



51st APACPH Conference 2019

SDGs in Reality

Pre-Conference: November 20, 2019
Faculty of Public Health, Mahidol University

Conference: November 21-22, 2019
Amari Watergate, Bangkok, Thailand

Programme & Abstract Book



51st Asia-Pacific Academic
Consortium for Public
Health (APACPH)
Conference

SDGs in Reality

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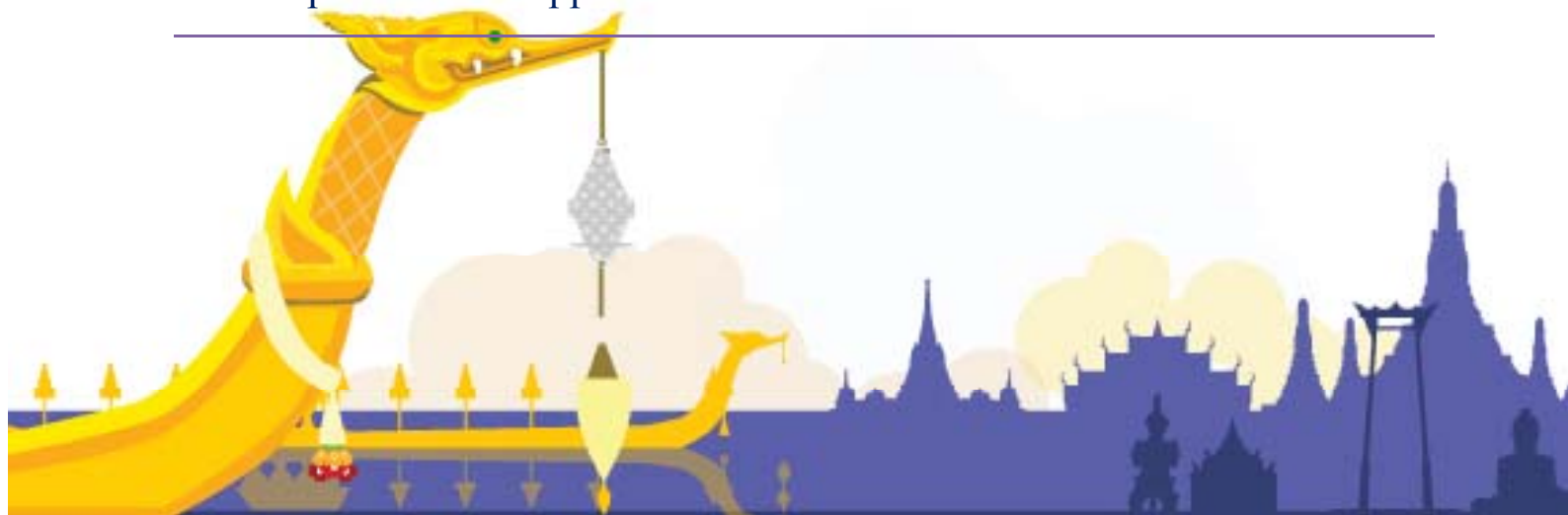
*Amari Watergate Bangkok Hotel,
Bangkok, Thailand*





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51st Asia-Pacific Academic
Consortium for Public
Health (APACPH)
Conference

SDGs in Reality

Welcome Messages



Welcome Message



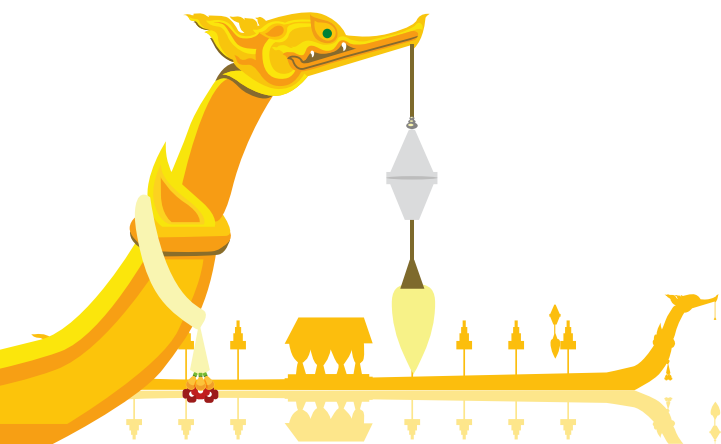
Professor Dr. Wah-Yun Low
President, APACPH

Greetings and a warm welcome to the 51st APACPH Conference, a Conference jointly hosted by APACPH and Mahidol University, Bangkok. This Conference is held in conjunction with the 72nd Founding Anniversary of the Faculty of Public Health, Mahidol University, Bangkok.

It's a pleasure to have all of you here to participate in this APACPH 2019 Conference. This Conference discusses the opportunities and diversity of issues, challenges and the contemporary researches in SDGs in sustainable development, and ways of reaching its goal in 2030 in the Asia-Pacific region. According to the World Health Statistics 2018: Monitoring Health for the SDGs, low and middle-income countries (LMIC) remain far behind the goals and targets. Thus, this conference is timely and it provides a starting point for dialogue and debate at the national and regional level. The Conference brings together an outstanding group of public health experts and practitioners who will deliberate on issues relating to SDGs and sustainable development. It can also help governments and other stakeholders to reach much-needed social, economic and political consensus and focus on the gaps and priorities for moving forward. Emphasis is also given on the opportunities for bringing the Asia-Pacific region together in action on cross-cutting issues and in support of the countries that face multiple challenges in this region. All these requires strengthened partnerships and regional action. We hope the proceedings will make an important contribution to the achievements of SDGs outcomes and 2030 Agenda for Sustainable Development and the understanding of current developments in public health in the Asia-Pacific region.

On behalf of APACPH, I would like to express our gratitude to the various keynote and plenary speakers and to all other distinguished speakers for taking part in this conference. I would also like to congratulate the organising committee and everyone who has contributed to the conference. We are especially grateful for the support of our partners and sponsors in making this conference a reality. Last but not least, I wish all of you a stimulating and enjoyable time at the conference, and also hope you have the opportunity to explore this beautiful and exotic country.

Sincerely yours,



Welcome Message



Associate Professor
Dr. Chanuantong Tanasugarn
Dean of the Faculty of Public Health

It is my honor and privilege to celebrate 72nd founding Anniversary of the Faculty of Public Health, Mahidol University by hosting the 51st APACPH Conference this year. This conference under the theme, “SDGs in Reality” aims to share public health knowledge related to sustainable development. Since HRH Prince Mahidol of Songkla’s philosophy and the late King Bhumibol’s sufficient economy are in concordance with the United Nation’s Sustain Development Goals. Therefore, the 51st APACPH conference theme on SDGs is for us timely and appropriately to organize as the Faculty of Public Health.

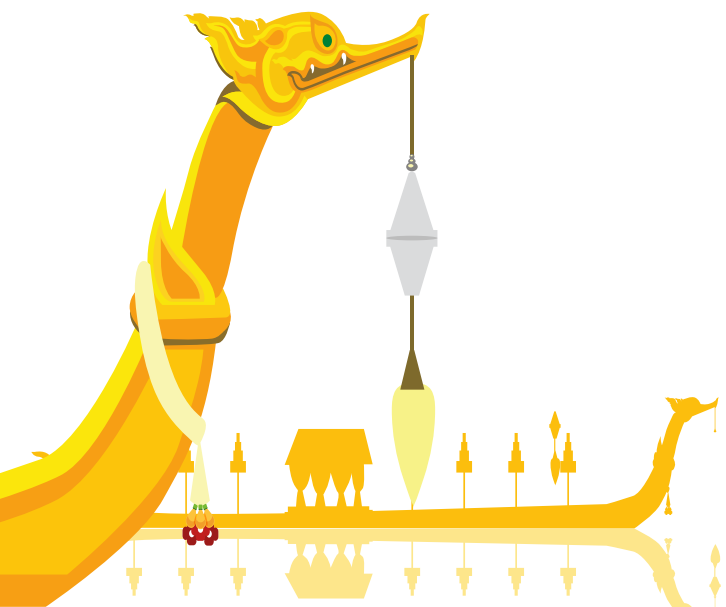
Another aim of this gathering is to document and report progress or achievements at the national and regional level. We need to explore how to expand the links within and without our regions to develop more opportunities for international collaborations. I hope we begin to break down traditional academic boundaries to create collaborative teams of experts to achieve the stated SDGs especially those concerning health, peace and security.

The conference activities are arranged not only for professionals who work in the SDGs to revisit the approach and document the positive results or barriers but also for promoting professional experiences in healthy meeting and green environment, so that all participants’ health are enhanced, and WHO “Health in All Policy (HiAP)” approach is endorsed.

Lastly, I wish you enjoy your stay in Bangkok. Please let our support staff know any of your concerns throughout the meeting, both individual and communal and how we can help you plan more effectively.

We will do our best to make your stay in Thailand a memorable experience.

Thank you very much for your participation and once again welcome to Bangkok.



Conference report and welcome remark



Professor Banchong Mahaisavariya
Acting President
Mahidol University and Chair of the
Conference Organizing Committee

His excellency, President of APACPH, executives, ladies and gentlemen. Thank you for your presiding at the 51st APACPH conference.

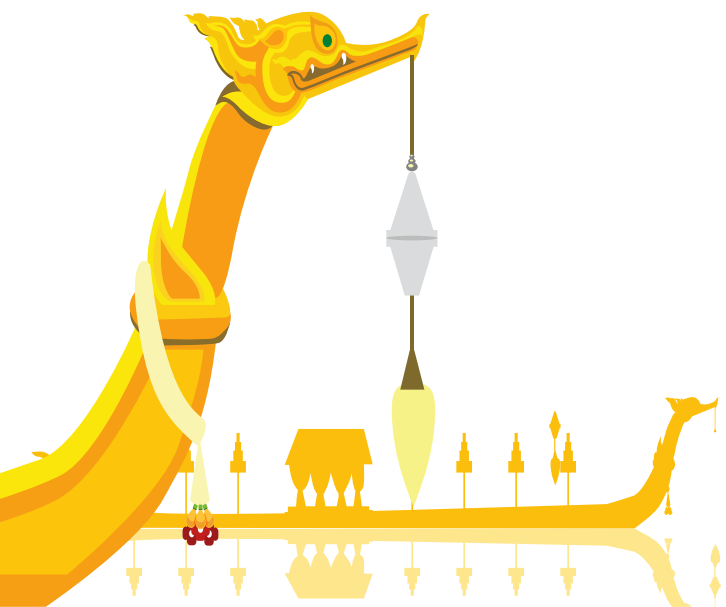
Asia-Pacific Academic Consortium for Public Health or APACPH has been formulated since 1984 to strengthen public health education and partnership among higher educational institutions in Asia and Pacific. Faculty of Public Health, Mahidol University has close collaboration with APACPH because the former Dean of Faculty of Public Health, Professor Dhepphanom Muangman was one of five founding members of the consortium.

The APACPH conference has been conducted annually to be an academic platform for public health academia and profession to share, learn and develop public health education, network, technology and innovation for the betterment of mankind. The conference this year focuses on SDGs in Reality which is in line with the policy of Mahidol University i.e. eco-university, healthy university. Mahidol University is honored to be the secretariat of the ASEAN University Network - Health Promotion Network and have an opportunity to collaborate with all of you.

This year about 500 participants from 20 countries joining us. Our invited speakers are exceptional scholars from United Nation, World Health Organization and several government organizations related with SDGs. The conference will discuss current condition of SDGs on the first day and identify how to achieve SDGs in 2030 on the second day. This year, we firstly initiate a platform for young investigator namely “the turbo-talk” to share their researches and welcome them to the public health academic world.

Once again, on behalf of Mahidol University and organizing committee, I would like to express my sincere appreciation to all of you for your kind support and contribution to the conference and the consortium.

Thank you



Opening Remark



Associate Professor Soranit Siltharm,
Permanent Secretary of Ministry of
Higher Education, Science,
Research and Innovation

His excellency, Mr. Asim Iftikhar Ahmed, honorable professor Wah Yun Low, President of APACPH, honorable professor Banchong Mahaisavariya, President of Mahidol University, honorable keynote speakers Dr. Somsak Chunharas, former Minister of Public Health and Dr. Stefanos Fotiou, Director of Environment and Development Division, United Nations Economic and Social Commission for Asia and the Pacific, APACPH executive members, speakers, guests, ladies and gentlemen.

It is my great pleasure to be here with you all at the 51st APACPH conference 2019.

The conference focuses on Sustainable Development Goals in Reality to request public health professions revisiting our actions towards SDGs achievement. Although the United Nation reported a promising result of some areas, many areas request urgent collective attention such as food security, violence, illiteracy and disaster which deteriorate human health and life tremendously.

It may be the right time for us to ask ourselves “How can academia ensure the SDGs achievement?”

Ladies and gentlemen, I would like to recall all of you the five pillars of SDGs which are restoring Peace, saving Planet, creating Prosperity, enhancing Partnership and nourishing People. These five pillars do need strong support from each level of the society including individual, family, community, organization and country.

To achieve SDGs, the APACPH community has a promising future due to one crucial pillar so called “Partnership”. Among ASEAN countries, we have a diversity of social and economic status and of course health of people but health is a borderless condition which each country should be aware of health condition intra and inter-nation, so why we called “global public health”. Moreover, at the ASEAN Plus Three Summit on November 4, 2019 Mahidol University has been appointed as ASEAN Centre for Sustainable Development Studies and Dialogue (ACSDSD), one of 6 ASEAN Centre under a support of the Royal Thai government.

Is it adequate for public health to support SDGs achievement?

In 2015, the statement "the health of human civilization and the state of the natural systems on which it depends" by Rockefeller and Lancet has raised an awareness of both health and non-health experts to work even much closer and stronger to improve condition of natural resource or planet and will definitely improve human well-being. We can overcome all challenges together.

Before deciding and conducting activities, we must consider all-round knowledge in the relevant fields and the relationship among the field, as well as the awareness of honesty, patience, perseverance, and intelligence in leading one's life.

As academic institutes, we can implement the philosophy into our education and administration as well as strengthening global partnership which the consortium is already done.

I would like the conference start by citing the eloquent education philosophy of HRH Prince Mahidol of Songkhla “True Success is not in the leaning but in its application to the benefit of mankind”. I am sure that this conference will have fruitful discussions, create stronger global partnership, and initiate strategic steps for academic institutions to ensure SDGs achievement.

Thank you



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November 21-22, 2019

51st Asia-Pacific Academic
Consortium for Public
Health (APACPH)
Conference

SDGs in Reality

General Information





GENERAL INFORMATION

VENUE

November 20, 2019

Faculty of Public Health, Mahidol University

420/1 Rachawithi RD., Rachathewi District, Bangkok 10400, Thailand

Tel: +66 2 354-8543

Website: www.ph.mahidol.ac.th

Faculty of Public Health, Mahidol University is the first faculty of public health in Thailand in a Thai university, is now celebrating 72nd anniversary since the establishment May 25, 1948. To maintain the leadership in public health education, “social laboratories” have been developed for student learning activities, and the social responsibility concept has been introduced to the management system as the method to improve the Faculty’s culture and to enhance students and staff competencies concerning public health and society leading to a sustainable development goal.

Transportation:

BTS sky train <https://www.bts.co.th/eng/routemap.html>

1. Take sky train N route and get off at N3 (Victory Monument Station)
2. Take Exit 3 then head to Ratchawithi road (650 meters about 10 minutes)

Taxi or Drive

1. From Victory monument keep on Ratchawithi road for 650 meters
2. The Faculty of Public Health is on your right hand

November 21 – 22, 2019

Amari Watergate Bangkok

847 Petchburi Road, Ratchathewi, Bangkok 10400, Thailand

Tel: +66 2 653-9000

Fax: +66 2 653-9045

Website: www.amari.com/watergate

Amari Watergate Bangkok is conveniently located close to all of Bangkok’s main shopping areas, as well as being at the very heart of the main business district. The malls of Central World, Gaysorn Piazza and Siam Paragon, plus the fashion markets of Pratunam, are all easily accessible, only a short stroll from the hotel. Access to the two main airport express ways is also unrivalled, enabling guests to make rapid journey to and from both city airports.

Transportation:

BTS sky train (<https://www.bts.co.th/routemap.html>)

1. Take sky train N route and get off at N1 (Ratchathewi Station)
2. Take Exit 4 then heading to Ratchathewi intersection
3. Turn right on Petchaburi Road and heading to Platinum Shopping Mall (1000 meters about 15 minutes)
4. Amari Watergate Bangkok Hotel locates opposite to Platinum Shopping Mall



ABSTRACTS

The 51st APACPH Abstracts are available on the website: www.apacph2019.org

BADGE

All participants are requested to wear their badges at all times inside the conference venue as this will serve as your ticket to access the functions for which you are registered.

CLOSING CEREMONY

The closing ceremony will be held on November 22 2019; 15.30 – 17.30 hrs on Watergate Ballroom, Floor 6

COMPUTER SERVICE

Computers with internet access are available in the conference's computer service area.

CURRENCY

The local currency is Thai Baht. The current exchange rate is approx. THB 30.36 to \$1USD (at the time of printing and is subjected to change). Foreign currencies can be exchanged at hotels, airports and a number of government-designated banks.

GREEN POLICY

51st APACPH will be reducing, reuse, and recycling plastic, glass, and paper. Please drop your badges in the designated drop box before you leave the venue.

INFORMATION DESK

The information desk is located at Floor 6.

LOST AND FOUND

Report lost items and found items to the information counter.

LUNCH

Lunch is provided by the Conference in Amaya Food Gallery, Floor 5

MOBILE PHONE

Kindly turn off your mobile phones or switch them to mute mode during conference sessions to avoid disrupting the proceedings.

OPENING CEREMONY

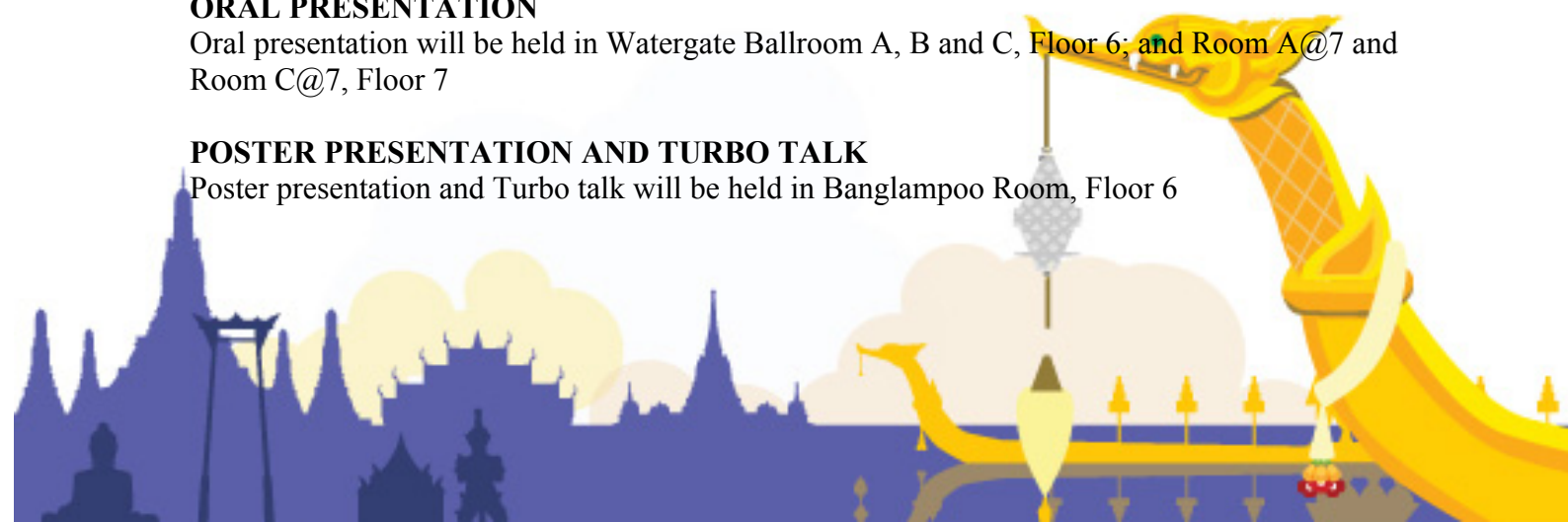
The ceremony will be held on November 21 2019; 08.30 – 09.00 hrs in Watergate Ballroom, Floor 6

ORAL PRESENTATION

Oral presentation will be held in Watergate Ballroom A, B and C, Floor 6; and Room A@7 and Room C@7, Floor 7

POSTER PRESENTATION AND TURBO TALK

Poster presentation and Turbo talk will be held in Banglampoo Room, Floor 6





Fast Facts about Bangkok, Thailand

About Thailand

Thailand is located in the heart of mainland Southeast Asia, Thailand is a country of mountains, hills, plains and a long coastline along the Gulf of Thailand (1,875 km) and the Andaman Sea (740 km), not including the coastlines of some 400 islands, most of them in the Andaman Sea. Its continental co-ordinates are latitudes 20° 28' N and 5° 36' S and longitudes 105° 38' E and 97° 22' W. To the north Thailand borders the Lao PDR and Myanmar; to the east the Lao PDR and Cambodia; to the south Malaysia; and to the west Myanmar. The country's land-based maximum north-south extent is approximately 1,600 km, and its maximum east-west extent measures approximately 870 km.

Capital: Bangkok (or Krung Thep, in Thai, which means City of Angel)

Climate: Thailand's climate ranges from the sub-tropical to the tropical zones, with three distinct seasons: a hot and dry season from February to May, a monsoon season from June to October, and a cooler, dry season from November to January. Average seasonal temperatures vary between a low of 23.0 °C and a high of 32.2 °C.

Seasons: There are three seasons in Northern, Northeastern and Central Thailand - hot (March to May), rainy (June to October), and cool (November to February). And there are two seasons in the South - rainy (April to November) and hot (December to March). In the North and Northeast in winter, the temperatures are much lower during night time, especially on the mountains, with temperatures lower than 10°C.

Language: Thai is the national and official language. It is a tonal language with different dialects. Its script was created in 1283 by King Ramkhamhaeng the Great of the Sukhothai Kingdom. Other languages spoken include Chinese and Malay. English, a compulsory subject of secondary school curricula, is widely spoken and understood throughout the country.

Currency: Thailand's currency unit is the Baht, which is divided into 100 satangs. Notes are in 20 baht (green), 50 baht (blue), 100 baht (red), 500 baht (purple), and 1,000 baht (brown) denominations. The exchange rates against the US dollars averaged out at 31.0 baht to US\$ 1 in 2012. Coins are valued at 25 and 50 satangs (brass-colored), 1 baht (nickel), 2 baht (brass/nickel), 5 baht (nickel with copper rim), and 10 baht (nickel with a brass center).

National Flag: Five horizontal bands of red, white and blue represent unity of the nation, purity of religion, and the monarchy, respectively.

Religion: The majority of Thais (over 90 per cent) are Buddhists, although other major religions are practiced. These include Christianity, Hinduism, Islam, and Sikhism. The Constitution makes no mention of any religion or sect as a national religion and grants complete freedom of worship for all Thai citizens.

Electricity: 220 volts 50 cycles



Direction to the Faculty of Public Health, Mahidol University

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Web: <https://www.ph.mahidol.ac.th/eng/contact/>



Faculty of Public Health
Location on google map





Map of Faculty of Public Health, Mahidol University



- | | |
|-------------------------|-----------------------------|
| 1 Building no. 1 | 6 Building no. 6 |
| 2 Building no. 2 | 7 Building no. 7 |
| 3 Building no. 3 | 8 Building no. 8 |
| 4 Building no. 4 | 9 Building no. 9 |
| 5 Building no. 5 | 10 Fac. of Dentistry |

****Registration at Building no. 1, floor 1**



Amari Watergate Bangkok Hotel

Transportation:

BTS sky train (<https://www.bts.co.th/routemap.html>)

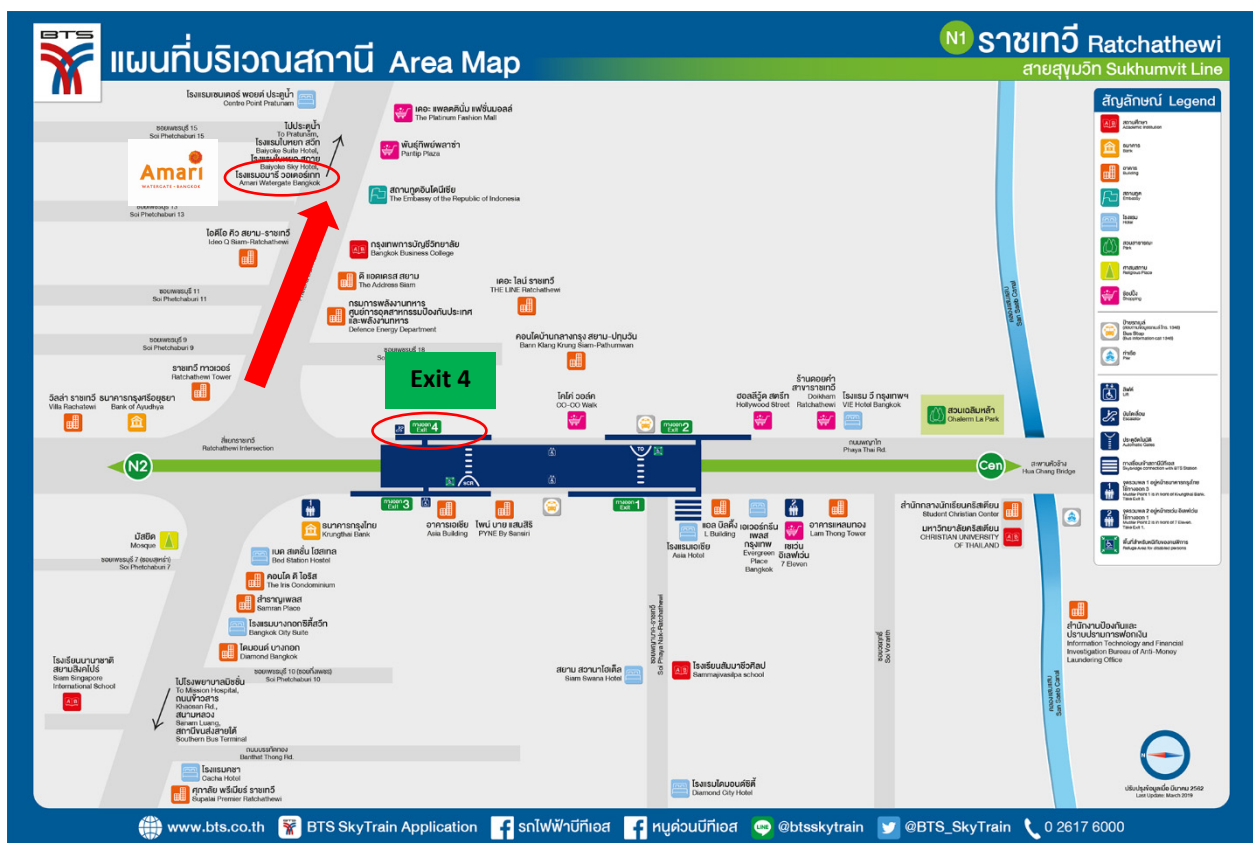
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Amari Watergate Hotel

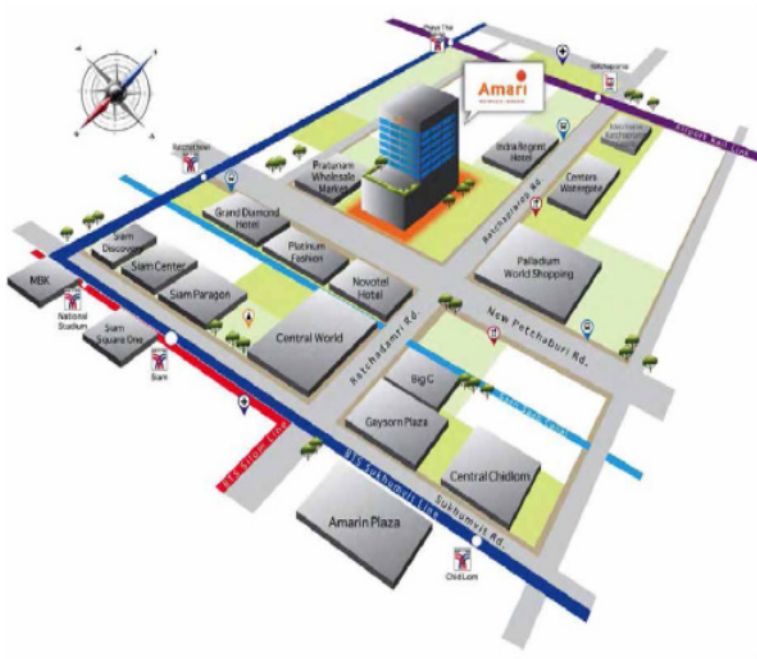
Location on google map

Web: <https://www.amari.com/watergate/>





AMARI WATERGATE BANGKOK



Amari Watergate Bangkok

Transport:

- Makkasan Airport Link
- Rajthevi BTS Station

Nearby:

- Platinum Shopping Mall
- Pantip Plaza
- Central World
- Gaysorn plaza
- Siam Paragon
- Erawan Shrine

GPS: 13°45'3.62"N 100°32'26.39"E



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SDGs in Reality

Pre- Conference

*November 20, 2019
Faculty of Public Health, Mahidol University,
Bangkok, Thailand*





November 20, 2019

09:00 – 12:00

Meeting Room 1608, Floor 6, Building no. 1 (see map 2)

Early career network (YITA awardee only)

Speakers:

- Professor Dr. Indika Karunathilake
APACPH ECN Advisor; Director, Medical Education Development and Research Centre, Faculty of Medicine, University of Colombo, Sri Lanka
- Professor Dr. Elahe Nezami
Associate Dean, Keck School of Medicine, University of Southern California, USA

14:00 – 20:00

Meeting Room, Floor 4, Building no. 5 (see map2)

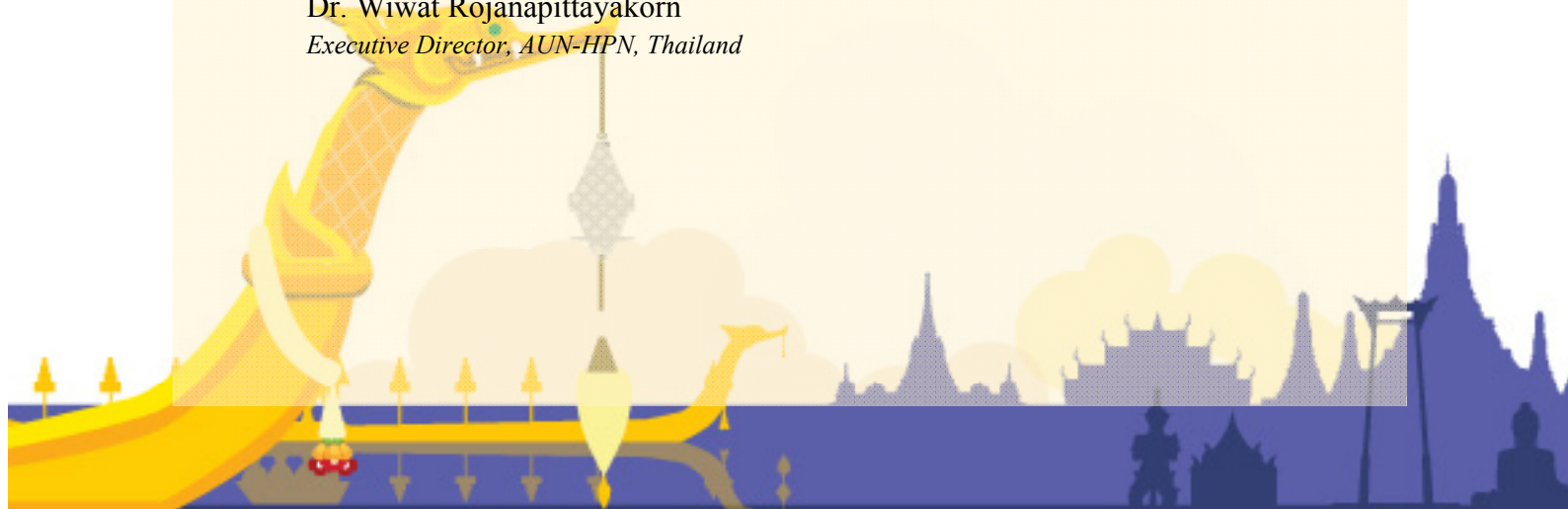
Health promotion core competency, innovations and health literacy

(Dinner provided)

Opening remark: Associate Professor Dr. Ying-Wei Wang
Director-General, Health Promotion Administration, Ministry of Health and Welfare, Taiwan

Speakers:

- **Diversity and inclusiveness: Who is left behind in the era of society 5.0?**
Professor Dr. Masamine Jimba
President of APACPH, Tokyo University, Japan
- **Diversity and inclusiveness: Case sharing**
Associate Professor Dr. Surintorn Kalampakorn
Faculty of Public Health, Mahidol University, Thailand
- **2018 CCHP workshop experience sharing**
2018 Trainees & Trainers
- **Program planning, implementation and evaluation: Individuals to systems, it is all the same**
Professor Dr. Bruce Maycock
Secretary-general APACPH; Head, School of Health Sciences, Curtin University, Australia
- **Program planning, implementation and evaluation: Case sharing**
Dr. Pitakpol Boonyamalik
Inspector General, Ministry of Public Health, Thailand
- **Partnership building: Collaboration towards health literacy**
Professor Dr. Wah-Yun Low
President of APACPH&APJPH Editor-in-Chief, University of Malaya, Malaysia
- **Partnership building: Case sharing**
Dr. Wiwat Rojanapittayakorn
Executive Director, AUN-HPN, Thailand



November 20, 2019

14:00 – 17:00

Meeting Room 1610, Floor 6, Building no. 1 (see map 2)

Innovations for strengthening capacities in health law & bioethics

Speakers:

- **The role of health law & ethics in implementing the WHO WPRO white paper – for the future: Towards the healthiest and safest region**
Mr. Darryl Barrett
Coordinator, Health Law & Ethics, WHO Regional Office for the Western Pacific
- **Introduction of APACPH – ICUH**
Dr. Mijeong Park
Invited Researcher, Yonsei University; Senior Fellow Researcher at Seoul National University, South Korea
- **Introduction of Mongolian National University of Medical Science**
Professor Dr. So Yoon Kim and Dr Mijeong Park
Invited Researcher, Yonsei University, South Korea
- **Present and Future of the International Cyber University of Medical Sciences (ICUMS): Mongolian Experiences**
Professor Dr. Young Moon Chae
Professor Emeritus of Yonsei University, South Korea
Honorary Professor of Mongolian National University of Medical Science, Mongolia
- **Introduction of Global Classroom**
Professor Dr. Yik-Ying Teo
Dean, Saw Swee Hock School of Public Health, National University of Singapore, Singapore
- **WHO health law tool**
Mr. Darryl Barrett
Coordinator, Health Law & Ethics, WHO Regional Office for the Western Pacific
- **Collaboration Between WHO and APACPH in Health Law & Ethics**
Professor Dr. Maznah Dahlui, *University of Malaya, Malaysia*
Assistant Professor Dr. Suthee Usathaporn, *Mahidol University, Thailand*
Professor Dr. Masamine Jimba, *University of Tokyo, Japan*
Professor Dr. Yik-Ying Teo, *National University of Singapore, Singapore*
Professor Dr. Young Moon Chae, *Mongolian National University of Medical Science, Mongolia*
Professor Dr. Myung Ken Lee, *Yonsei University, South Korea*
Mr. Darryl Barrett, *Health Law & Ethics, WHO WPRO*

14:00 – 17:00

Meeting Room 1811, Floor 8, Building no. 1 (see map 2)

Writing and publishing a public health research paper

Speakers:

- Professor Dr. Wah-Yun Low
President of APACPH & APJPH Editor-in-Chief, University of Malaya, Malaysia
- Professor Dr. Colin Binns
Deputy Editor-in-Chief, Curtin University, Australia





November 20, 2019

14:00 – 17:00

*The International Public Health and Environment Training Center, Floor 1,
Building no.4 (see map 2)*

Teaching and learning for public health education

Speakers:

- **Professor Dr. Agustin Kusumayati**
Dean, Faculty of Public Health, Universitas Indonesia, Indonesia
- **Dr. Nik Annii Afiqahbitni Haji Mohammad Tuah**
Universiti Brunei Darussalam, Brunei
- **Associate Professor Dr. Elahe Nezami**
Associate Dean, Keck School of Medicine, University of Southern California, USA
- **Professor Dr. Vincente Y. Belizario, Jr.**
University of the Philippines Manila, The Philippines

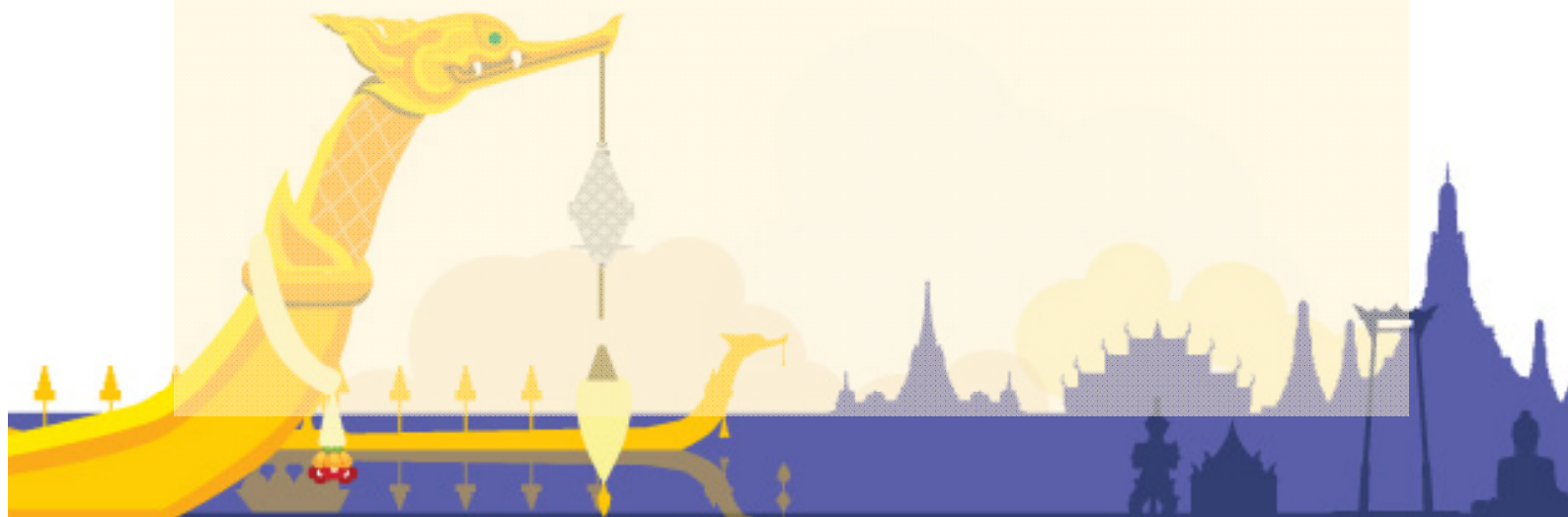
Moderator:

Associate Professor Dr. Chanin Chareonkul
Faculty of Public Health, Mahidol University, Thailand

17:00 – 18:00

Meeting Room 1610, Floor 6, Building no. 1 (see map 2)

ICUH (invited only)



November 20, 2019

Meeting Room 1608, Floor 6, Building no. 1

14.00 - 17.00

Topic 1: How to Make an Effective Conference Presentation

Workshop synopsis:

Ability of make an effective presentation is essential skills for public health professionals. During this workshop, early career public health professionals whose abstracts are selected for APACPH 2019 conference will be given personalised guidance on how to make their presentations more effective. The guidance will be provided by experts in medical education, public and scientific writing.

The content areas will be, planning the presentation, preparing the presentation, selecting and customizing PowerPoint templates, presenting effectively and handling difficult situation.

Workshop will be conducted in an interactive, hands-on format and selected participants will be given an opportunity to rehearse their presentations and obtain the expert feedback in a non-threatening, friendly environment.

Resource persons:

Professor Dr. Indika Karunathilake, Professor in Medical Education, University of Colombo, Sri Lanka and Editor in Chief, South East Asian Journal of Medical Education

Professor Dr. Elahe Nezami, Associate Dean and Professor in Medical Education, Keck School of Medicine, University of Southern California, USA

Expert Panel: Professor Dr. Bruce Maycock, Professor in Public Health, University of Curtin
Professor Dr. Victor Hoe, University of Malaya

Target group: Early Career Public Health Professionals whose abstracts are selected for APACPH 2019 Conference

Activities:

- 2.00-2.30 pm Introduction to workshop and Plenary Discussion: Planning and Preparing a Presentation-Professor Dr. Indika Karunathilake, ECN Director
- 2.30-3.00 pm Group work
- 3.00-3.30 pm Tips on making an effective presentation- Professor Dr. Elahi Nezami
- 3.30-4.30 pm Presentations by the participants
- 4.30-5.00 pm Feedback by the expert panel
- 5.00 pm Conclusion of the Workshop





November 20, 2019

Meeting Room 1608, Floor 6, Building no. 1

14.00 - 20.00

Topic 2: Health promotion core competency, innovations and health literacy

Time	Topic	Speaker	Moderator
14:00-14:10	Opening Remarks	Dr. Hung-Yi Chiou Vice President Finance, APACPH Director and Distinguished Professor, Master Program in Applied Molecular Epidemiology, Taipei Medical University, Taiwan Dr. Amporn Benjapornpitak (TBA) Deputy Director-General, Department of Health, Ministry of Public Health, Thailand Dr. Chanuantong Tanasugarn (TBA) Dean, Faculty of Public Health, Mahidol University, Thailand Dr. Chia-Hui Lee Director, Planning Division, Health Promotion Administration, Ministry of Health and Welfare, Taiwan	Dr. Ya-Wen Betty Chiu Taiwan Regional Director, APACPH Director and Professor, Global Health Program, Taipei Medical University, Taiwan
Group Photo			
14:15-15:05	Diversity and Inclusiveness: Who Is Left Behind in the Era of Society 5.0?	Dr. Masamine Jimba President, APACPH	
15:05-15:20	Diversity and Inclusiveness: Case Sharing	Dr. Surintorn Kalampakorn Associate Professor, Faculty of Public Health, Mahidol University, Thailand	
15:20-15:40	Q&A	Dr. Masamine Jimba & Dr. Surintorn Kalampakorn	
Coffee Break			
16:00-16:30	2018 CCHP Workshop Experience Sharing	2018 Trainees & Trainers	Dr. Feng-Jen Tsai Associate Professor, Global Health Program, Taipei Medical University, Taiwan
16:30-17:20	Program Planning, Implementation and Evaluation: Individuals to Systems, It Is All the Same	Dr. Bruce Maycock Secretary-General, APACPH	
Refreshment			
18:00-18:15	Program Planning, Implementation and Evaluation: Case Sharing	Dr. Pitakpol Boonyamalik Inspector Director, Ministry of Public Health, Thailand	Dr. Hung-Yi Chiou Vice President Finance, APACPH Director and Distinguished Professor, Master Program in Applied Molecular Epidemiology, Taipei Medical University, Taiwan
18:15-18:35	Q&A	Dr. Bruce Maycock & Dr. Pitakpol Boonyamalik	
18:35-19:25	Partnership Building: Collaboration towards Health Literacy	Dr. Wah-Yun Low President-Elect, APACPH	Dr. Hung-Yi Chiou Vice President Finance, APACPH Director and Distinguished Professor, Master Program in Applied Molecular Epidemiology, Taipei Medical University, Taiwan
19:25-19:40	Partnership Building: Case Sharing	Dr. Wiwat Rojanapithayakorn Executive Director, ASEAN University Network-Health Promotion Network (AUN-HPN), Thailand	
19:40-20:00	Q&A	Dr. Wah-Yun Low & Dr. Wiwat Rojanapithayakorn	



Time	Topic	Speaker	Moderator
13:30-13:35	Opening Remarks	Dr. Hung-Yi Chiou Vice President Finance, APACPH Director and Distinguished Professor, Master Program in Applied Molecular Epidemiology, Taipei Medical University, Taiwan	Dr. Ya-Wen Betty Chiu Taiwan Regional Director, APACPH Director and Professor, Global Health Program, Taipei Medical University, Taiwan
13:35-13:55	ICT Patient Engagement in the Era of NCDs	Dr. Ying-Wei Wang Director-General, Health Promotion Administration, Ministry of Health and Welfare, Taiwan	
13:55-14:10	How to Wage A Global War Against NCDs: The Singapore Story	Dr. Yik-Ying Teo Dean, Saw Swee Hock School of Public Health, National University of Singapore, Singapore	Dr. Masamine Jimba President, APACPH
14:10-14:25	Strategies to Combat NCDs in Malaysia: The Battle Continues...	Dr. Nor Izzah Hj Ahmad Shauki Director, Institute for Health Systems Research, Ministry of Health, Malaysia	Dr. Wah-Yun Low President-Elect, APACPH
14:25-14:40	Empowering national capacity to beat NCDs: Thailand experiences	Dr. Pairoj Saonaum Director, Healthy Lifestyle Promotion Section, The Thai Health Promotion Foundation, Thailand	Dr. Bruce Maycock Secretary-General, APACPH
14:40-15:00	Q&A	All Participants	Dr. Ya-Wen Betty Chiu Taiwan Regional Director, APACPH Director and Professor, Global Health Program, Taipei Medical University, Taiwan
Group Photo			

Administrative Committee

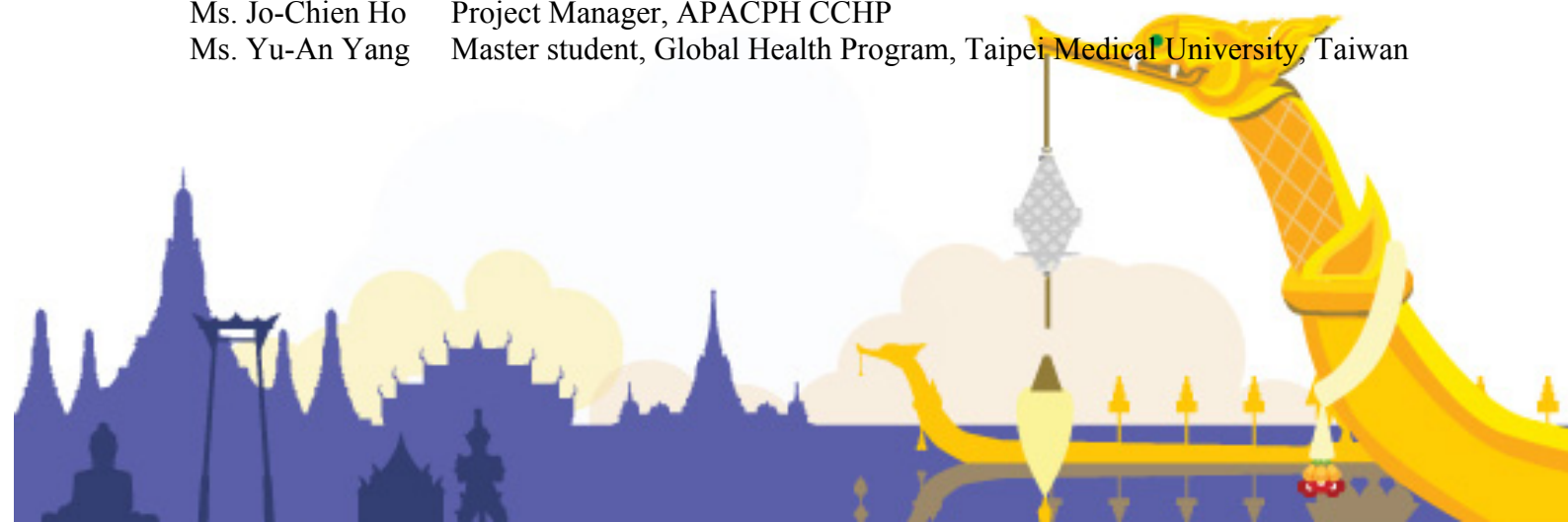
Dr. Ying-Wei Wang	Director-General, Health Promotion Administration, Ministry of Health and Welfare, Taiwan
Dr. Hung-Yi Chiou	Vice President Finance, APACPH
Dr. Ya-Wen Betty Chiu	Director, Taiwan Regional Office, APACPH
Dr. Chia-Hui Lee	Director, Planning Division, Health Promotion Administration, Ministry of Health and Welfare, Taiwan
Dr. Long-Sheng Chen	Researcher, Health Promotion Administration, Ministry of Health and Welfare, Taiwan

International Advisory Committee

Dr. Masamine Jimba	President, APACPH
Dr. Wah-Yun Low	President-Elect and APJPH (Editor-in-chief)
Dr. Bruce Maycock	Secretary-General, APACPH
Dr. Kee Seng Chia	1 st Vice President
Dr. Indika Karunatilake	Regional Director- South Asia & Accreditation
Dr. So Yoon Kim	ICUH, Proxy to Regional Director, Korea
Dr. Nor Izzah Hj Ahmad Shauki	Director, Institute for Health Systems Research, Ministry of Health, Malaysia

Staff

Mr. Yukai Huang	Project Manager, APACPH CCHP
Ms. Jo-Chien Ho	Project Manager, APACPH CCHP
Ms. Yu-An Yang	Master student, Global Health Program, Taipei Medical University, Taiwan





20 November 2019

Meeting Room 1811, Floor 8, Building no. 1

14.00 - 17.00

Topic 3: Writing and publishing a public health research paper

This workshop is organized by the Asia-Pacific Journal of Public Health (APJPH), in conjunction with the 51st Asia-Pacific Academic Consortium for Public Health (APACPH) Conference, held at the Faculty of Public Health, Mahidol University, Bangkok, Thailand. This Workshop is held as a response to meet individual and institution's needs to enhance research and acquire specific knowledge and skills to write and publish a scientific manuscript. There will be an emphasis on the common errors made in undertaking research and presenting it in a way that editors will accept your paper for publication. We will provide an outline of an academic article and examples of common errors. This workshop targets public health students, researchers and academic staff who conduct research and need to develop successful scientific writing skills. This workshop hopes to provide participants with a comprehensive introduction to scientific writing, boost participants' self-confidence to initiate and sustain quality scientific writing in the field of public health.

Speakers:

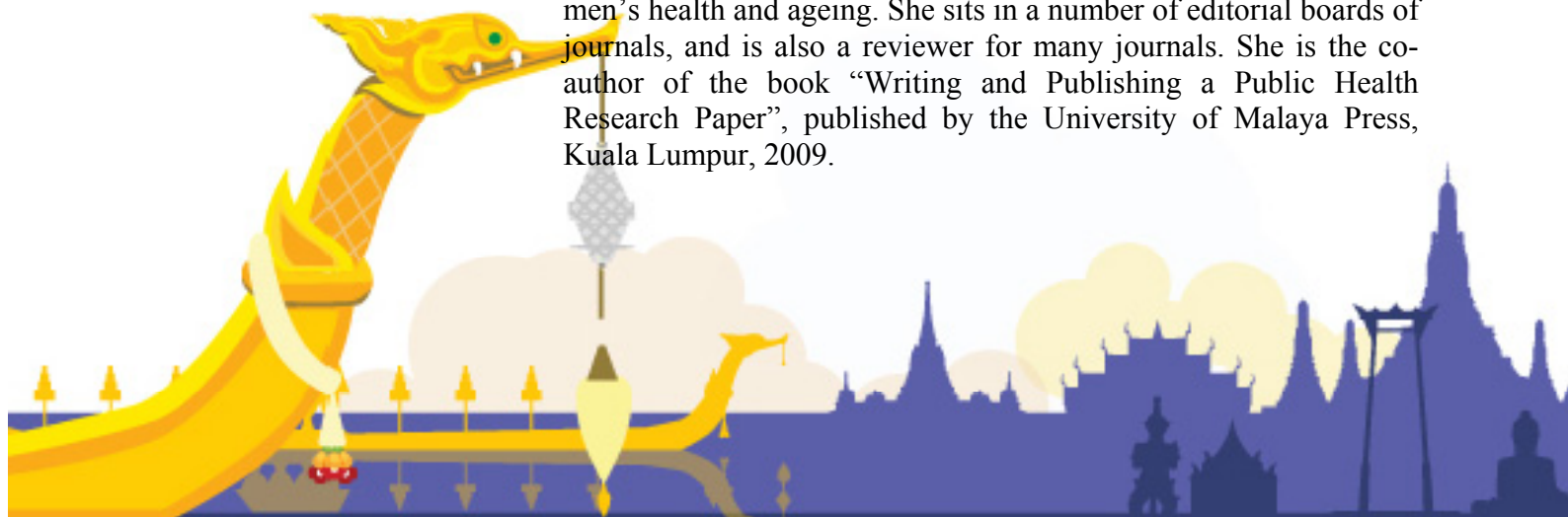
Professor Dr. Wah-Yun Low

Editor-in-Chief, Asia-Pacific Journal of Public Health

Faculty of Medicine, University of Malaya, Kuala Lumpur, Malaysia



Professor Wah-Yun Low, PhD, is the Editor-in-Chief of the Asia-Pacific Journal of Public Health (<http://aph.sagepub.com>). She is Professor of Psychology at the Faculty of Medicine, University of Malaya. She graduated with a BA (Hons) from the National University of Malaysia and obtained her MSc and PhD from the University of Surrey, Guildford, England. Professor Low is actively engaged in teaching, research, service and consultancy. She has published 20 books and book chapters and over 300 publications in peer-reviewed journals, particularly in the areas of behavioral science, sexual and reproductive health, HIV/AIDS, men's health and ageing. She sits in a number of editorial boards of journals, and is also a reviewer for many journals. She is the co-author of the book "Writing and Publishing a Public Health Research Paper", published by the University of Malaya Press, Kuala Lumpur, 2009.



Professor Dr. Colin Binns

Deputy Editor-in-Chief, Asia-Pacific Journal of Public Health

School of Public Health, Curtin University, Perth, Australia



Prof Binns graduated in medicine from the University of Western Australia and worked in hospitals in Perth and then for eight years in Papua New Guinea (PNG). In PNG, he became very interested in nutrition and received a scholarship to complete a MPH degree at Harvard. He returned to Australia to Curtin University and was appointed Foundation Head of the School of Public Health, a position he held for 21 years. He was Vice-President of the Asia Pacific Academic Consortium for Public Health for five years and is now Deputy Editor-in-Chief of the Asia-Pacific Journal of Public Health. He holds visiting professorial positions at Kagawa Nutrition University, Tokyo and University of Ryukus, Okinawa in Japan; Tonji Medical College Wuhan and Changsha Children's Hospital, PR China; Taipei Medical University, and Inje University, Korea. He has served on 17 committees of the National Health and Medical Research Council, including Chair of the Dietary Guidelines Committees for infants, children, adults and elderly Australians. He remains a member of the Australian Dietary Guidelines Committee, Iodine Working Group, Health Claims panel and the Advisory Panel on the Marketing of Infant Formula. He has published 600 scientific articles and book chapters. Honours include 'Senior Western Australian of the Year' (2004), an honorary PhD from Inje University, Korea, Research Australia Lifetime Achievement Award for medical research in Australia (2010) and the Asia-Pacific Clinical Nutrition Award 2012 for contributions to nutrition in the Asia-Pacific region.





20 November 2019

Meeting Room 1610, Floor 6, Building no. 1

14.00 - 17.00

Topic 4: Innovations for strengthening capacities in health law & bioethics

Background

Asia-Pacific Academic Consortium for Public Health (APACPH)

Asia-Pacific Academic Consortium for Public Health (APACPH) is an international non-profit organization comprising many of the largest and most influential schools of Public Health in the Asia-Pacific region and dedicated to improving professional education for public health. Launched in 1984, the APACPH aims to tackle the unique public health challenges of the Asia-Pacific region, and to promote the translation of Public Health education and research into evidence-based policies and programs to improve the health and well-being of populations in the Asia-Pacific Region.

The APACPH Conference is an Annual International Conference initiated by the Asia-Pacific Academic Consortium for Public Health (APACPH) to accentuate public health concerns and share innovation and updated public health knowledge and related disciplines. The Faculty of Public Health, Mahidol University will host the 51st APACPH Conference 2019 from November 20th – 22nd, 2019 at Amari Watergate Bangkok, Thailand.

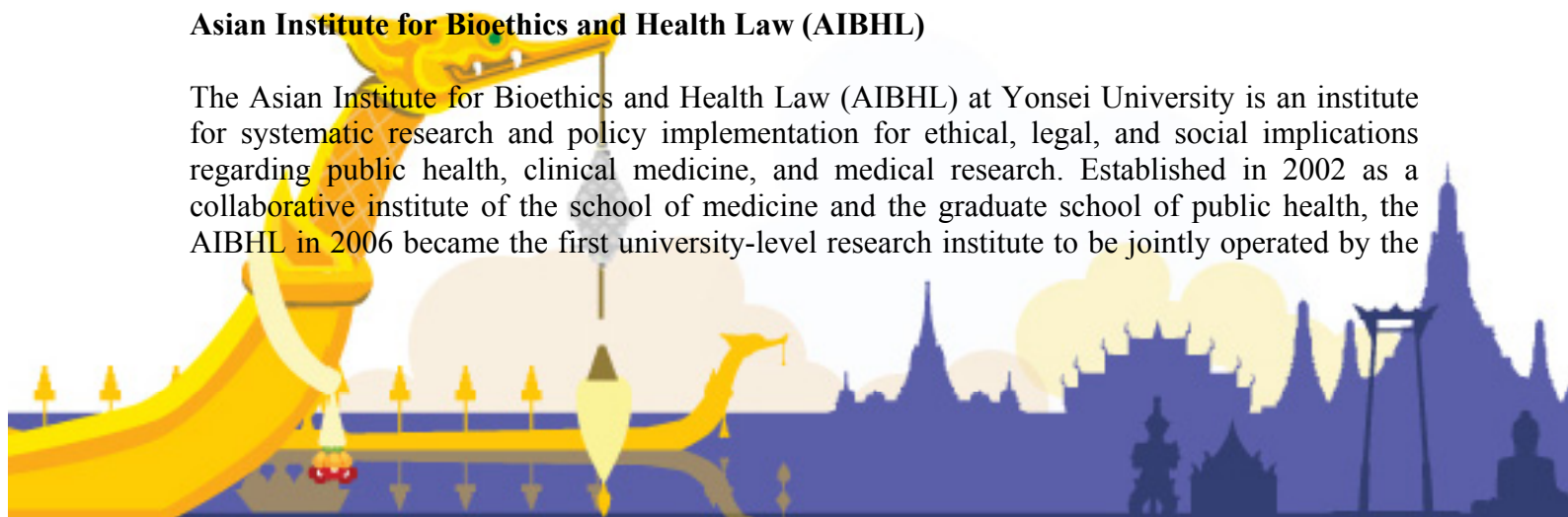
International Cyber University for Health (ICUH)

The International Cyber University for Health (ICUH) is an affiliation of the APACPH that serves as the educational focal point for the provision of public health education in the Asia-Pacific region. ICUH was established in May of 2004 through the authorization of establishment during the 35th meeting of the APACPH in 2003 and has since been under the operational management of the Yonsei University Graduate School of Public Health in Seoul, South Korea.

ICUH provides online learning to those who seek information on the discipline of public health, education opportunities, and research. Since its establishment, the ICUH has offered 43 different subjects by more than 30 lecturers, to more than 1,300 students totally. By pooling valuable resources from the leading member universities in our region and APACPH, ICUH is committed to ensuring that people will have the opportunities to propel their academic pursuit with these highquality educational materials.

Asian Institute for Bioethics and Health Law (AIBHL)

The Asian Institute for Bioethics and Health Law (AIBHL) at Yonsei University is an institute for systematic research and policy implementation for ethical, legal, and social implications regarding public health, clinical medicine, and medical research. Established in 2002 as a collaborative institute of the school of medicine and the graduate school of public health, the AIBHL in 2006 became the first university-level research institute to be jointly operated by the



Health Systems (Schools of Medicine, Dentistry, Nursing, and Public Health) and the main campus (Schools of Letters, Law, and Theology).

Since its inception, the AIBHL has been actively cooperating with international organizations to promote in-depth research into global health policies, and to ultimately produce quality health-policy professionals. In 2010, the AIBHL started its cooperation with the WHO Western Pacific Regional Office to promote public health status of the Western Pacific and its vicinities. Recognizing its contributions, the institute was designated the WHO Collaborating Center for Bioethics and Health Law in February of 2014. As a collaborating center, the AIBHL has developed a public health law framework including an assessment tool to assess country-level public health law and legislations, collected and disseminated related documents, and complied with requests for assistance or information from WHO's country offices, field staff, and from other United Nations organizations and their staffs.

The AIBHL have been hosting Pre-Conference Workshop and Symposium on Health Law and Bioethics at APACPH Conference every year since designated as WHO CC. This year, Pre-conference workshop is mainly focused on collaboration of ICUH with areas of Health Law and Bioethics.

AIBHL has offered its Health law and bioethics courses for the ICUH since Fall of 2016. Director of the AIBHL, Prof. So Yoon Kim, currently serves as the manager of the ICUH.

FINAL CONCEPT NOTE (November 6th 2019)

WHO Collaborating Centre for Health Law and Bioethics Preconference Consultation

Innovations for Strengthening Capacities in Health Law & Bioethics

Hosted by Asian Institute for Bioethics and Health Law

(WHO CC for Health Law and Bioethics)

In collaboration with the World Health Organization

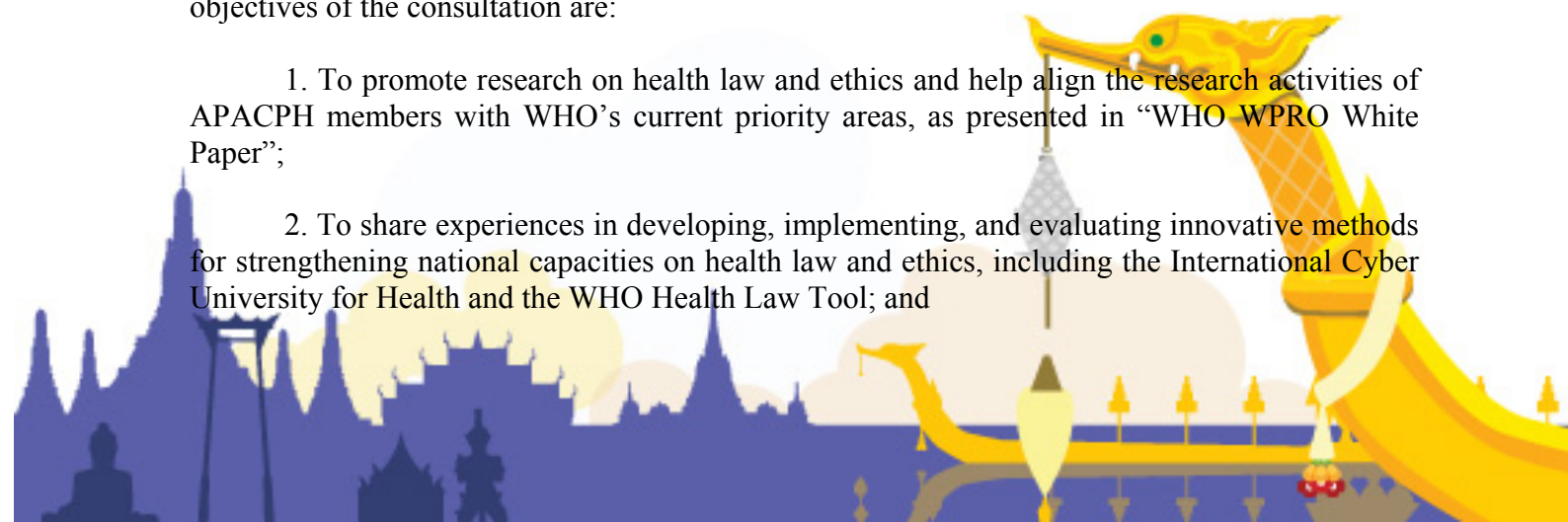
20 November 2019, 14:00~17:00, Mahidol University, Bangkok, Thailand

Objectives of Workshop

As the theme for this preconference workshop is “Innovations for Strengthening Capacities in Health Law & Bioethics”, this meeting aims to discuss about various strategies on how to improve training methods in support of countries across a broad range of health topics, with a focus on the role of law and ethics. The participants will review WHO’s priority areas, discuss the International Cyber University for Health platform, share examples of e-learning cases from other countries, and consider ways to strengthen cooperation between APACPH and WHO. The objectives of the consultation are:

1. To promote research on health law and ethics and help align the research activities of APACPH members with WHO’s current priority areas, as presented in “WHO WPRO White Paper”;

2. To share experiences in developing, implementing, and evaluating innovative methods for strengthening national capacities on health law and ethics, including the International Cyber University for Health and the WHO Health Law Tool; and





3. To explore opportunities for collaboration on health law and ethics between APACPH and WHO.

Organizing Partners

1. The event will be hosted by Asian Institute for Bioethics and Health Law.
2. The host will be supported by WHO CC for Health Law and Bioethics.
3. The event will be an open meeting, consisting of representatives of APACPH institutions and professors of Graduate School of Public Health at Yonsei University, who are working in multi-sectoral ways to support International Cyber University for Health.
4. WHO WPRO will provide technical and financial support for the event.

Technical Requirements

Audio-visual services including microphones, screen, and computer will be needed to enable showing presentations.



20 November 2019

Meeting Room 1610, Floor 6, Building no. 1

14.00 - 17.00

Topic 5: Teaching and learning for public health education

This meeting aims to formulate a white paper in Public Health and Global Health Education in Asia. During the meeting, several crucial educational methods to enhance public health and global health competency will be discussed. Deans and experts in public health from Indonesia, Brunei, USA etc. will share their significant experience on public health education.

Speakers:

- Professor Dr. Agustin Kusumayati
Dean, Faculty of Public Health, Universitas Indonesia, Indonesia
- Dr. Nik Annii Afiqahbitni Haji Mohammad Tuah
Universiti Brunei Darussalam, Brunei
- Associate Professor Dr. Elahe Nezami
Associate Dean, Keck School of Medicine, University of Southern California, USA
- Professor Dr. Vincente Y. Belizario, Jr.
University of the Philippines Manila, Philippines

Moderator:

- Associate Professor Dr. Chanin Chareonkul
Faculty of Public Health, Mahidol University, Thailand





51st Asia-Pacific Academic
Consortium for Public
Health (APACPH)
Conference

SDGs in Reality

Conference Programme

*November 21-22, 2019
Amari Watergate, Bangkok, Thailand*



November 21, 2019

07:30 – 08:30 **Registration** Floor 6

08:30 – 09:00 **Opening ceremony** Watergate Ballroom, Floor 6

Welcome Remark by Professor Dr. Banchong Mahaisavariya
*Acting President of Mahidol University, Thailand and
Chair of 51st APACPH Organizing Committee*

Welcome Remark by Professor Dr. Wah-Yun Low
President of APACPH, University of Malaya, Malaysia

Opening Remark by Associate Professor Dr. Soranit Siltharm
*Permanent Secretary, Ministry of Higher Education, Science, Research and
Innovation, Thailand*

Welcome Performance “Sound of Siam”

APACPH Award Presentation by Professor Dr. Wah-Yun Low, President of APACPH

1. APACPH Public Health Recognition Award

- Professor Dr. Myong-Sei Sohn
APACPH President Emeritus, South Korea

2. APACPH Excellence in Leadership Medallion Award

- Associate Professor Dr. Yupha Udomsakdi
Former Minister of Education, Thailand
- Professor Emeritus Dr. Piyasakol Sakolsatayadorn
Former Minister of Public Health, Thailand

3. APACPH Medal of Merit Award

- Professor Dr. Jung-Der Wang
Former Dean of College of Public Health, National Taiwan University, Taiwan
- Professor Dr. Banchong Mahaisavariya
Acting President of Mahidol University, Thailand

Group photo of awardees and APACPH organizing committee

09:00 – 09:30 **Press conference** Floor 8

09:00 – 10:00 **Keynote speeches** Watergate Ballroom, Floor 6

● **Climate and environmental emergencies and human wellbeing**

Dr. Stefanos Fotiou
Director, Environment and Development Division, United Nations ESCAP, Thailand

● **Ethics, public health and SDGs**

Dr. Somsak Chunharas
*Former Deputy Minister of Public Health and President of Thai National Health Foundation,
Thailand*





November 21, 2019

10:00 – 10:30	Refreshment and networking	Ballroom Foyer, Floor 6
10:30 – 12:00	Plenary session	Watergate Ballroom Floor 6

SDGs and public health: At present

Speakers:

- **Achieving the health SDGs by 2030: Challenges and opportunities**
Dr. Daniel Kertesz
WHO representative to Thailand
- **Gaps and goals: closing gaps and achieving goals for the case of Thailand**
Dr. Pattama Teanravisitsagool
Deputy Secretary General, Office of National Economic and Social Development Council
- **Health promotion is the linkage and innovative enabler of health and sustainable development**
Dr. Supreda Adulyanon
Chief Executive Officer Thai Health Promotion Foundation, Thailand

Moderator:

Associate Professor Dr. Nopraenu Sajjarax Dhirathiti
*Acting Vice President for International Relations and Cooperate Communication,
Mahidol University, Thailand*

12:00 – 13:00	Lunch break	Amaya Food Gallery, Floor 5
12:00 – 13:00	APJPH: Editorial board meeting	Bangsue, Floor 7
12:30 – 13:30	Turbo Talk presentation	Banglampoo, Floor 6

Chair : Professor Dr. Agustin Kasumayati
University of Indonesia, Indonesia

Co-chair : Associate Professor Dr. Yuvadee Rodjarkpai
Burapha University, Thailand

- T-1** **Clustering of acute diarrhoea among children of under five years old in Sabah, Malaysia**
Syed Sharizman Syed Abdul Rahim, Shamsul Azhar Shah, Mohammad Saffree Jeffree, et al.
- T-2** ***In vitro* evaluation of marine sediment-derived actinobacteria against two dominantly circulating *Leptospira* serovars in the Philippines**
Rosario Clarissa Marie M. Lota, Rafael Adriano P. Nalupta, Mariya Klodyn D. Patron, et al.
- T-3** **Surveillance of leptospirosis among animals in Iloilo province, Philippines**
Evalyn A. Roxas, Nina G. Gloriani, Philip Ian V. Padilla, et al.
- T-4** **Attitudes towards and beliefs about cancer and colorectal cancer (CRC) screening in Malaysia: A population-based survey**
Darishiani Paramasivam, Désirée Schliemann, Michael Donnelly, et al.
- T-5** **Premarital sexual behavior of pregnancy risk in adolescents: Qualitative case study in Pulogadung district health center, East Jakarta**
Prihayati, Hermawan Saputra, Ridwan Amiruddin
- T-6** **The contribution of women empowerment in improving maternal health**
Devi Syarief, Healthy Hidayanty, Ridwan Amiruddin, et al.

November 21, 2019

- T-7 Health care workers' perception on prevention of overweight and obesity among under 5 years old children in Fiji**
Masoud Mohammadnezhad, Sharan Ram
- T-8 Profile of nutritional status children aged 0-59 months in Banggai Regency, Central Sulawesi, Indonesia**
Aspar Abdul Gani, Lucy Widasari, Anang S. Otoluwa, et al.
- T-9 A school-based interventional study to improve healthy eating practices among Malaysian adolescents: Protocol for feasibility of quasi-experimental pilot trial**
Shooka Mohammadi, Tin Tin Su, Muhammad Yazid Jalaludin, et al.
- T-10 Examining depressive symptoms among parents with low socio-economic status in Kuala Lumpur, Malaysia**
Nur Asyikin Yakub, Nor Ba'yah Abdul Kadir, Suzana Mohd Hoesni
- T-11 Investigation of the status quo and influencing factors of obesity in young children in Hubei province**
Anli Yan, Haihang Jin, Suifeng Liu, et al.

13:00 – 13:30 Poster presentation

Banglampoo, Floor 6

13:30 – 15:00 Parallel session 1

Watergate Ballroom A, Floor 6

Antimicrobial resistance - A global health challenge

Speakers:

- **Addressing the global health challenge of antimicrobial resistance with a one health approach**
Dr. Mary Joy N. Gornoncillo, DVM, MTVSc, Ph.D.
*Emergency Centre for Transboundary Animal Diseases (ECTAD)
Food and Agriculture Organization of the United Nations (UN-FAO)
Regional Office for Asia and the Pacific (RAP)*
- TBA
Dr. Ronello Abila
World Organization for Animal Health (OIE) Sub-Regional Representative, Regional Representation for Asia and the Pacific, Thailand
- **Antimicrobial resistance: interface between global and national policies - Thailand perspective**
Dr. Nithima Sumpradit
Senior Pharmacist, FDA Thailand, Ministry of Public Health, Thailand
- **Private sector's role in antimicrobial use for sustainable food systems: Case studies of Betagro**
Mr. Rawat Chantong
Consultant - Livestock Management, Betagro, Thailand

Moderator:

Assistant Professor Dr. Walasinee Sakcamduang
Dean, Faculty of Veterinary Science, Mahidol University, Thailand



November 21, 2019

13:30 – 15:00 Parallel session 2

Watergate Ballroom B, Floor 6

Ecological approach for disease prevention and sustainability

Speakers:

- **Causes of the persistence of STHs in the field: Case study of Tha-Song-Yang in Thailand**

Associate Professor Dr. Poom Adisakwattana
Faculty of Tropical Medicine, Mahidol University, Thailand

- **Trop Med healthy border school**

Dr. Pannamas Maneekan
Faculty of Tropical Medicine, Mahidol University, Thailand

- **Integration of student-centered learning and social innovation to combat tropical diseases at community level**

Assistant Professor Dr. Saengduen Moonsom
Coordinator of Thailand One Health University Network, Mahidol University, Thailand

Moderator:

Professor Dr. Parmpen Viriyavejakul
Faculty of Tropical Medicine, Mahidol University, Thailand

13:30 – 15:00 Parallel session 3

Watergate Ballroom C, Floor 6

NCDs: Success and challenges

Speakers:

- **ICT patient engagement in the era of NCDs**

Dr. Ying-Wei Wang
Director General, Health Promotion Administration, Taiwan

- **How to wage a global war against NCDs: The Singapore story**

Professor Dr. Yik-Ying Teo
Dean, Saw Swee Hock School of Public Health, National University of Singapore, Singapore

- **Strategies to combat NCDs in Malaysia: The battle continues**

Dr. Nor Izzah Hj Ahmad Shauki
Ministry of Health, Malaysia

- **Empowering national capacity to beat NCDs: Thailand experiences**

Dr. Pairoj Saonuam
Director, Healthy Lifestyle Promotion Section, Thai Health Foundation, Thailand

Moderator:

Professor Dr. Hung-Yi Chiou
Taipei Medical University, Taiwan



November 21, 2019

13:30 – 15:00 Parallel session 4

Room A@7, Floor 7

Health literacy and health in all policies

Speakers:

- **Faculty of Public Health: Health literate faculty**
Associate Professor Dr. Chanuantong Tanasugarn
Dean, Faculty of Public Health, Mahidol University, Thailand
- **Developing interventions for community health literacy**
Associate Professor Dr. Roy W. Batterham
Thammasat University, Thailand and Swinburne University, Australia
- **Healthy city policy and health outcomes in Indonesia**
Professor Dr. Sukri Palutturi
Hasanuddin University, Indonesia

Moderator:

Dr. Nuttapun Supaka
Director, Partnership and International Relations Section, Thai Health Promotion Foundation, Thailand

13:30 – 15:00 Parallel session 5

Room C@7, Floor 7

Sustainable nutrition in the Asia-Pacific region

Speakers:

- **Moving towards a food-based strategy for sustainable nutrition in Asia**
Associate Professor Dr. Pattanee Winichagoon
Institution of Nutrition, Mahidol University, Thailand
- **APACPH dietary guidelines and sustainability**
Professor Dr. Colin Binns
Curtin University, Australia

Moderator:

Assistant Professor Dr. Carol Hutchinson
Faculty of Public Health, Mahidol University, Thailand

15:00 – 15:30 Refreshment and networking

Ballroom Foyer, Floor 6

15:30 – 17:00 Oral presentation

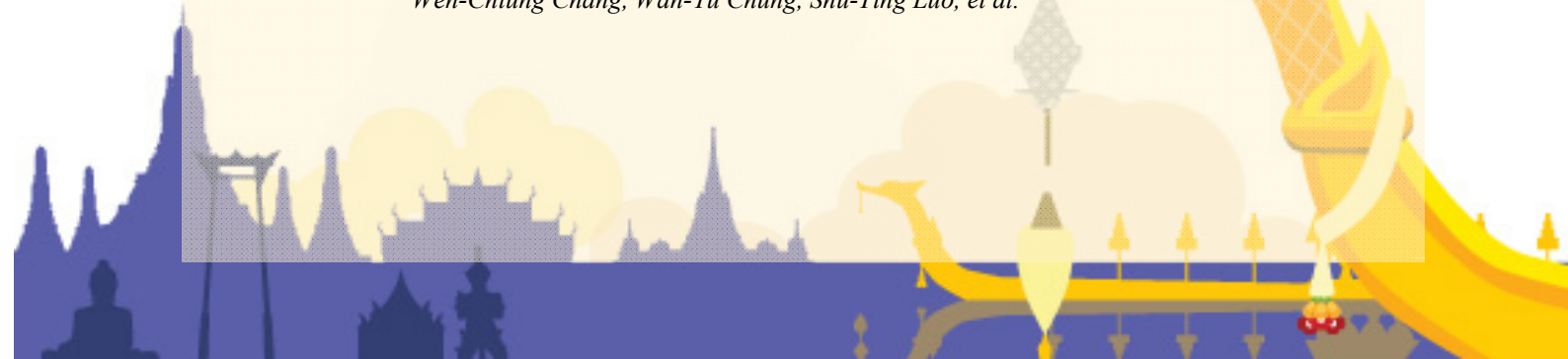
Watergate Ballroom A, Floor 6

Track 1: Emerging and re-emerging diseases

Chair : Dr. Rajendra Surenthirakumaran
University of Jaffna, Sri Lanka

Co-chair : Associate Professor Dr. Manee Chanama
Mahidol University, Thailand

- O-1** Incidence rates and risk factors of enterovirus 71 infections: A prospective cohort study in Taiwan
Wen-Chiung Chang, Wan-Yu Chung, Shu-Ting Luo, et al.





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- O-2** Treatment quality and outcome for multidrug-resistant tuberculosis patients in four Chinese provinces
Xubin Zheng, Qi Zhao, Yi Hu, et al.
- O-3** Are countries' self-reported assessments of their capacity for infectious disease control reliable? Associations among countries' self-reported international health regulation 2005 capacity assessments and infectious disease control outcomes
Feng-Jen Tsai, Mathuros Tipayamongkhogul
- O-4** Patient's perspective of satisfaction when antiretroviral therapy was task-shifted in northern Thailand
Tsutomu Kitajima, Saiyud Moolphate, Waranyu Jumnongparasatporn, et al.
- O-5** Detection and serotyping of *Legionella pneumophila* in cooling tower and faucets of selected intensive care units of a tertiary hospital in Philippines
Dianne Melody A. De Roxasa, Lilen DC. Sarola

15:30 – 17:00 Oral Presentation

Watergate Ballroom B, Floor 6

Track 2: Health promotion/health literacy/healthy city

Chair : Professor Dr. Maznah Dahlui
University of Malaya, Malaysia

Co-chair : Associate Professor Dr. Surintorn Kalampakorn
Mahidol University, Thailand

- O-6** model for improving the quality of life of drug resistant TB in the undata hospital in Palu in central Sulawesi province
Baharuddin Condeng, Muh Syafar, M. Furqaan Naiem, et al.
- O-7** Neighborhood built environment and leisure-time physical activity: A cross-sectional study in Southern China
Ting Yu and Yuliang Zou
- O-8** Effectiveness of a confidence-building intervention for breast feeding in a baby-friendly hospital in the Lao PDR
Keiko Nanishi, Chanthida Vanlasy, Sengchanh Kounnavong
- O-9** Correlates of sedentary behaviour in Asian adults: A systematic review
Andre Matthias Müller, Bozhi Chen, Nan Xin Wang, et al.
- O-10** Effectiveness of a culturally sensitive lifestyle intervention in reducing anthropometric parameters of mothers with a history of gestational diabetes mellitus- A community based comparative study
Thamudi Sundarapperuma, Sudharshani Wasalathanthri, Priyadarshika Hettiarachchi, et al.

15:30 – 17:00 Oral presentation

Watergate Ballroom C, Floor 6

Track 3: Non-communicable diseases and risk factors

Chair : Professor Dr. Sanjay Rampal
University of Malaya, Malaysia

Co-chair : Associate Professor Dr. Arporn Powwattana
Mahidol University, Thailand



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- O-11** Physical activity participation and the risk of chronic diseases among South Asian adults: A systematic review and meta-analysis
Susan Paudel, Alice J. Owen, Ebenezer Owusu-Addo, et al.
- O-12** Modifying effects of fruit and vegetable intake on the association between total fat intake and incident hypertension: A prospective cohort study among Chinese adults
Minzhe Zhang, Shuai Yuan, Qiqiang He
- O-13** Projection of the future prevalence of osteoarthritis in South Korea
Yunsun Jung, Young-Eun Kim, Dun-Sol Go, et al.
- O-14** Reasons to undergo screening for non-communicable diseases by apparently healthy people: A qualitative study from Sri Lanka
Thilini Herath, Manuja Perera, Anuradhani Kasturiratne
- O-15** Obesity factors in Indonesian women based on clinical breast examination
Sri Idaiani, Tince ArniatiJovina, Danny Fajar Mogsa, et al.

15:30 – 17:00 Oral presentation

Room A@7, Floor 7

Track 4: Community participation and mobilization/ injury prevention and disaster management/ oral health

Chair : Professor Dr. Victor Hoe
University of Malaya, Malaysia

Co-chair : Assistant Professor Dr. Tassanee Silawan
Mahidol University, Thailand

- O-16** Role of civil society organization and community-based reproductive health workers in providing reproductive health services in disaster-affected Delta areas in Ayeyarwady Region, Myanmar
Paing Soe, Aung Hpone Myint, Myat Sandi Min, et al.
- O-17** Association between early childhood caries and its maternal factors among young Cambodian children
Yu Kubota, Nhep San Pech, Callum Durward, et al.
- O-18** The relationship between the complete denture policy for the elderly and nutrition in Tainan
Chia-Jen, Teng, Pei-Shan Ho, Shu-Chuan, et al.
- O-19** Demonstration of high value care to improve oral health of a remote indigenous community in Australia
Sanjeeva Kularatna, Ratilal Laloo, Jeroen Kroon, et al.

15:30 – 17:00 Oral presentation

Room C@7, Floor 7

Track 5: Other public health relates

Chair : Professor Dr. Indika Karunathilake
University of Colombo, Sir Lanka

Co-chair : Associate Professor Dr. Oranut Pacheun
Mahidol University, Thailand

- O-20** Social and gender inequities and health systems: Immunisation among infants in Southeast Asian countries
Paolo Miguel Manalang Vicerra, Jeofrey Abalos





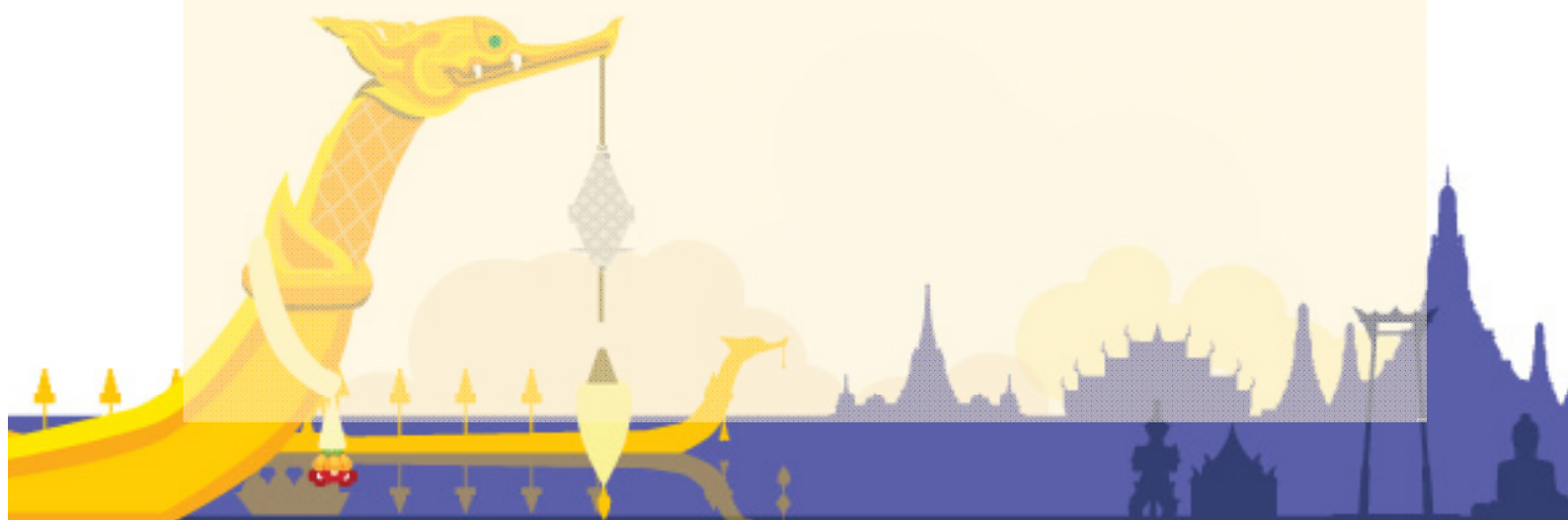
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- O-21** National and subnational burden of disease by socio-demographic index in Korea
Dun-Sol Go, Young-Eun Kim, Seok-Jun Yoon
- O-22** Trends of breast cancer mortality in Chinese women from 1990 to 2015: An age-period-cohort analysis
Yani Ding and Qing Liua
- O-23** Changes in perinatal mortality after the implementation of the two-child policy in Zhejiang Province China
Li-Qian Qiu, Wei-Wei Wu, Xiao-Bo Wang, et al.
- O-24** The potential of *Chanoschanos* (Milkfish) skin gel extract as an alternative approach in treating first degree burn
Brian Kenneth E. Eduarte, Nicole Andrey Acosta, Jenela Pauline Lumanlan, et al.

17:00 – 18:00	APACPH-CCHP meeting	<i>Floor 7(Room: TBA)</i>
18:00 – 20:30	Welcome reception	<i>Rooftop Garden, Floor 8</i>

Welcome reception: Green and healthy party

- Dress: National costume or smart casual
- Thai spicy and international dishes and alcohol-free cocktail
- Trio Band by College of Music, Mahidol University
- Special Performance “Khon”
- Traditional Thai dance “Ramwong”



November 22, 2019

07:30 – 08:30 Registration *Floor 6*

08:30 – 09:00 Keynote speech *Watgate Ballroom, Floor 6*

Mahidol sustainable university

Professor Dr. Banchong Mahasavariya
*Acting President of Mahidol University, Thailand and
Chair of 51st APACPH Organizing Committee*

09:00 – 10:00 Plenary session *Watgate Ballroom, Floor 6*

Social justice and social equity

Speakers:

- **Social justice and social equity: Policy packages in Thailand**
Professor Dr. Supasit Pannarunothai
Chair, Center of Health Equity, Thailand
- **Technology disruption for equity and social justice in public health**
Professor Dr. Sathirakorn Pongpanich
Dean, College of Public Health Science, Chulalongkorn University, Thailand

Moderator:

Professor Dr. Yik-Ying Teo
*Dean, Saw Swee Hock School of Public Health, National University of Singapore,
Singapore*

10:00 – 10:30 Refreshment and networking *Ballroom Foyer, Floor 6*

10:30 – 12:00 Parallel session 6 *Watgate Ballroom A, Floor 6*

Pollution and environmental health: Means or an end for SDGs

Speakers:

- **Children's environmental health: A challenge for SDGs"**
Professor Dr. Budi Haryanto
University of Indonesia, Indonesia
- **Total asbestos ban: From international conventions to national policies**
Assistant Professor Dr. Ro-Ting Lin
China Medical University, Taiwan

Speaker and Moderator:

- **SDGs and transboundary air pollution management**
Associate Professor Dr. Sarawut Thepanondh
Faculty of Public Health, Mahidol University, Thailand





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10:30 – 12:00 Parallel session 7

Watergate Ballroom B, Floor 6

Intentional and unintentional injury

Speakers:

- **Situation of occupational injury situation in Thailand**
Associate Professor Dr. Naesinee Chaiear
Faculty of Medicine, Khon Kaen University, Thailand
- **Innovation of One Stop Crisis Center (OSCC) in Numphong hospital, Thailand**
Dr. Wichai Ussavaphark
Numphong District Hospital, Khon Kaen, Thailand
- **Fall in the elderly, the challenging for SDGs**
Dr. Anuchar Settasatien
Thai Health Promotion Foundation, Thailand
- **Prevention unintentional injury in Thai children**
Dr. Chatchai Im-arom
*Child Safety Promotion and Injury Prevention Research Center,
Faculty of Medicine, Ramathibodi Hospital, Thailand*

Speaker and Moderator:

- **Road traffic injury**
Dr. Witaya Chadbunchachai
*Director, WHO collaborating center for injury prevention and safety promotion,
Thailand*

10:30 – 12:00 Parallel session 8

Watergate Ballroom C, Floor 6

How to ensure healthy lives at all ages?

Speakers:

- **Ensuring healthy lives from a newborn to childhood period**
Dr. Pongtong Puranitee
Faculty of Medicine Ramathibodi Hospital, Mahidol University, Thailand
- **Healthy literacy for healthy lives through non-formal and informal education?**
Mr. Prayut Lakkam
*Director, Department of Development and Promotion of Learning Innovation,
Office of Non-Formal and Informal Education, Thailand*

Speaker and Moderator:

- **From adulthood to older adults**
Dr. Orapitchaya Krairit
*Chief, Geriatric Medicine Division, Faculty of Medicine Ramathibodi Hospital,
Mahidol University, Thailand*



November 22, 2019

10:30 – 12:00 **Parallel session 9**

Room A@7, Floor 7

Area based health innovation

Speakers:

- **Healthy startup ecosystem and healthy environment: A case study of KIID**

Assistant Professor Dr. Rittirong Chutapruttkorn
Dean, Faculty of Architecture, Bangkok University, Thailand

- **Japanese initiatives for people living with dementia**

Miss Eri Yoshimura
Manager, Health and Global Policy Institute (HGPI), Japan

Moderator:

Dr. Nares Damrongchai
CEO, Thailand Center of Excellence for Life Sciences (TCELS), Thailand

10:30 – 12:00 **Parallel session 10**

Room C@7, Floor 7

Country experiences: Contemporary issues in public health

Chair : Dr. Maria Elena G Filio Borromeo

UNAIDS Country Director for Pakistan and Afganistan

Co-chair : Professor Betty Ya-Wen Chiu

Taipei Medical University, Taiwan

Speaker:

CE-1: Electronic media and early childhood social emotional development

Catherine Thamarai Arumugam, et al.

CE-2: Qualitative enquiry is essential to indigenous health promotion response for obesity epidemic in Fiji islands

Kamal Singh, et al.

CE-3: Perceptions of depression among Malaysian youth: A qualitative study

Nik Daliana Nik Farid, et al.

CE-4: Haze impacts on health: Direct medical cost of haze-related respiratory illnesses in public healthcare facilities

Hafiz Jaafar, et al.

12:00 – 13:00 **Lunch break**

Amaya Food Gallery, Floor 5

12:20 – 13:30 **Turbo Talk presentation**

Banglampoo, Floor 6

Chair : Professor Dr. Ma Sandra B Tempongko

Deputy Coordinator, SEAMEO Regional Tropical Medicine and Public Health Network

Co-chair: Dr. Arthit Phosri

Mahidol University, Thailand

T-12

A systematic review of health status of coastal community in Sabah, Malaysia

Amirah Azzeri, Goh Hong Ching, Hafiz Jaafar, et al.





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- T-13** Continuity of care in maternal comprehensive health services:
A literature review
Adriana Palimbo, A.Ummu Salmah, Ridwan Amiruddin, et al.
- T-14** Perceived benefit, perceived barrier and self-medication practice among rural people in Nepal
Sudhir Mishra, Nawarat Suwannapong, Mathuros Tipayamongkhogul, et al.
- T-15** Analysis on relationship between *Bacillus* and *Enterobacter* bacteria in air and hospital acquired infections potential in intensive care unit rooms of Dr. Wahidin Sudirohusodo hospital
Owidan Wisudawan B, Anwar Mallongi, Anwar Daud, et al.
- T-16** The impact of air pollution control measures for the Beijing Olympics in 2008 on reducing respiratory and cardiovascular disease
Yi-Ting Lin, Hathaichon Boonhat, Ro-Ting Lin
- T-17** Phthalate and their exposure from PVC floor maternal
Kamonwan Promtes, Bunyarit Panyapinyopol, Suphaphat Kwonpongsagoon, et al.
- T-18** The religion quality improvement for primary health care character in South Sulawesi
Muhammad Tahir, Ridwan Amiruddin, Sukri Palutturi, et al.
- T-19** Satisfaction evaluation of national health insurance patient; upgrade of care class at Lasinrang Pinrang general hospital
Marwah Thaha, Amran Razak, Indar, et al.
- T-20** Barriers for underutilization of maternal and child health services in Indonesia: A qualitative perspective
I Ketut Swarjana, Natkamol Chansatitporn, Nawarat Suwannapong, et al.
- T-21** Does the health insurance governance system support health care programs?
Rini Anggraeni, Syahrir A. Pasinringi
- T-22** A long-term care policy and smart care solution in Taiwan.
Yu-Sheng Lin, Korravarn Yodmai
- T-23** Development of T-CBT model to improve the competence of midwives in prevention of depression in victims of child sexual violence
Triana Indrayani, Sukri Palutturi, Ridwan Amiruddin, et al.

13:00 – 13:30 **Poster presentation**

Banglampoo, Floor 6

13:30 – 15:00 **Oral presentation**

Watergate Ballroom A, Floor 6

Track 6: Life course health

Chair : Professor Dr. Kazuhisa Miyashita
Wakayama Medical University, Japan

Co-chair: Associate Professor Dr. Orawan Kaewboonchoo
Mahidol University, Thailand

- O-25** Depression and associated psychosocial factors among post-partum mothers in Medical Officer of Health area Kolonnawa, Colombo, Sri Lanka
Shermi Jayasumana, Kasun Wasala

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- O-26** Socioeconomic status, health behaviors and children's body mass index in China: Longitudinal study
Jing Liang, Peigang Wang
- O-27** Effect of progressive muscle relaxation training and nursing information support on anxiety of elderly multiparas
Quan Shen, Yan-Qiong Ouyang, Shan Ju
- O-28** Life expectations, reasons for school dropouts and health related problems among adolescents and youth Not on Education, Employment or Training (NEET) in Anuradhapura district
Dilhari G.I., Dilrukshi K.L.S., Dias W.P.N., et al.
- O-29** Social network diversity and active aging among the Japanese elderly persons, a survey in 2019
Myo Nyein Aung, Motoyuki Yuasaa, Satomi Ureno, et al.
- O-30** Factors associated with the continuum of care for maternal, newborn and child health care services in the Gambia
Jiyoung Oh, Kyung Hee Kim, Jae Wook Choi

13:30 – 15:00

Oral presentation

Watergate Ballroom B, Floor 6

Track 7: Occupational and Environmental Health

Chair : Associate Professor Dr. Chalermchai Chaikittiporn
Thammasat University, Thailand

Co-chair: Assistant Professor Dr. Plernpit Boonyamalik
Mahidol University, Thailand

- O-31** Leptospirosis among urban service workers in Sabah, Malaysia Borneo 2017
Mohammad Saffree Jeffree, Azman Atil, Rohaizat Hassan, et al.
- O-32** Recognition and prevention of overwork-related cerebrovascular and cardiovascular disease in Taiwan
Ro-Ting Lin
- O-33** Residential radon and histological types of lung cancer: A meta-analysis of case-control studies
Cong Li, Wenshan Zhou, Jun Yu, et al.
- O-34** Leukemia and petrochemical exposure: A meta-analysis
Hathaichon Boonhat, Ro-Ting Lin
- O-35** Temporal variation of the association between particulate matter and hospital admission for cardiovascular disease in Bangkok, Thailand
Arthit Phosri
- O-52** Built environment and its influences on walking habits in Seoul, Korea
Changwoo Shon, Jungah Kim





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13:30 – 15:00 Oral presentation *Watergate Ballroom C, Floor 6*

Track 8: Health for all and health in all policies

Chair : Professor Dr. Phillip Baker
Deakin University, Australia

Co-chair: Associate Professor Dr. Charuwan Tadadej
Mahidol University, Thailand

- O-36** Do lower medication costs increase the incentive for smokers' quit attempts after relapse?
Yi-ei Wang, Ying-Wei Wang, Yi-Wen Tsai, et al.
- O-37** Childhood immunization in post-conflict, hard-to-reach areas by collaboration between ethnic health organizations and government providers in Kayin State, Myanmar
Myat Sandi Min, Sithu Naing, Wai Linn Kyaw, et al.
- O-38** Patterns of access to maternal, newborn, and child health services by parents' employment status and health insurance eligibility in Cambodia: A cross-sectional study
Akira Shibanuma, Inrasothythep Neth, Kim Net, et al.
- O-39** Towards understanding socioeconomic inequalities in unmet healthcare needs in Korea
Jongnam Hwang
- O-40** Trend in mortality of viral hepatitis associated with economic and healthcare policy development in China: An age-cohort-period characteristic analysis
Ying Li, Junfeng Jiang, Jianchuan Qi, et al.
- O-41** Review of equity in access, quality and health system of maternal mortality towards effective universal health coverage in Indonesia
Rooswanti Soeharno, Budi Hidayat

13:30 – 15:00 Oral presentation *Room A@7, Floor 7*

Track 9: Health in marginalized population

Chair : Professor Dr. Masamine Jimba
University of Tokyo, Japan

Co-chair: Assistant Professor Dr. Pensri Watchalayann
Thammasat University, Thailand

- O-42** Understanding lived experiences of at-risk teenage boys in Taiwan through photovoice
Victor Hsiao, Sunya Chen, Mellissa Withers
- O-43** Physical and mental health of live-in female foreign domestic Workers. A quantitative survey in Hong Kong
Roger Yat-Nork Chung, Jonathan Ka-Long Mak
- O-44** Relationship of HIV prevention and treatment services utilization, risky behaviors and HIV risk among drug users in the border areas of Yunnan, China: A latent class analysis
Han Wang, Hong Yan

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O-45	Women with physical disabilities in Northern Vietnam: Impacts of pregnancy on their life <i>Thi Vinh Nguyen, Julie King, Niki Edwards, et al.</i>	
O-46	Health care-seeking behavior during delivery among women having children under five years of age in rural areas of Kachin State, Myanmar <i>Nay Zar Win, Bang-on Thepthein</i>	
13:30 – 15:00	Oral presentation	<i>Room C@7, Floor 7</i>
Track 10: Health and social innovation and health technology		
Chair : Professor Dr. Bruce Maycock <i>Curtin University, Australia</i>		
Co-chair: Associate Professor Dr. Usa Lek-Uthai <i>Mahidol University, Thailand</i>		
O-47	Sports monitoring with flying drones (moving aerial cameras) maybe cost efficient if injuries are prevented <i>Deborah Hilton</i>	
O-48	Validity of anthropometric and percentage body fat values estimated from a novel computer-based body image assessment program <i>Masaharu Kagawa, Sayumi Iwamoto, Kiyoko Sugita, et al.</i>	
O-49	Performance of rapid diagnostic tests for malaria diagnosis in children: A systematic review <i>Wen-Jun Zhu, Wen-Ru Shang, Yan-Qiu Du, et al.</i>	
O-51	Behavior problems among grade eight school children in Jaffna district, Sri Lanka; Prevalence correlates and the effectiveness of a yoga based intervention package <i>J.T. Sivashankar, N. Sathiakumar, R. Surenthirakumaran</i>	
15:00 – 15:30	Networking and refreshment	<i>Ballroom Foyer, Floor 6</i>
15:30 – 17:30	Closing ceremony	<i>Watergate Ballroom, Floor 6</i>
15:30 – 16:00	Award presentation <ul style="list-style-type: none"> • Photo Competition <i>By Professor Dr. Indika Karunathilake</i> • Oral/Poster presentation <i>By Associate Professor Dr. Chakrit Hirunpetcharat</i> 	
16:00 – 16:30	Keynote speech: Health road and belt and SDGs Professor Dr. Wang Hui <i>Dean, School of Public Health, Shanghai Jiao Tong University, China</i>	
16:30 – 17:00	Dialogue: Public health and global health education and SDGs <ul style="list-style-type: none"> ▪ Professor Dr. Wah-Yun Low <i>President of APACPH&APJPH Editor-in-Chief, University of Malaya, Malaysia</i> ▪ Professor Dr. Kee-Seng Chia <i>National University of Singapore, Singapore</i> 	





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17:00 – 17:10 **Closing remark**

Professor Dr. Wah-Yun Low

President of APACPH&APJPH Editor-in-Chief, University of Malaya, Malaysia

17:10 – 17:20 **52nd APACPH conference host presentation**

University of Airlangga, Indonesia

17:20 – 17:30 **Closing Chorus “Oh I Say & Singing In the Rain & Lego House”**

By College of Music, Mahidol University



51st APACPH Conference: SDGs in Reality
November 21-22, 2019

51st Asia-Pacific
Academic Consortium for
Public Health (APACPH)
Conference

SDGs in Reality

Keynote, Plenary & Parallel

*November 21-22, 2019
Amari Watergate, Bangkok, Thailand*





Keynote

November 21, 2019; 09.00 – 10.00 hrs
Watergate Ballroom, Floor 6

Title: Climate and Environmental Emergencies and Human Wellbeing

Dr. Stefanos Fotiou

Director, Environment and Development Division United Nations ESCAP



Stefanos Fotiou is the Director of the Environment and Development Division in the UN ESCAP. Stefanos is responsible for the planning and implementation of the UN ESCAP work on natural resources management, climate change, sustainable urban development and green economy. Prior to this Stefanos worked for 10 years in the UN Environment Programme in various roles in the Economy Division and in the Asia-Pacific office. Throughout his career, Stefanos has taken leading roles in international forums, has conceptualised and led the development of regional and national strategies on environment and sustainable development and his work has been published and referenced. He holds a PhD in Natural Resource Economics, a Master in Information Systems, and a Master in Forestry and Natural Environment.

Abstract

The escalation of the impacts of climate change and other environmental emergencies like air pollution has a profound impact on the human wellbeing. The entire human development process has been jeopardised because of the health and other impacts of the environmental emergencies in the population and specifically in vulnerable groups like urban and rural poor. Confronting the impacts of climate and environmental emergencies is a challenge but it is something that it is feasible provided that there is a mix of political leadership, leverage of investments from private sector and behavioural change of people. The presentation will outline some “low hanging fruits” in terms of specific action in these areas and provide recommendations for future work.



Keynote

November 21, 2019; 09.00 – 10.00 hrs

Watergate Ballroom, Floor 6

Title: Ethics, Public Health and SDGs

Dr. Somsak Chunharas, MD, MPH

Former Deputy Minister of Public Health and President of Thai National Health Foundation



Dr. Somsak Chunharas, is presently the president of National Health Foundation, a Thai NGO, working on knowledge-based health policy and system development. Graduated 1977 with degree in medicine from Mahidol university Thailand and board certified in preventive medicine with master degree in Public health from The Royal Tropical Institute, Netherland. Extensive work experiences from being a physician and director in community hospitals in rural Thailand to international health and health planning to deputy minister of health.

Specific areas of interest and experiences include health policy and system research, health insurance system, health equity, research ethics, information system, human resource development, knowledge management and learning organization with articles and book chapters in Thai and English.





Keynote

November 22, 2019; 08.30 – 09.00 hrs
Watergate Ballroom, Floor 6

Title: Mahidol Sustainable University

Professor Dr. Banchong Mahasavariya, M.D.

Acting President of Mahidol University and Chair of 51st APACPH Organizing Committee



Professor Dr. Banchong Mahasavariya completed his medical degree, internship and residency training in Orthopaedic Surgery at the Faculty of Medicine Siriraj Hospital, Mahidol University in 1983. In 1993 he returned to Mahidol University as an Associate Professor, rising to become Dean of the Faculty of Graduate Studies, Vice President, and then Acting President of Mahidol University. Professor Mahasavariya was also a founding member of the Asian Association of Dynamic Osteosynthesis, and serves as the President of the Royal College of Orthopaedic Surgeons of Thailand. He has served on several committees in international Orthopaedic Societies such as the ASEAN Orthopaedic Association, and also serves on the editorial board of several international journals.



Plenary: SDGs and Public Health: At Present

November 21, 2019; 10.30 – 12.00 hrs
Watergate Ballroom, Floor 6

Title: Achieving the Health SDGs by 2030: Challenges and Opportunities

Dr Daniel Kertesz

WHO Country Representative



Daniel Kertesz has been working with the World Health Organization since 1997. Most recently, Dr Kertesz was the WHO Representative in Mozambique (2012-2016). During this period, he was deployed to serve as the WHO Representative a.i. in Sierra Leone (August 2014-March 2015) to lead WHO's Ebola response activities within the country. From July to December 2015, he was seconded to WHO headquarters to serve as the Director of the Project Team working on reform of WHO work in emergencies.

Dr Kertesz began his WHO career in Mali, where he was responsible for Polio Eradication activities and the Expanded Program on Immunization. He continued this work as the Immunization team leader with WHO/Angola, and then as WHO Representative in Guinea Bissau and Ghana.

Prior to joining WHO, Dr Kertesz was Chief of the Division of Respiratory Diseases at Health Canada. Dr Kertesz is a medical doctor specialized in internal medicine and infectious diseases. He holds a Master's degree in Epidemiology from the London School of Hygiene and Tropical Medicine and is a fellow of the Royal College of Physicians and Surgeons of Canada.





Plenary: SDGs and Public Health: At Present

November 21, 2019; 10.30 – 12.00 hrs
Watergate Ballroom, Floor 6

Title: Gaps and goals: closing gaps and achieving goals for the case of Thailand

Dr. Pattama Teanravisitsagool

*Deputy Secretary General, Office of National Economic and Social Development Council
November 21, 2019 during 10.30 - 12.00 hours*



Dr. Pattama Teanravisitsagool is the Deputy Secretary General, Office of the National Economic and Social Development Council. She has an extensive experience of working in the monitoring social situation and outlooks. She also developed the social database and indicators for national progress index for sustainable development. She was the executive director at macroeconomic policy and strategy office.

Abstract

The reality of SDGs in Thailand is the remaining gaps to be closed in all aspects. Achieving goals are being challenged in the VUCA world¹ where there are various unforeseeable factors. Awareness and momentum of implementation must be encouraged in all parts of Thai society. The meaning of SDGs must be strategically communicated in an understandable and realistic fashion. Moreover, well-planned SDGs financing needs to be addressed in a more integrated and coherent framework.

The SDGs framework adopted since 2016 fits well with the long term development goal stipulated under the Thailand's 20 year national strategy covering the period of 2018-2037. Under the long term strategy, Thailand is aimed to become a developed nation with security, equity, prosperity and sustainability. These characteristics reflect well the 5Ps under SDGs. Under Thailand's long term strategy, indicators, objectives and goals in all development dimensions are set qualitatively and quantitatively to ensure that actionable plans and programs would be well-designed and effectively executed in coherent manners. These include, for example, (1) per capita income is set to rise to the level of high income country's from approximately 8,000 USD per year in 2019; (2) economic growth and income generation are to be based on broadening economic bases inclusively while total factor productivity and labour

¹ V = vulnerability, U=uncertainty, C=complexity, A=ambiguity

productivity are to be increased 2%-3% per year; (3) science, technology and innovation (STI) development are to be invested in and drive the development while Thailand is aimed to be in the top 20 ranked in the competitiveness context; (4) economic and social opportunities especially opportunities to access to good quality public services are to be broadened optimally while GiNi coefficient is set at 0.36 against 0.48 currently; (5) forestry, one of the key indicators reflecting green development, is set to be at around 40% of the total area. The objectives and indicators under the 17 SDGs are being included to describe these long term goals.

The progress made under the SDGs implementation so far suggests that there are remaining gaps which could be challenged in a rapid changing world. Looking at health dimension in particular, health insurance schemes cover approximately 99.94% of Thai population. However, the gaps and challenges remain on the health care quality which has been very much spatially diverse across the country. Various indicators especially on resources allocation point to disparity in services' quality provided. This situation could be challenged further with a rapid demographic change towards aged society with lingering higher poverty ratio among elderly as compared to other cohorts. Meanwhile, the cases of non-communicable disease (NCD) have been increasing especially among elderly.

Moving forward, there are challenges which would significantly affect the success of SDGs implementation. These include, for instance, the rapid demographic change towards aged society, globalization, urbanization, disruptive technology and climate changes. There are definitely positive and negative impacts of these factors on all dimensions of sustainability unless risk management plan are put in place. There are also some macro and micro paradox which need to be considered. Inevitably, policy innovation is needed to ensure that policy responses are rightly subscribed, targeted, monitored and evaluated. Importantly, policy cycle must be a double learning loop so that policy design and implementation would be reacted to timely. A strategic framework must be laid out to truly reflect all the dimensions and indicators affecting health directly and indirectly. Joint key performance indicators need to be imposed under M&E framework to ensure effective employment of public budget. Importantly, participatory approach and public-private partnership must be strengthened in order to promote healthy living and health prevention.





Plenary: SDGs and Public Health: At Present

November 21, 2019; 10.30 – 12.00 hrs
Watergate Ballroom, Floor 6

Title: Health Promotion is the linkage and innovative enabler of health and sustainable development

Dr. Supreda Adulyanon

*Chief Executive Officer, Thai Health Promotion Foundation
Bangkok, Thailand*



Dr. Supreda Adulyanon is one of the leading experts in innovative health financing and health promotion movement in Thailand and Asia. He is well known internationally for his work on supporting countries on sustainable health financing mechanism, and on addressing major health risks control for NCDs in Thailand, such as tobacco and alcohol. Currently, he is the Chief Executive Officer of the Thai Health Promotion Foundation (ThaiHealth), the forefront national agency which catalyzes, motivates, supports, and coordinates health promotion movement in Thailand to over 20,000 multi-sectoral partner organizations in Thailand and abroad since 2001.

Prior to joining ThaiHealth, he was a lecturer and senior administrator at the Faculty of Dentistry, Khon Kaen University, Khon Kaen, Thailand. He served as the Deputy Chief Executive Officer of ThaiHealth and its Director of the Major Risk Factors Control section, overseeing Tobacco Control Plan, Alcohol Control Plan and Road Traffic Accident Prevention Plan at the ThaiHealth. He was instrumental in Thailand achievements and improvement in reducing the national health burden derived from those three major risk factors.

On academia front and has written and published numerous articles about health promotion and the innovative health financing model.



Abstract

In the 21st century, good public health can be interpreted as both precondition and an indicator for sustainable development. Ensuring healthy lives and promoting well-being for all at all ages is one of the 17 sustainable development goals (goal 3). However, most of the 17 goals are established social, economic, and environmental determinants of health: ending poverty, improving nutrition and food security, ensuring inclusive and quality education, achieving gender equality and female empowerment, ensuring water and sanitation, sustainable economic growth, employment and decent work and creating safe and resilient cities which are to deliver health for all. The broader conceptualization of public health within the SDG framework reflects calls from much of the global health community to break away from the silo approach. Health promotion concepts, models, practical actions and public policies can not only contribute to achievement of the SDG 3 (health goal), but also to achieving progress across wide range of the 17 goals.

Health promotion interventions have been proven to effective in addressing many social, economic and environmental determinants of health. Health promotion approaches such as action across sectors underpinned by health in all policies, and social mobilization underpinned by effective community engagement in health are important strategies for integrated health promotion actions. Public policies developed in other sectors can have profound effect on health and sustainable development. Empowerment and active participations of communities in the settings where they create health, wealth, and social development are fundamental to the achievement of health and sustainable development. Health literacy means not only understanding individual risk behaviours or knowledge but also understanding of factors determining their health and well-being.

Thai Health Promotion Foundation (“ThaiHealth”) is Thailand’s health promotion fund set up in 2001, derived its income from 2% surcharged excise tax on tobacco and alcohol products, making it a win-win model for innovative and sustainable financing for health promotion. It has demonstrated that there is a possibility of effective funding & enabling process for health and social development.





Plenary: Social justice and social equity

November 22, 2019; 09.00 – 10.30 hrs
Watergate Ballroom, Floor 6

Title: Social justice and social equity: Policy packages in Thailand

Professor Dr. Supasit Pannarunothai
Chair, Center of Health Equity, Thailand



Plenary: Social justice and social equity

November 22, 2019; 09.00 – 10.30 hrs
Watergate Ballroom, Floor 6

Title: Technology disruption for equity and social justice in public health

Professor Dr. Sathirakorn Pongpanich

Dean, College of Public Health Science, Chulalongkorn University, Thailand





Parallel 1: Antimicrobial resistance - A global health challenge

November 21, 2019; 13.30 - 15.00 hrs
Watergate Ballroom A, Floor 6

Title: Addressing the Global Health challenge of antimicrobial resistance with a One Health approach

Dr. Mary Joy Goroncillo
FAO ECTAD AMR Programme Coordinator



Parallel 1: Antimicrobial resistance - A global health challenge

November 21, 2019; 13.30 - 15.00 hrs
Watergate Ballroom A, Floor 6

Title: TBU (To be uploaded)

Dr. Ronello Abila

World Organization for Animal Health (OIE) Sub-Regional Representative, Regional Representation for Asia and the Pacific





Parallel 1: Antimicrobial resistance - A global health challenge

November 21, 2019; 13.30 - 15.00 hrs
Watergate Ballroom A, Floor 6

Title: Antimicrobial resistance: interface between global and national policies – Thailand perspective

Dr. Nithima Sumpradit

Senior Pharmacist,

Bureau of Drug Control Food and Drug Administration, Ministry of Public Health, Thailand



Dr. Nithima Sumpradit is a senior pharmacist at the Food and Drug Administration, Ministry of Public Health, Thailand. She is a lead, multi-sectoral coordinator for Thailand's National Strategic Plan on AMR and also a program manager for the Royal Thai Government – WHO Country Cooperation Program on AMR. She started engaging in this field via the Antibiotics Smart Use program that was piloted in 2007, and then adopted into national policies in promoting appropriate use of antibiotics in Thailand. She received bachelor's degree is in Pharmaceutical Sciences, Mahidol University. Her Master's Degree is in Health Promotion and Behavior from the University of Georgia, and her Ph.D. is in Pharmacy Social and Administrative Sciences at the University of Michigan.

Abstract

2015 and 2016 are pivotal years as antimicrobial resistance (AMR) earns its mark at the global level. The WHO Global Action Plan on AMR (GAP-AMR) was adopted in 2015, followed by the adoption of the FAO Action Plan on AMR and the OIE Strategy on AMR in 2016. Also, in 2016, the Political Declaration of the High-Level Meeting of the General Assembly on AMR was adopted to support actions under the One Health Approach and establish the Inter-agency Coordination Group (IACG) to provide practical guidance for approaches needed to ensure sustained effective global action to address AMR.

2017-present is a transition phase from policy to actions. Progress has been observed. At the national level, countries are urged to have a national action plan on AMR (NAP-AMR) by 2017, stated in the GAP-AMR. During 2017-2018, 93 countries developed NAP-AMR. Of these, 19 countries have obtained government approval for the plan, created monitoring arrangements, had funding identified, and successfully established multi-sectoral collaboration. Thailand is one of them. Thailand's National Strategic Plan on AMR 2017-2021 (NSP-AMR) was endorsed by the cabinet in 2016. The implementation yields significant progress but lots of challenges still lie ahead. In 2019, a mid-term review for NSP-AMR is conducted to assess the implementation gaps to adjust the operational plans.

Because AMR is a global health issue, no country can address AMR in isolation. Additionally, countries are at different stages and have different capacities in handling AMR issues. The collaborations across the national, regional and global levels are needed to sustain global policy momentum and facilitate country actions in addressing AMR. Examples of regional and global actions are the establishment of the Regional Tripartite (FAO/OIE/WHO) Secretariat for One Health with focus on AMR to cascade tripartite collaboration from global to regional levels in order to support national actions, and the translation of IACG recommendations into actions to sustain the global momentum that could accelerate national actions against AMR.

In conclusion, AMR is one of the most serious global health problems. Multi-sectoral and multi-level collaborations under the One Health Approach are essential to sustain the global momentum and support the national action, which is the key leverage point for addressing AMR.





Parallel 1: Antimicrobial resistance - A global health challenge

November 21, 2019; 13.30 - 15.00 hrs
Watergate Ballroom A, Floor 6

**Title: Private sector's role in antimicrobial use for sustainable food systems:
Case studies of Betagro**

Mr. Rawat Chantong

Consultant - Livestock Management, Betagro, Thailand



Mr. Rawat Chantong renowned personal for the livestock and farming. He has been working in the field of livestock since 1986. He started working in Betagro in swine breeding farm since 1986. He worked in the operated specific pathogenic free pigs farm in 1993. He introduced Electronic Sow Feeding in Betagro farm for animal welfare purpose. Since 2017, he started to conduct Raise Without Antibiotic in pigs. He has a degree in Animal Science and Animal Breeding.



Parallel 2: Ecological approach for disease prevention and sustainability

November 21, 2019; 13.30 - 15.00 hrs
Watergate Ballroom B, Floor 6

Title: Causes of the persistence of STHs in the field: Case study of Tha-Song-Yang in Thailand

Associate Professor Dr. Poom Adisakwattana
Faculty of Tropical Medicine, Mahidol University



Dr. Poom Adisakwattana is Associate Professor in the Department of Helminthology. He earned his Ph.D. in Biomedical Sciences from Thammasat University, Thailand. He was a postdoctoral researcher in the Inflammation and Immunity group at Trinity College, Dublin, Republic of Ireland. His research focuses on host-parasite interaction with association to host immune response.

Dr. Poom's research expertise include molecular diagnosis of helminthic infections and development of molecular proteins as a noble therapy for complications caused by parasitic infections such as schistosomiasis and trichinosis. He is experienced in using molecular techniques to identify proteins secreted from parasites, which can be used as a diagnostic tool.

Abstract

Soil-transmitted helminths (STH) affect health status of human, especially preschool- and school-aged children worldwide. To prevent and control, several strategies have been invented and applied, such as mass drug administration, health education and activity-based implementation. In this regard, we set up observational study in students in local schools and surrounding communities along Thai-Myanmar border, Tha-Song-Yang, Tak province. Growth and health status of children have been monitored and associated with intestinal parasitic infection and nutrition. Mass anthelmintic drug has been administered and fecal examination has been monitored at 1, 2 and 6 months to assess drug efficacy and re-infection. STH eggs contaminated in the environment has been investigated and fecal examination in the reservoir animals will be performed in the near future. The outcome of our study will be translated to key stakeholders including children, teachers, guardians, health personals and local government to engage and empower one health approach against STH in the community.





Parallel 2: Ecological approach for disease prevention and sustainability

November 21, 2019; 13.30 - 15.00 hrs
Watergate Ballroom B, Floor 6

Title: TropMed Healthy Border School

Dr. Pannamas Maneekan

Faculty of Tropical Medicine, Mahidol University



She graduated in nursing science, master in Community Medicine from Chulalongkorn University and doctoral degree at Tropical Medicine Faculty, Mahidol University Research expertise, teaching and researching based mainly on community-based approaches and interdisciplinary perspectives in public health and school health research, education and training Research area in dengue, malaria and school health.

Abstract

Teachers play a vital role of students not only learning but also student life in school, while health sectors support student health in school. Although, primary prevention activities to promote healthy in school are established, but there are some diseases still dynamic especially in the remote area. School Health Activities Development Project was developed and done under the Academic health service project for students and communities in the remote areas by Tropical Medicine Faculty during 2018-19. This project focused on school teacher which aimed to strengthen Tropical Medicine related - health in border school. Two-days' workshop training during March 2019, scoped in eight topics: Tropical Medicine situation, Sanitation, Nutrition, Health behavior, Happiness promotion Skill, School safety, School health volunteer and school Network. Participants were 45 teachers from Mae Salid Luang school and 2 teachers from Child care center, Ta Son Yang District, Tak Province. Among 43 completed pre/post-test teachers, 40 (93.3%) passed 6-10 scores from 10 and 34 (79.1%) equal and increase in post-test score. For workshop group work, participants analyzed health relate problem in school based on student age and seven projects were created which four of them were related to health hygiene: 1) prevention common cold in child care center, 2) clean skin kids among kindergarten, 3) lice control in grade 1, 4) beautiful teeth kids among grade 2-3. Organic vegetable cultivation project created for students in grade 4. Another two projects were school health volunteers united to be healthy project for student in grade 5-6, and mental health care about game in secondary student. During school visiting August 2019, some projects developed in concrete, such as hygiene related projects, organic vegetable cultivation. However, there many factors that influence healthy in school students: school policy, a movement for work of human resource, household hygiene and culture etc., so the improvement to be a healthy status needs the collaboration development which keep move forward.

Parallel 2: Ecological approach for disease prevention and sustainability

November 21, 2019; 13.30 - 15.00 hrs

Watergate Ballroom B, Floor 6

Title: Integration of students centered learning and social innovation to combat tropical diseases at community levels

Assistant Professor Dr. Saengduen Moonsom, Coordinator

*Thailand One Health University Network (THOHUN) and
THOHUN National Coordinating Office*



Assistant Professor Dr. Saengduen Moonsom is currently a teaching staff of Faculty of Tropical Medicine, Mahidol University and serves as Coordinator of Thailand One Health University Network (THOHUN) and THOHUN National Coordinating Office. She holds BSc in Medical Technology from Chiang Mai University and M.Sc. and Ph.D in Molecular Genetics and Genetic Engineering from Institute of Molecular Biosciences, Mahidol University, Thailand with full support from the Royal Golden Jubilee PhD scholarship, Thailand Research Fund (TRF), Thailand. She was postdoctoral fellow of School of Crop Production Technology, Suranaree University of Technology, Nakhon Ratchasima, Thailand, during 2011-2012.

At national level, she has officially appointed as secretary of national strategic committee on preparedness prevention and solving of Emerging Infectious Diseases (2017 - 2021): Future workforce development working group and Deputy Chair of national strategic committee on preparedness, prevention and solving of Emerging Infectious Diseases (2017 - 2021) in academic institutions. She serves as a lead and consultant for development and implementation and program assessment for Outcome Based Education of some academic institutes in Thailand. She also manages One Health implementations for THOHUN and serves as trainers for OH capacity development at both national and regional levels. Beside capacity building, her researches focus on immunological and molecular studies and diagnostic development for tropical diseases, particularly protozoal diseases. Her students and researches have been awarded by TRF, Mahidol University and DAAD from 2013 -2019.





Abstract

Thailand One Health University Network (THOHUN) is comprised of 61 faculties of 10 leading Thai universities. The network aims to prepare competent Thai students and health workers, who can collaborate with multi-disciplinary professionals for effective surveillance, detection, control, and response to emerging and re-emerging infectious diseases and antimicrobial resistance. Key roles of THOHUN is assisting Thai government in “future workforce development” and improving multi-sectoral coordination and other OH capacity of health workers and professionals. More than ten of high impact and participatory educating/training modules have been developed or integrated into existing curricula of university members. About 150 of multi-disciplinary educators, 900 public health, livestock volunteers, and health professionals, and 200 students (OH Ambassadors) have been trained and mobilized to conduct 107 activities resulting in 4,000 of trained students and health professionals and 40 published articles in international journals until 2018. Among these, student-centered, community intervention based and peer to peer learning through the "International Short Course on Ecosystem Health" and "Student One Health Camp" are high impact platforms found to significantly improve technical and OHCCs of future workforces, which can be used as models and expanded to keep up with foreseeable demands for OH-trained future and current workforces in Thailand. These platforms are expected to be sustainable and applicable for OH capacity building at regional and international levels in the future.



Parallel 3: NCDs: Success and challenges

November 21, 2019; 13.30 - 15.00 hrs
Watergate Ballroom C, Floor 6

Title: ICT Patient Engagement in the Era of NCDs

Wang Ying-Wei
M.D., Dr. P.H.

*Director-General, Health Promotion Administration, Ministry of Health and Welfare, Taiwan,
R. O. C.*

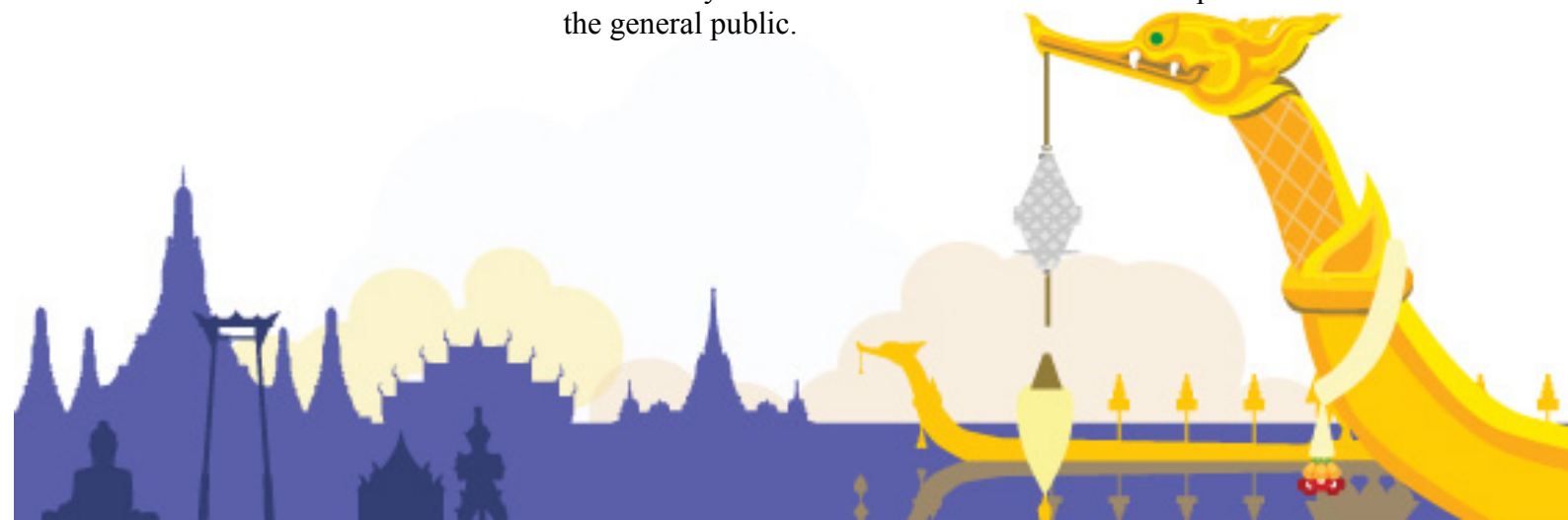


Dr. Wang Ying-Wei currently serves as the Director General of Health Promotion Administration, Ministry of Health and Welfare in Taiwan. He is also the Associate Professor in the Department of Medical Humanities, Tzuchi University, Taiwan.

Professor Wang served as the Secretary-General of Taiwan Society of Health Promotion Hospitals, and has been newly elected as the governance board member in the International Health Promoting Hospitals Network in June 2018. In addition, he devotes great effort to the development of hospice and palliative care and served as a council member in the Asia Pacific Hospice Palliative Care Network. With his extensive experience in the promotion of palliative care, Professor Wang won the first prize in the 2010 international quality of death survey.

Prior to his current position, Professor Wang has been actively engaged in community health promotion, elder community care, mobile medical services and community care for remote areas. On top of promoting primary health care, he also emphasizes the promotion of health in the workplace, school, and cities.

As the Director-General of the Health Promotion Administration, Prof. Wang focuses on health promotion and prevention of non-communicable disease through health literacy and maximizing effectiveness of communication among public health centers, hospitals, civil organizations and academia, in order to elevate the accessibility to health information in both health professionals and the general public.





Abstract

The rapid increase in the spread of non-communicable has become a major health threat around the globe. According to the Global Status Report on Non-communicable Diseases of the WHO in 2016, NCDs were responsible for 71% of the world's deaths, which is almost equal to 40.5 million deaths every year. Moreover, non-communicable diseases impact low- and middle-income countries significantly accounting for three-quarters of the total death by non-communicable diseases. From 2011 through 2015, the total economic loss from non-communicable disease and related deaths amount to over US\$7trillion. In the same report, it has also indicated that the global diabetic patients are gradually increasing, with diabetic patients in the Asia-Pacific region accounting for 36.9% of the total.

Intervention with a quality disease care model is an important factor for the success of the care of chronic diseases. Taking diabetes as an example, Taiwan began its efforts starting with the prevention of the risk factors to improve healthy diet and physical activity of the public, and organized screening and early detection with early intervention and treatment. Furthermore, we established 269 diabetes health promotion institutions to execute diabetes care and improve the indicators of quality care, and at the same time, combined with national health insurance co-payment services to effectively improve the quality of care for diabetic patients. Standardized mortality of diabetic patients has dropped by 36.7% from 2002 through 2017.

Additionally, with the advent of information and communication technology, Taiwan has incorporated related technologies and applications in the prevention of chronic disease risk factors (including the risk factor prevention and promotion of enhancing physical activity of the public, diet and nutrition, and healthy body weight) and chronic disease shared care.



Parallel 3: NCDs: Success and challenges

November 21, 2019; 13.30 - 15.00 hrs

Watergate Ballroom C, Floor 6

Title: How to wage a global war against NCDs: the Singapore story

Teo Yik Ying

D.Phil.

Dean, NUS Saw Swee Hock School of Public Health

Department of Statistics and Applied Probability, Faculty of Science, NUS



Professor Teo Yik Ying is Dean of the Saw Swee Hock School of Public Health, National University of Singapore, and concurrently the iOmics Programme Leader at the Life Sciences Institute, and an Associate Faculty Member of the Genome Institute of Singapore.

Prof Teo majored in statistical genetics, having completed his doctoral training at the University of Oxford after obtaining a Distinction for his Masters in Applied Statistics at Oxford and graduating top of the cohort for in the Bachelor programme in Mathematics at Imperial College, UK. He pursued his postdoctoral training with the Wellcome Trust Center for Human Genetics, where he was concurrently appointed as a Lecturer at the Statistics Department in Oxford University.

A keen researcher by nature, Prof Teo has gained international recognition for his work in genomics, where his focus is in the development and application of mathematical and statistical techniques to understand the genetic causes of human diseases and genetic evolution in worldwide populations. He has conducted large scale genomic studies on populations from Africa, Europe and Asia, and currently chairs an international consortium investigating the genetic diversity of cosmopolitan and indigenous populations in Asia.

Prof Teo has served as the Director for the Centre for Infectious Disease Epidemiology and Research, where the Centre works closely with the Ministry of Defence to develop capabilities for disease surveillance, consultation and research to deter and to control potential infectious disease outbreaks. He was also the Founding Director for the Centre for Health Services and Policy Research, which approaches systems-level healthcare issues from a multidisciplinary perspective, connecting healthcare workers, patients, researchers, policy- and decision-makers to tackle complex themes in the fast-changing nature of health services delivery.

For his contributions and achievements to academic and public health, Prof Teo was the recipient of numerous awards, including the Singapore Youth Award (2011), the Young Scientist Award by the Singapore National Academy of Science (2010), the NUHS-Mochtar Riady Pinnacle Young Achiever Award (2015), and the Outstanding Young Persons of the World award in the category of Academic Leadership and Achievements (2015). He was also conferred numerous scholarships during his education, including the Public Service Commission scholarship (1997), the Shell Centenary Scholarship (2000), the Lee Kuan Yew Postgraduate Scholarship (2003) and the NUS Overseas Graduate Scholarship (2003). Growing up in a family of educators, Prof Teo is both a passionate and exceptional educator, and has won numerous faculty and university awards for teaching excellence from both NUS and Oxford.



Abstract

The burden of non-communicable diseases (NCDs) is rising steadily in every country, especially in any country bearing the brunt of a demography that is rapidly ageing. For many low- and middle-income countries, the rise in NCD burden accompanies the traditional presence of infections such as malaria, HIV/AIDS, and tuberculosis, and these dual burdens create immense pressure on health systems that are already struggling to cope with providing basic health services and rising expectations in the population. Countries need to utilise the global and national information systems to understand the current and future problem of NCDs, in order to establish the necessary national programmes and policies to tackle the risk factors of NCDs and associated complications, as well as to step up sustainable disease screening programmes to identify disease onset early. Here I will share the lessons learnt by Singapore in starting the War on Diabetes – a whole-of-government campaign to address the challenge of NCDs.



Parallel 3: NCDs: Success and challenges

November 21, 2019; 13.30 - 15.00 hrs
Watergate Ballroom C, Floor 6

Titla: Strategies to combat NCDs in Malaysia: The Battle continues

Nor Izzah Bt Haji Ahmad Shauki

M.D, M.Comm.Health, Ph.D.

Director & Public Health Specialist

Institute for Health Systems Research, Ministry of Health Malaysia



Dr. Nor Izzah received her first degree from University Science of Malaysia in 1990 and obtained Master of Community Health from National University of Malaysia in 2003 specializing in Hospital and Health Service Management'. She has served at various levels of organizations within Ministry of Health Malaysia (MOH) covering hospitals, rural health clinics, Community Polyclinics, District Health Office, State Health Department, Research Institute and National level. Her vast experience in different fields; from clinical, health service management and research for over 28 years with elegant leadership, strategic planning and service development provides unique advantages in health policy and systems.

Under her leadership at Institute for Health Management, MOH, Dr Izzah initiated and led planning, execution and enhancement of the programme for Leadership and Governance Development through Talent Grooming Programme (TGP) for Technical Healthcare Professionals working in the MOH Malaysia. She was then promoted as the Director of Institute for Health Systems Research (IHSR), National Institutes of Health, Malaysia. IHSR is the WHO Collaboration Center for Health Systems Research and Quality Improvement since 1988 and recently was selected to lead the establishment of a platform for Embedding Rapid Reviews in Health Systems Decision Making by WHO Alliance For Health Policy and Systems Research.

Dr Izzah has been actively involved in series of health policy related research projects and health policy and systems research. She has published numerous peer-reviewed manuscripts and regularly provides evidence to stakeholders within MOH and other related central government agencies on issues related to health systems. Dr Izzah has also been involved in leading numerous task force at both state and national level for betterment of Malaysian Public Health. She was appointed as a board member for Quality Assurance in Health, engaged in advocator and policy development, change management and program evaluation. She was also appointed as reviewer and editor-in-chief for publications on community health and quality improvement. She has made significant contributions and provided expertise to the WHO Western Pacific Region Regional Office (WPRO), Manila as Technical Advisory Group (TAG) for various health related issues.



Abstract

The emergence of NCDs as the leading cause of death globally and including Malaysia were due to many changes occurred in socio-economic determinants in health such as globalization of trade and marketing, lifestyle changes, shift of socio-demographic pattern, improved economic affordability, ease of travelling, economic transition and movement of unhealthy products, leading to high risk behavioral changes and increase metabolic risk factors.

The NCD situation in Malaysia is like that of an epidemic and must be dealt with like any Public Health Emergency. There is no doubt that the lifestyle in Malaysia has changed over the years as a result of urbanization and globalization. These in turn give rise to the dual burden of disease; increasing incidences of overweight, obesity and NCDs as well as micronutrient deficiencies. The number of people with NCDs keeps growing bringing the 'Health of the Nation' to a critical crossroad.

NCDs are the leading cause of death and morbidity among adults in Malaysia, and have resulted in heavy emotional as well as financial toll on all of us. The increasing medical costs to treat patients with NCDs is of serious concern. The emphasis on the whole-of-government and whole-of-society approach to NCDs is important as health is not only the MOH's responsibility but also everyone's responsibility. It relies on the support of all stakeholders and therefore everyone urged to work together to implement the recommended interventions and make Malaysia a healthier place to live in.

The NSP-NCD Malaysia 2016-2025 is to provide a roadmap for all relevant stakeholders in Malaysia to reduce the preventable and avoidable burden of morbidity, mortality and disability due to NCDs by year 2025. It is hoped that our population would reach the highest attainable standards of health and productivity at every age and NCDs are no longer a barrier to our well-being and negatively impacts Malaysia's socio-economic development.



Parallel 3: NCDs: Success and challenges

November 21, 2019; 13.30 - 15.00 hrs

Watergate Ballroom C, Floor 6

Title: Empowering National Capacity to Beat NCDs: Thailand's Experiences

Points of Session:

Pairoj Saonum

MD, PhD.

Director, Healthy Lifestyle Promotion Section,
Thai Health Promotion Foundation (ThaiHealth)

E-mail: pairoj@thaihealth.or.th



Dr.Pairoj Saonum is a medical doctor with Thai Board Certificate in Preventive Medicine (Epidemiology). He began his medical professional life with 5 years in the community hospital in the northeast area of Thailand, where he perceived how people in the rural area took care their health and sought for health services. Giving the perfect breeding ground for practicing from the remote area, the daily practices encouraged and addressed more on the Disease Prevention and also the Health Promotion. This has enlightened him to enhance his expertise more by obtaining a PhD in Community Medicine at Chulalongkorn University in 2008. Since he started his career at Thai Health Promotion Foundation (ThaiHelath), he experienced about 3 years in Monitoring and Evaluation Unit. Currently, he has been appointed the Director of

Promoting Healthy Lifestyle Section with the main responsibility of promoting healthy food, physical activity, and healthy media. These three different plans require a strong linkage and productive strategies to seek for the collaboration and raise awareness through the social determinants or the boundaries beyond the health sectors lying under the problems. This also requires ThaiHealth's key model "Tri-Power Strategy" to integrate 3 distinguished aspects to drive and solve health problems namely; Knowledge and Research, Policy and Law Enforcement, and Social Mobilization. Dr.Pairoj also devotes his time for academic development by giving the lecture as invited lecturer in many universities and giving consultation on Monitoring and Evaluation.

Abstract

- Background of NCDs prevention and control in Thailand before ThaiHealth
- Why Thailand needed an autonomous health promotion agency to promote population-based health promotion to beat NCDs
- How ThaiHealth adopted "Tri-angle that moves the mountain model" to empower multi-stakeholders in Thailand
- Recommendations for other countries





Parallel 4: Health literacy and health in all policies

November 21, 2019; 13.30 - 15.00 hrs

Room A@7, Floor 7

Title: Faculty of Public Health: Health Literate Faculty

Associate Professor Dr. Chanuantong Tanasugarn

Dean, Faculty of Public Health, Mahidol University, Thailand



Dean Tanasugarn, a US graduate in DrPH program in the area of Behavioral Sciences from University of North Carolina at Chapel Hill, and MPH in Health Service Administration from University of Pittsburgh. She has advocated several public health policies based on the research findings since coming back to Thailand. Those include HIV AIDS counseling and community mobilization, Health Promotion in the hospital and community, Sex Education in School, Hospital accreditation, and community health system. The latest policy she was a key person advocating is “Health Literacy” which later became a national public health reform policy by the Thai Government. She also successfully developed a model which will be scale up nationwide using peer for progress as the social innovation in Thailand at the district level for Diabetes Mellitus problem.

Dr. Tanasugarn has shown her commitment to public health in Thailand via a policy change and model development. Her leadership role and her existing private and public health network led to new development for SDG such as Sunghern Sustainable Development District Model, GIS Innovation Center for Public Health, and Interprofessional Education Public Health and Health Literate Faculty Model to enhance WHO principle on “Health in All Policy.”



Parallel 4: Health literacy and health in all policies

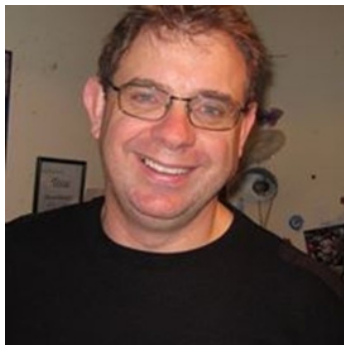
November 21, 2019; 13.30 - 15.00 hrs

Room A@7, Floor 7

Title: Developing interventions for community health literacy

Associate Professor Dr. Roy W. Batterham

Thammasat University, Thailand and Swinburne University, Australia



Associate Professor Roy Batterham has considerable experience as a service provider and manager in the health sector and as a Principle in a health services research consulting company. A physiotherapist, program evaluator and global health researcher Roy has been the leading methodological thinker behind the development of tools and approaches that are now having a global impact, most notably the Ophelia process, which has been applied in more than 16 countries (Australia, Philippines, Thailand, Egypt, China, Brunei, Denmark, Norway, Netherlands, Portugal, France, South Africa, Ireland, Wales, England, Scotland) and is now being adopted within a major WHO international program (recommended within a WHO Action Network across the 55 countries in the EU region).

For the Thailand National Health Security Office, Roy co-led the development of the Information and Support for Health Actions Questionnaire (ISHAQ) a health literacy measurement tool for communal cultures. Roy also had a principal methodological role in the development of measurement tools that are now widely used around the world including the HLQ, eHLQ and heiQ.

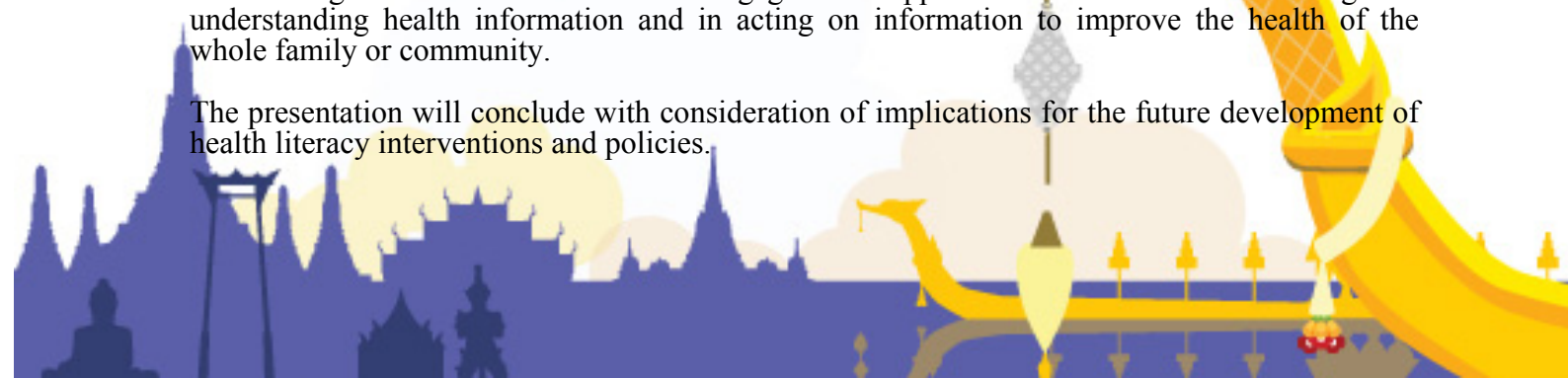
Roy has conducted more than 40 evaluations including high impact evaluations such as an evaluation of the Beyond Blue Victorian Centre of Excellence for Research on Depression and Related Disorders, the implementation of the Disability Services Act, Victoria and participated in the evaluation of the Hospital Complaints System for the Kingdom of Thailand.

Synopsis

There is increasing evidence that people in families, communities and workplaces often have similar health literacy suggesting that the ways in which families, friends and colleagues talk together about health is critical in shaping the ways that they access, understand, appraise, remember and use health information. This is likely to be particularly important in communal cultures and in communities with limited access to other sources of information. It is, therefore, critically important that we develop interventions to enhance the ways in people in families and communities engage each other about health information.

This presentation will consider two interventions that have been developed and tested in the Asia-Pacific region over the last two years. The first is the Action for Healthier Families Toolkit which has been developed by WHO Western Pacific Region Office and has recently undergone formal testing and evaluation in Vanuatu. The second intervention development process is the Mekong Connected-and-Live knowledge process which has been developed and tested in Cambodia and Laos for the purpose of assisting communities to develop local One Health strategies. Both of these strategies seek to work with families and communities to develop their own strategies to enable members to engage and support each other more in sharing and understanding health information and in acting on information to improve the health of the whole family or community.

The presentation will conclude with consideration of implications for the future development of health literacy interventions and policies.





Parallel 4: Health literacy and health in all policies

November 21, 2019; 13.30 - 15.00 hrs
Room A@7, Floor 7

Title: Healthy city policy and health outcomes in Indonesia

Professor Sukri Palutturi

Hasanuddin University, Indonesia



Prof. Sukri Palutturi, SKM, M.Kes., MSc.PH, PhD was born in Tanatoa, Indonesia on 29 May 1972. He graduated from Griffith University both Master of Science in Public Health (MSc.PH) in 2008 and Doctor of Philosophy (PhD) in 2013 at the Center for Environment and Population Health. Four books have been written: Kesehatan itu Politik (2010), published by e-Media Solusindo, Semarang; Public Health Leadership (2014), published by Pustaka Pelajar, Yogyakarta; Health Politics: Teori dan Praktek (2015), published by Pustaka Pelajar, Yogyakarta; Healthy Cities: Konsep Global, Implementasi Lokal untuk Indonesia (2017), published by Pustaka Pelajar, Yogyakarta; Politik Kesehatan di Indonesia (2019), published by Pustaka Pelajar, Yogyakarta. The books were written in Indonesia. Thirty one articles have been published; 43 total citations by 29 documents and h-index 4. Area of expertises are health policy and politics; public health leadership; healthy setting and health promotion and healthy cities. He has developed research related to healthy cities in Indonesia. In addition, individuals and teams also he helped to develop districts/cities capacity related to the implementation of healthy cities in Indonesia. Various healthy city trainings have been conducted such as healthy city need assessment, healthy city planning and budgeting, capacity building for a healthy district/city for forums, and a healthy district/city verification system, and involved various stakeholders and institutions throughout Indonesia. At the national level he helped the Ministry of Health of the Republic of Indonesia to provide input or consultation on the implementation of healthy districts/cities in Indonesia. His current positions are as Vice Dean for Student, Alumni and Partnership Affairs in the Faculty of Public Health, Hasanuddin University, Makassar Indonesia; and as Chairperson of the Indonesian Public Health Union for Region IV (Sulawesi, Kalimantan, Maluku and Papua)



Abstract

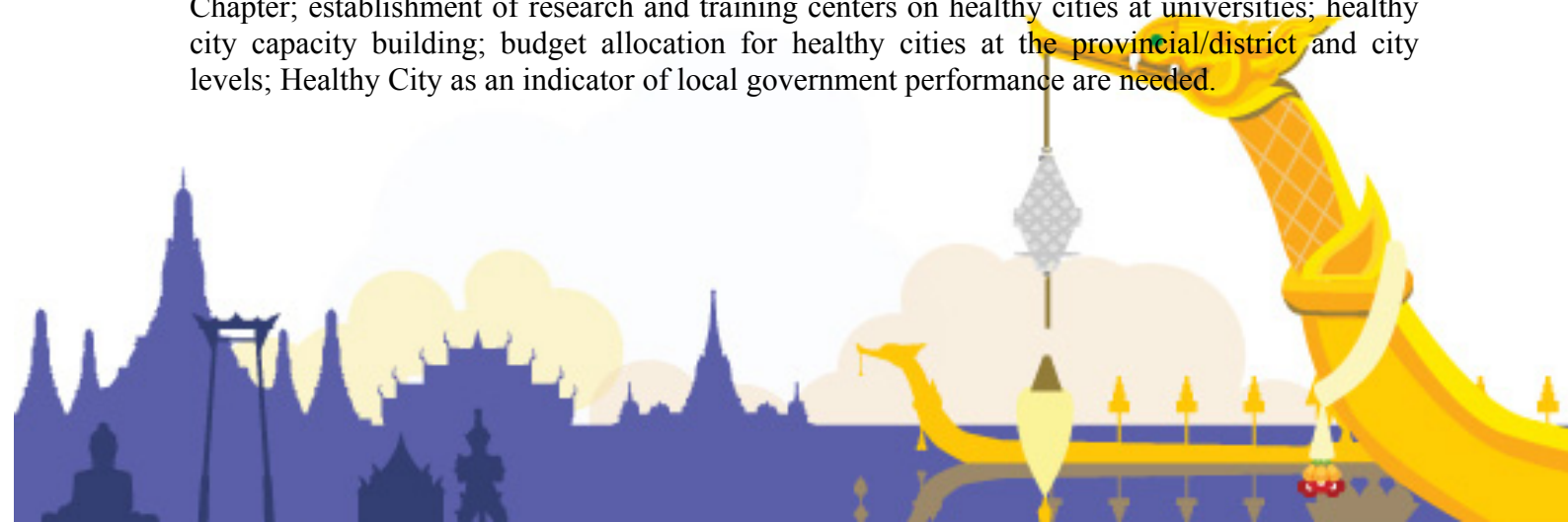
Healthy city approach that aims to address various urban health problems was introduced by WHO around 1986. In Indonesia, the evolution of implementing a healthy city, which is more commonly referred to as a healthy district/city (*kabupaten/kota sehat*) was organised since 1998. Its implementation has been running routinely but the impact or health outcomes since healthy city is implemented is rarely examined further. This paper aims to present milestone of healthy city in Indonesia, achievements "health outcomes", challenges, opportunities and recommendation.

This paper illustrates that the history of healthy cities in Indonesia was inspired by a long journey in which European countries introduced a concept or approach to solving urban health problems, namely the Healthy City approach. Indonesia developed Pilot Healthy City Projects in 6 districts/cities in 1998. Additional 8 districts cities, especially tourist areas also were developed in 1999. Healthy City during that period was pioneered by the Ministry of Health. With a variety of considerations, to develop a stronger healthy city implementation, in 2005 a joint regulation was issued between the Ministry of Health and the Ministry of Home Affairs. The regulation is an umbrella for the implementation of healthy city in Indonesia. Every two years, districts/cities are assessed to determine whether they are eligible or qualify as districts/cities. Three categories of healthy city awards in Indonesia are provided: *Swasti Shaba Padapa*, *Swasti Shaba Wiwerda* dan *Swasti Shaba Wistara*

The health impact of implementing such a healthy city, specifically needs to be explored further. But if we refer to the definition of healthy city in Indonesia: clean city, safe city; comfortable city and healthy city itself, it can be proven that the achievement indicators are increasingly being met. The assessment results show that districts/cities are still dominated by Planning Board (*Bappeda*) and Health Office; some districts/cities have not involved the Forum (still dominated by the *OPD*); the role of the Forum (both at the District/City, District, Village level) is not optimal.

Various challenges of Healthy City in Indonesia are identified such as: No Healthy Cities regional organization on SEAR; No National Healthy Cities Alliance; Healthy Cities is only a national issue of several ministries; Less support from the local government; Regents/mayors/governors replaced; while opportunities of Healthy City in Indonesia consist of Healthy Cities as Global Movement; National Policy: Ministry of Home Affairs and Ministry of Health; National Planning : *RPJMN*; Various relevant healthy cities themes : *Sister City*, *Child-Friendly City*, *ADIPURA*, *KOTAKU*.

Therefore, establishment of the Alliance of Healthy City for SEAR; review of Joint Regulations between the *MOHA* and *MOH*; establishment of the Alliance of Healthy City for Indonesia Chapter; establishment of research and training centers on healthy cities at universities; healthy city capacity building; budget allocation for healthy cities at the provincial/district and city levels; Healthy City as an indicator of local government performance are needed.





Parallel 4: Health literacy and health in all policies

November 21, 2019; 13.30 - 15.00 hrs
Room A@7, Floor 7

Chair and Moderator

Dr. Nuttapun Supaka,

Director, Partnership and International Relations Section, Thai Health Promotion Foundation



Parallel 5: Sustainable nutrition in the Asia-Pacific region

November 21, 2019; 13.30 - 15.00 hrs

Room C@7, Floor 7

Title: Moving Towards a Food-Based Strategy for Sustainable Nutrition in Asia

Associate Professor Pattanee Winichagoon, Ph.D.

Senior Advisor

The Institute of Nutrition, Mahidol University (INMU)



Assoc. Prof. Pattanee Winichagoon is currently a Senior Advisor to the Institute of Nutrition, Mahidol University (INMU), Thailand. Her research work focused in the area of maternal and child micronutrient status, micronutrient intervention and community-based nutrition program. She has collaborated with several internationally renowned scientists and published numerous peer-reviewed articles in international journals and monographs. She has provided advice and consultation to various agencies, such as, WFP, UNICEF-EAPRO, WHO, FAO and AUSAID projects. Assoc. Prof. Winichagoon was the Vice Chair of the Scientific Committee for the 19th International Congress of Nutrition held in Bangkok in 2009; co-chair of Local Organizing Committee of the forthcoming 5th Micronutrient Forum Global conference to be held in Bangkok, March 2020. She obtained her B.Sc. in Food technology from Chulalongkorn University, Thailand, M.Sc. in Nutrition from University of Hawaii and Ph.D. in International Nutrition from Cornell University, USA.

Abstract

The Asia-Pacific region covers a large proportion of the world and its populations. Stunting and wasting in young children remain severe in some countries. Parallel to this is the rapid rise in childhood obesity. The Pacific's scenario differs somewhat, where obesity has been high but there are limited data on undernutrition (e.g. Papua New Guinea). Micronutrient deficiencies, namely vitamin A, iron and iodine, persist in the Asia-Pacific. The situation is termed Double Burden of Malnutrition (DBMN), implicating co-existence of both ends of malnutrition. Past successes focused on specific nutrient interventions, such as high protein and energy food supplementation and micronutrient supplementation, which aimed to reduce anemia, risk of maternal mortality and improve birth weight. Given the current DBMN, efforts to improve nutrition should move towards multi-sectoral, integrated programs from food production/systems that include nutrition considerations. Biofortification of staples (rice, wheat, millets) through plant breeding to increase zinc and iron have been successful. Fortification of staples or condiments (iodine, iron, vitamin A) has been successfully implemented in some countries. Above all, broader food-based strategies, which build on the diversity of available regional foods, are needed to promote 'healthy diets'. Recent linear programming tools, such as Optifood, have been tested in several countries and could provide guidance to policy and program, including promotion of food-based dietary guidelines. Legislation, e.g., sugar/sodium tax, has been used or explored to address NCDs. Global advocacy for improved nutrition during the first 1000 days of life has the potential to promote child growth/development and prevent short/long term health risks. The challenge now rests on the country/region to work individually or in harmony to promote better diets for the Asia-Pacific region.



Parallel 5: Sustainable nutrition in the Asia-Pacific region

November 21, 2019; 13.30 - 15.00 hrs
Room C@7, Floor 7

Title: APACPH Dietary Guidelines and Sustainability

Professor Colin Binns, Ph.D.
Curtin University



After 8 years of medical work in Papua New Guinea I joined Curtin University in 1977 and became Foundation Head of the School of Public Health, a position I held for 21 years. This included a period as the Foundation Director of the National Drug Research Centre. I served on 20 committees of the National Health and Medical Research Council, including Chair of the Dietary Guidelines and Infant Nutrition committees for several decades. My work has been related to nutrition and public health, particularly infant nutrition and nutrition and cancer in the Asia Pacific region. My publications include 600 papers 50 books and chapters, mainly on Dietary Guidelines and public health nutrition. I am an editor of the Asia Pacific Journal of Public Health and previously the Australian Journal of Health Promotion and have visiting professorships at 8 Asian Universities.

Honours have included the Research Australia Lifetime Achievement Award (for translation of science into public policy), Senior Australian of the Year (WA), and honorary PhD (Inje University, for nutrition research in Asia) and many academic awards.

Abstract

The APACPH Dietary Guidelines were developed to address significant public health issues including mortality, morbidity, and disability. They are food based, allow for adequate nutrient intakes and healthy growth (for children) and a healthy body weight (for everyone). The guidelines provide a pattern of lifelong nutrition to optimize whole of life health (Asia Pacific Journal of Public Health 2017, Vol. 29: 98–101 and 2018, Vol. 30: 682–690). Dietary Guidelines need to take into consider the constraints of planetary health imposed by available world resources and the bidirectional effects of food production and diets on climate change.

Public health nutrition is critical to achieving the Sustainable Development Goals. For example promoting breastfeeding to the WHO recommended rates will reduce infant and child mortality, reduce chronic disease and obesity in adults and improve overall population IQ levels. The elimination (or at least substantial reduction in the use of infant formula) will improve child health, reduce the need for hospitalisation and brings substantial environmental gains.

The constraints of climate change, environmental contamination and continuing population growth (albeit at a reduced rate) will constrain food availability for preparing healthy diets. The sustainable principles to be addressed in our region include avoiding food waste, economizing on potable water use, ensuring sustainable fishing, maintaining biodiversity and improving safe food handling and processing. Continuing collaboration with AgroSciences is needed to develop climate tolerant crops and animals and reduce energy use to zero-carbon production.

As public health academics and professionals we must work together to endure that our children and grandchildren have a stable and healthy dietary intake. The APACPH Dietary Guidelines provide a good basis for regional advocacy and action to achieve major public health gains and contribute to the Sustainable Development Goals.

Parallel 6: Pollution and environmental health: Means or an end for SDGs

November 22, 2019; 10.30 - 12.00 hrs
Watergate Ballroom A, Floor 6

Title: Children's environmental health: A challenge for SDGs

Professor Dr. Budi Haryanto
University of Indonesia, Indonesia





Parallel 6: Pollution and environmental health: Means or an end for SDGs

November 22, 2019; 10.30 - 12.00 hrs
Watergate Ballroom A, Floor 6

Title: Total asbestos ban: From international conventions to national policies

Assistant Professor Dr. Ro-Ting Lin
China Medical University, Taiwan



Parallel 7: Intentional and unintentional injury

November 22, 2019; 10.30 - 12.00 hrs
Watergate Ballroom B, Floor 6

Title: Situation of occupational injury situation in Thailand

Dr. Naesinee Chaiear

Associate professor at Khon Kaen University

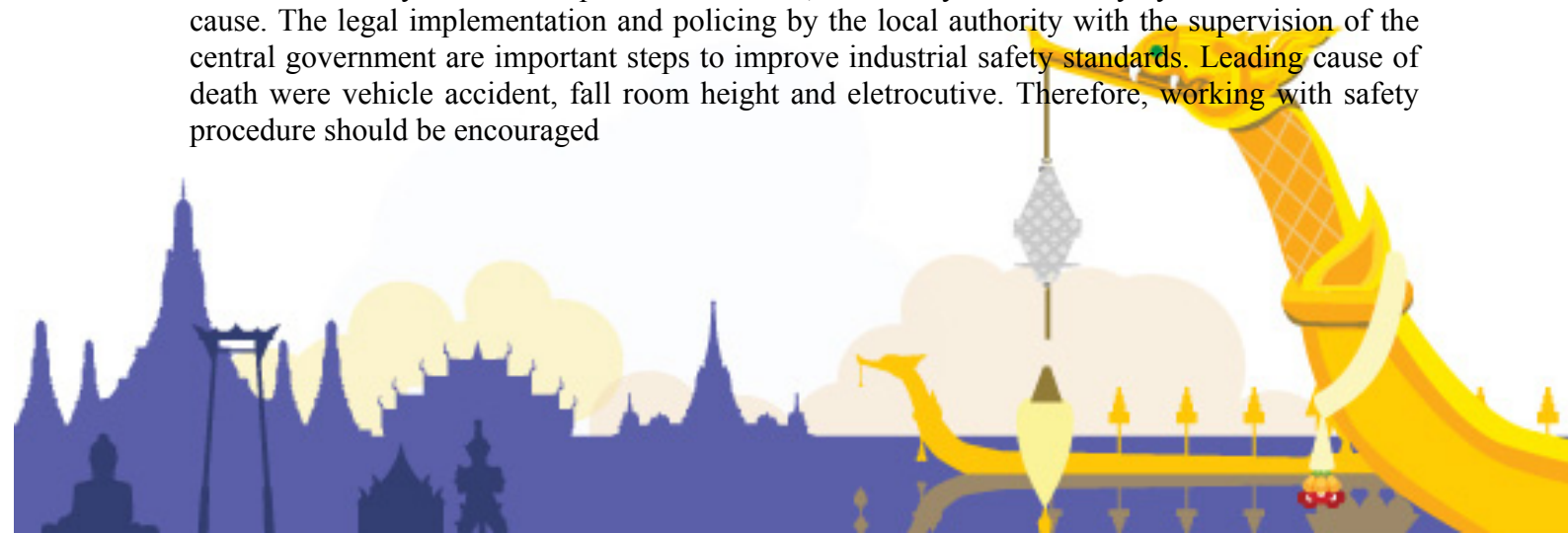
Div of Occupational Medicine, Dept of Community Medicine, Faculty of Medicine, Khon Kaen University, Khon Kaen, Thailand



Dr. Naesinee Chaiear is the associate professor in Khon Kaen University in the division of occupational medicine in the department of community medicine. She has her Master degree and PhD in occupational health. She is the director of residency program in occupational medicine and is the chair of occupational medicine program in Khon Kaen University.

Abstract

Occupational injuries are one of important injuries occurred in Thailand. The injuries happen mostly during work. Health effects of occupational injuries can vary significantly from acute or chronic pain, work loss, disability and financial loss to death. The quicker the industrial growth, the higher fallibility were observed, particularly shown in the small industrial sector. The major accidents in the factory are caused by instruments, gadgets, and machines. In small-scale industry, the entrepreneurs sometimes do not have sufficient resources to replace the long-standing or malfunctioned machines. This might cause a machinery error and leads to the unexpected accidents. Second is the limitation of education. Huge number of workers do not have enough technique, skill, or knowledge to operate the machinery, so this will probably cause the lack of safety in the workplace. In addition, deficiency of the safety system should be the cause. The legal implementation and policing by the local authority with the supervision of the central government are important steps to improve industrial safety standards. Leading cause of death were vehicle accident, fall from height and electrocution. Therefore, working with safety procedure should be encouraged.





Parallel 7: Intentional and unintentional injury

November 22, 2019; 10.30 - 12.00 hrs
Watergate Ballroom B, Floor 6

Title: Innovation of One Stop Crisis Center (OSCC) in Numphong hospital, Thailand

Dr. Wichai Ussavaphark

Nam Phong District Hospital, Khon Kaen, Thailand



Dr. Wichai Ussavaphark has been recognized as the outstanding rural doctor award by rural doctors foundation in 2003, Siriraj Faculty of Medicine, Mahidol University in 2006, Thai Medical Council in 2010. He is also the chairman of the community hospital reform committee along with Khon Kaen Province's anti violence against women and children alliance.

Dr. Wichai Ussavaphark received his medical degree from Chulalongkorn University in 1984. Along with master degree; he has diploma of preventive medicine; 1990, Master of Public Health, Institute of Tropical Medicine, Antwerp, Belgium, 1996. - Diploma of Family Medicine, Thai Medical Council, 2002.

Abstract

Background: Domestic violence against women and children has been linked with physical, mental, and spiritual health of people in Thailand. In addition, the common problems of survivors in Thailand are difficult to access in health and judge services. Since 1999 – 2008, our One Stop Crisis Center (OSCC) was developed the systems for preventing and helping domestic violence survivors and connect with multi-professionals networking. The report and record system were not prepared well and healthcare providers had not knowledge and skills to work with domestic violence. Therefore, Numphong hospital developed an inclusive innovation to prevent and help women and children from domestic violence. The concepts and frameworks that we have been following for working with domestic violence are holistic care, empower counselling, case manager, and community participating.

Method: The processes of innovation included: (1) building the advisory board to set the goals and plans together; (2) implementing the preventing and helping plans that covered physical, mental, and spiritual dimensions of survivors; (3) creating a domestic violence center at Numphong hospital that is available 24 hours for domestic violence survivors; (4) developing a health team by giving them knowledge, training, and monthly meeting. During a meeting, we discussed about domestic violence cases and how to develop the care plans; and (5), making more connections with communities and multi-professionals. by monthly meeting.

Results: The results from the innovation were: (1) having more women and children could access more services and facilities that OSCC provided; (2) we have been creating the campaigns to stop domestic violence that is an international domestic violence day (November 25th) in every year; (3) we established the community health volunteers to observe and monitor the domestic violence in community; (4) developing the community models for observing and

helping domestic violence survivors; (5) developing the skills and changing the attitudes of healthcare providers to domestic violence; (6) and creating the effective referral systems by integrating with communities and multi-professionals.

Conclusion: The key factor of success of this innovation is leader's policies, multi-professionals continuous meeting and community participating. Qualitative and quantitative research are needed to evaluate the effective of the innovation.





Parallel 7: Intentional and unintentional injury

November 22, 2019; 10.30 - 12.00 hrs
Watergate Ballroom B, Floor 6

Title: Fall in the elderly, the challenging for SDGs

Dr. Anuchar Sethasathien M.D.

*Thai Fund for Road Safety (Ministry of Transport)
Thai Health Promotion Foundation, Road safety
Regional Technical Advisor, WHO SEARO, Road Safety*



Dr. Anuchar Sethasathien has worked as the secretary general of National Institute for Emergency Medicine. Dr. Anuchar has also recognised as the chair of the Subcommittee for Strategic Collaborative Integrated EMS Planning, National Legislative Assembly, Public Relationship Committee, Safety 2018, The 13th. World Conference on Injury, Prevention and Safety Promotion, Bangkok and 13th Asia Pacific Conference on Disaster Medicine, Bangkok. He was the project director for Strengthening ASEAN Regional Capacity for Disaster Health Management (ARCH Project) and Assistant Director, Udon Thani Hospital, Thailand. He also took the position of Chief of staff, Orthopaedic Department, Udon Thani Hospital, Thailand.

Dr. Anuchar Sethasathien received his degree from Chaingmai University for medicine and got his master degree in public administration from National Institute of Development Administration, Thailand. He has been awarded as the Best Trauma Doctor 2001, Trauma Surgeon Association of Thailand.

Abstract

WHO: The 2nd leading cause of unintentional injury deaths worldwide. Estimated 646, 000 Cases died from falls/ yr. and 37.3 million falls are severe Cases. Over 80% are in low- and middle-income countries.

In 2016, 15.22% of Thailand citizens were over the age of 60 and Thailand's life expectancy has speedily increased. By 2030 (10 years from now) one in three Thai citizens will be over 60 and falls will be crisis problem, if we do nothing. Aging and Urbanization also make more complex environment that is the unsafe for older people and more vulnerable to suffer from fall and its consequences, that will also the National Economic burden.

Falls can be prevented by risk management, home environment and the condition of the elderly. Thailand already had plan and guideline for prevent fall in the elderly but need more community implementation. The 3 Pillar concept of WHO sound good for control this problem 1) Social

awareness and Seriously Concern 2) Risk Prevention and Management then 3) Community innovation for safety and smart live style for all Elder.

People are challenging for old ideas about aging, the Myth of Senility. In the other way, this is The economic opportunities for not only prevent Fall but also sustainably recreative and productive live for the Elders in The Smart City with SDGs.

Anuchar Sethasathien M.D.





Parallel 7: Intentional and unintentional injury

November 22, 2019; 10.30 - 12.00 hrs
Watergate Ballroom B, Floor 6

Title: Prevention Unintentional Injury in Thai Children

Dr. Chatchai Im-arom

Pediatrician at Child Safety Promotion and Injury prevention research center, Ramathibodi Hospital Bangkok Thailand

Lecturer at Department of Community Medicine Faculty of Medicine Ramathibodi Hospital Mahidol University, Bangkok Thailand



Dr. Chatchai Imarom is a Thai pediatrician who works with the cases related to Child Abuse and Child Protection in Thailand for 8 years. Apart from Pediatrician, he is also a lecturer in the topics of Child Abuse and Child Protection, Health Promotion for medical students and master degree students in Mahidol University and Mae Fah Luang University.

Before becoming a pediatrician, he graduated Medical degree from Mahidol University, Bangkok where is his hometown. In the south of Thailand, he spent 3 years working as a rural doctor for the Ministry of Public Health where he found himself focused on the Child Safety and Child Protection issues. Then he moved back to Bangkok for Pediatric Training at Ramathibodi Hospital and work there afterwards.

Currently he is working as a lecturer in a department of community medicine, Ramathibodi hospital. Health promotion, Child Safety and Child Protection are still the topics he is dedicating his time for.

Abstract

Unintentional injuries are the leading causes of death of Thai Children for many years. These include drowning, which is on the top leader, road traffic accidents, fall, burn and etc. After more than 10 years of Child Safety Promotion and Injury Prevention Research Center (CSIP) combating with unintentional injuries, there are some inspiring stories and practices to be shared such as drowning prevention program, fall prevention and road traffic accident prevention program among the communities and schools in Thailand which could guide the path for a safer society for children.



Parallel 8: How to ensure healthy lives at all ages?

November 22, 2019; 10.30 - 12.00 hrs
Watergate Ballroom C, Floor 6

Title: From infancy to adulthood

Dr. Pontong Puranitee

Faculty of Medicine Ramathibodi Hospital, Mahidol University, Thailand





Parallel 8: How to ensure healthy lives at all ages?

November 22, 2019; 10.30 - 12.00 hrs
Watergate Ballroom C, Floor 6

Title: Healthy literacy for healthy lives through non-formal and informal education?

Mr. Prayut Lakkam

Director, Department of Development and Promotion of Learning Innovation, Office of Non-Formal and Informal Education, Thailand



Parallel 9: Area based health innovation

November 22, 2019; 10.30 - 12.00 hrs
Room A@7, Floor 7

Title: Healthy startup ecosystem and healthy environment: A case study of KIID

Assistant Professor Dr. Rittirong Chutaputtikorn
Dean, School of Architecture, Bangkok University



Assist Prof. Dr. Rittirong Chutaputtikorn was an architect in professional firm and also was a part-time art instructor. He is the Dean, School of Architecture, Bangkok University where he has been working as a full-time lecturer since 2003. Apart from teaching in both Bachelor and Master degree, he is coaching in several social-enterprise projects especially in Universal Design and Innovative concept.

Abstract

One objective of National strategy Thailand 4.0 is enhancing start-ups' ability to make use of innovation and digital technology to create the value of products and services. Since it was official launched, "Kluaynamthai Innovative Industries District" or KiiD, was proposed. The existing industries, such as Logistic and Media, have been interested to develop into innovation-based industries. KiiD needs to achieve the sustainable district development plan driven by innovations. The goals are 1) attracting start-ups to this area, 2) enhancing the quality of life, and 3) creating innovations.

There are many important factors supporting the healthy startup ecosystem, which can summaries to six indicators: 1) Cost of living, 2) Rental rate, 3) The ease of starting a business, 4) Office space, 5) Monthly salary, and 6) Quality of life. From our data collected on 2017-2018 according to such indicators, KiiD is recognized as a new engine of growth that will boost the country's economy with high-tech industries. Such district development plan could enhance good quality of life without abandoning the district identity, existing skill, wisdom, local businesses, and communities. It is believed that it can lead to sustainable development in the long run. These also can help the Kluaynamthai to become the healthy districts both in economic and environmental aspects.





Parallel 9: Area based health innovation

November 22, 2019; 10.30 - 12.00 hrs
Room A@7, Floor 7

Title: Japanese initiatives for people living with dementia

Eri Yoshimura, Manager

Health and Global Policy Institute, Japan



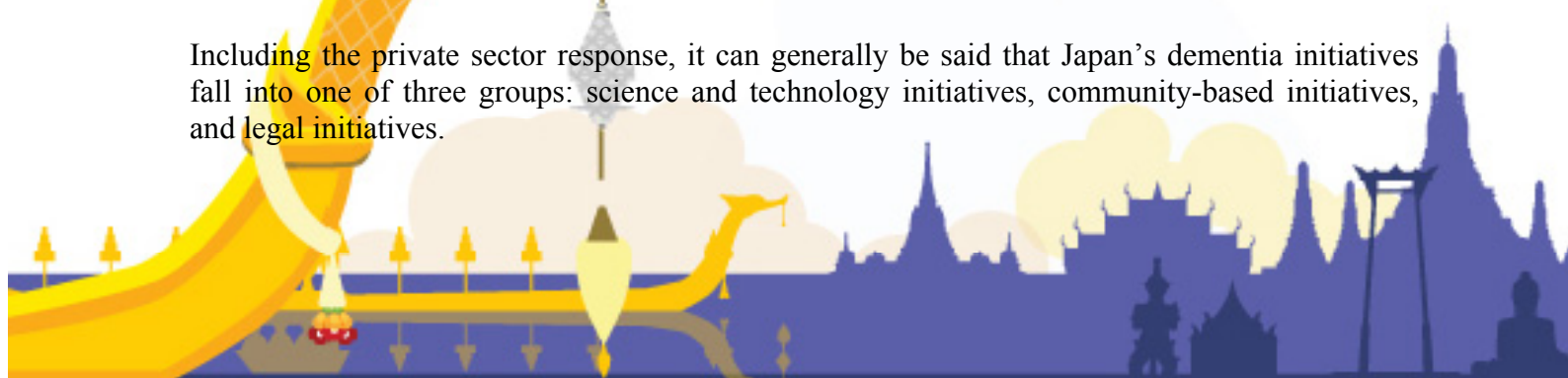
Eri Mikubo Yoshimura graduated from Keio University with a BA in Law (Political Science). After graduating, she started her career at Olympus, a Japanese medical device company. She then worked as a strategy consultant at IBM Japan. She provided consulting services for Japanese manufacturing companies in areas such as business process standardization and supply chain transformation. As a Rotary Foundation Global Scholar, she graduated from the University of California, San Francisco (UCSF) with a MS in Global Health. During her masters at UCSF, Eri focused on maternal and child health, and conducted field work in Sulawesi, Indonesia. After graduating from UCSF, she joined Health and Global Policy Institute (HGPI) in 2016. Eri led global health related projects including Access to Medicine and Antimicrobial Resistance. She has also planned and managed several projects on dementia, such as promoting public-private-partnerships in dementia and collaborating with the World Dementia Council (WDC) in research. Eri additionally plans, manages, and implements health policy related projects in Kanagawa Prefecture and is also engaged with research on Women's health.

Abstract

Japan began to experience population aging earlier than many countries around the world. As of 2017, one in three people in Japan were age 65 years or older. Alongside population aging, the number of people living with dementia is increasing as well. It is now expected that one out of five people age 65 years or older will develop dementia by 2025. Dementia is an urgent issue for Japan. It is also a complex issue, one that HGPI believes requires a society-wide approach.

To that end, in 2017, we HGPI released policy recommendations on the design of Public-Private-Partnerships (PPPs) for dementia in Japan. Our research supporting those recommendations found that Japan's private sector is already working to help realize a dementia-friendly society.

Including the private sector response, it can generally be said that Japan's dementia initiatives fall into one of three groups: science and technology initiatives, community-based initiatives, and legal initiatives.



Science and technology is a strength of Japan. Work is being done to use artificial intelligence, (AI), big data, and other technology to help detect dementia early, make early diagnoses possible, and maintain quality of life for people who develop dementia.

On the other hand, Japan is making use of a community-based integrated care system to support care work that cannot be replaced by technological innovations. These initiatives include innovations in urban design which seek to create healthier and more friendly environments for people living with dementia.

On the legal front, the Japanese Diet is expected to enact the “Dementia Basic Law” this autumn. It is hoped that this law will further support movements to realize a dementia friendly society. Japanese stakeholders are eager to share best practices with partner countries in Asia and elsewhere toward the further development of innovative initiatives for people living with dementia.





Parallel 10: Country experiences: Contemporary issues in public health

November 22, 2019; 10.30 - 12.00 hrs
Room C@7, Floor 7

CE-1

Electronic Media and Early Childhood Social Emotional Development

Catherine Thamarai Arumugam^{*}, Mas Ayu Binti Said, Nik Daliana Binti Nik Farid
Department of Social and Preventive Medicine, Faculty of Medicine, University of Malaya,
Kuala Lumpur, Malaysia

^{}Corresponding Author: catherinethamarai@yahoo.com*

Abstract

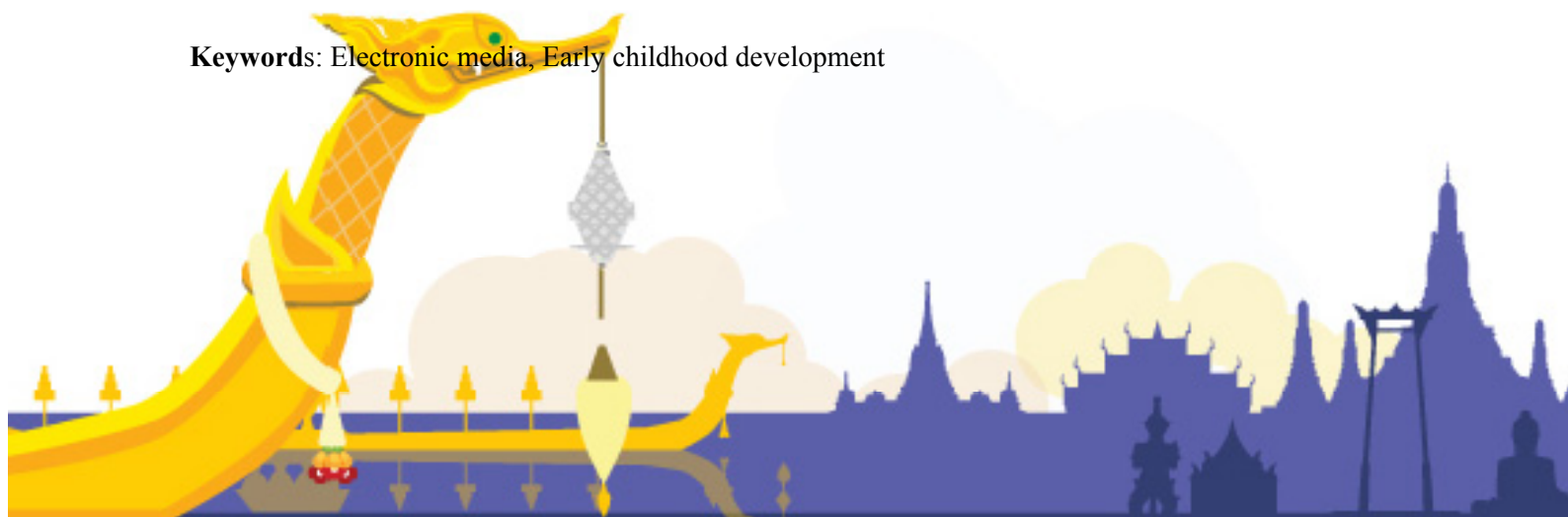
Background/Objectives: The way children live, learn and interact have changed over the years as childhood is progressively saturated by advancement of technology. From television to mobile devices, breakthroughs have been revolutionizing families. The American Academy of Paediatrics and World Health Organization call for limitation of screen time to not more than an hour in children between age of two to five and children below two-year old are urged not to be exposed to any screen time at all. This study is aimed to investigate the association between screen time, parental media behaviour and home media environment with early childhood social emotional development.

Methods: This cross-sectional study would be conducted in government health clinics located at district of Gombak, Selangor. Data collection is through interviewer-assisted questionnaire administration among parents of children aged 18 and 36 months old. Child's screen time is calculated using the Global Time Estimate method; gathering information on average time spent for watching television, using computer, laptop, mobile devices or video consoles on a typical day. Parental media behaviour is assessed using "Parent Problematic Digital Technology Use" and "Media and Technology Usage and Attitudes Scale"; whereas home media environment is assessed using the "Technology Related Parenting Scale". Child social emotional development is measured using "Ages and Stages Questionnaires: Social-emotional", 2nd edition (ASQ:SE-2). The research is currently at the stage of pilot study. Multiple logistic regression method is planned for data analysis.

Results: Prevalence of excessive screen time among young children and factors associated with it can be identified through this study. Types of media content that toddlers are exposed to would also serve as a vital finding. The association between child screen time, parental media behaviour and home media environment with early childhood social emotional development can be ascertained.

Conclusions: This study would assist in understanding the influences of techno-subsystem on early childhood social emotional development. Findings of the study would pave the way to develop public policies that would help to create a safe media environment and enabling atmosphere for young children to grow up in.

Keywords: Electronic media, Early childhood development



Parallel 10: Country experiences: Contemporary issues in public health

November 22, 2019; 10.30 - 12.00 hrs

Room C@7, Floor 7

CE-2

Qualitative Enquiry is Essential to Indigenous Health Promotion Response for Obesity Epidemic in Fiji Islands

Kamal Singh^{a,*}, Marguerite Sendall^b, Philp Crane^c

^aFaculty of Health, Engineering and Sciences, University of Southern Queensland, Toowoomba, Australia,

^bFaculty of Health, Queensland University of Technology, Brisbane, Australia,

^cSchool of Social Sciences, University of Sunshine Coast, Queensland, Australia

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Abstract

Background/Objectives: Obesity is a complex, multifactorial non communicable diseases involving environmental, social, cultural, genetic, physiological, metabolic, behavioural and psychological components. In recent decades, the burden of obesity has increased rapidly in developing South Pacific islands, and has exceeded the prevalence seen in developed countries. Obesity is more than just an individual problem; it is a community problem, driving up health care costs and reducing productivity. Hence, communities play an important role in lifting the health of their members by promoting healthy lifestyle changes ng to the factors affecting obesity in Fiji. The research objective were to understand the factors which influence current food practices, physical activity levels, and behaviours contributing to obesity in a specific rural Indigieuses Fijian community.

Methods: The study was a community based participatory approach which engaged with a rural Indigieuses Fijian Community. The research strategies included community consultation, a health survey, interviews, dissemination of findings to the community and feedback from the community. Data was analysed using the Analysis Grid for Environment Linked to Obesity (ANGELO) framework.

Results: Interview analyses revealed food intake and physical activity were associated with sociocultural, economic, political and physical environmental factors that influenced obesity. Participants revealed that previous health promotion programs were not culturally designed to meet the cultural values, beliefs and traditional ways in the community. The findings indicated that health care providers and policymakers need to be involved with the community culture, and to recognise and appreciate community culture and traditional ways to promote equitable participation in decision making.

Conclusions: Recommendations from this research include calls for new social policy that supports active participation of the local community, that incorporates community goals, cultural wellbeing and fairness, and results in culturally competent approaches to health promotion.

Keywords: Obesity, Community participation, Fiji, Rural





Parallel 10: Country experiences: Contemporary issues in public health

November 22, 2019; 10.30 - 12.00 hrs
Room C@7, Floor 7

CE-3

Perceptions of Depression among Malaysian Youth: A Qualitative Study

Nik Daliana Nik Farid^{a,b,*}, Nur Asyikin Yakub^{b,d}, Mohd Alif Idham Abd Hamid^c,
Kishwen Kanna Yoga Ratnam^a, Nurul Syafika Amir Hamzah^c, Maznah Dahlui^{a,b}

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^bCentre for Population Health, Faculty of Medicine, University of Malaya, Kuala Lumpur, Malaysia,

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^dPsychology and Human Well-being Research Centre, National University of Malaysia, Selangor, Malaysia

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Abstract

Background/Objectives: Youth's understanding of depression and their perceptions of its causes are important factors in ensuring the success of mental health programs for this population. In Malaysia, there has been limited effort devoted to the examination of youth's perceptions of depression. The objective of this study was to explore the perceptions of depression among Malaysian youth in urban cities.

Methods: This was a qualitative study wherein 28 interviews were held with youths in the urban areas of Kuala Lumpur and Selangor. Respondents aged 15-30 years were selected from an institute for skill development and from welfare institutions in two states (Federal Territory of Kuala Lumpur and Selangor). During these interviews, youth's perceptions and understanding of two areas of depression were explored, including: a) the meaning of depression, and b) factors contributing to depression. A thematic analysis was conducted to assess the presence of commonly occurring perceptions among youth.

Results: The participants perceived depression as involving sadness, uncomfortable feelings, and the occurrence of physical manifestations. Young people attributed depression to social circumstances: family conflict and neglect, academic concerns, loneliness, problems with peers, work stress, social media, and a high cost of living.

Conclusions: Our findings provide support for the proposition that when planning mental health programmes for youth, consideration must be given to the need for positive interactions within and between families and social groups.

Keywords: Youth, Perceptions, Depression, Social circumstances



Parallel 10: Country experiences: Contemporary issues in public health

November 22, 2019; 10.30 - 12.00 hrs

Room C@7, Floor 7

CE-4

Haze Impacts on Health: Direct Medical Cost of Haze-related Respiratory Illnesses in Public Healthcare Facilities

Hafiz Jaafar^{a,b,*}, Marzuki Isahak^b, Maznah Dahlui^{b,c}

^aDepartment of Primary Care, Faculty of Medicine and Health Sciences, Universiti Sains Islam Malaysia, Negeri Sembilan, Malaysia,

^bDepartment of Social and Preventive Medicine, Faculty of Medicine, University of Malaya, Kuala Lumpur, Malaysia,

^cCentre for Population Health, Department of Social and Preventive Medicine, Faculty of Medicine, University of Malaya, Kuala Lumpur, Malaysia

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Abstract

Background/Objectives: Haze imposes a substantial disease burden on populations, especially those in the Southeast Asian region. This study aims to understand the haze impacts on health and to determine healthcare utilization and healthcare costs incurred by public healthcare providers.

Methods: A cross-sectional study was conducted using secondary data from 2012 to 2015 on air pollutants and ecological factors obtained from the Department of Environment and healthcare utilization data retrieved from the Ministry of Health Malaysia and the University Malaya Medical Centre. The calculation of costs associated with managing haze-related respiratory illnesses was based on the unit cost derived from other studies. This was used to compare the direct medical cost for treatment of haze-related respiratory illnesses during haze and non-haze episodes.

Results: The average numbers of inpatient and outpatient visits during haze episodes were 74 (± 62.1) and 320 (± 650.1), respectively, compared to 34 (± 16.5) and 146 (± 170.5), respectively, during non-haze episodes. The four-year cumulative direct medical cost differences between haze and non-haze episodes were RM 13.4 million for inpatient cases and RM1.4 million for outpatient cases.

Conclusions: The deterioration in air quality due to haze episodes creates a significant financial burden for the public healthcare system as the result of increased utilization. It is essential to ensure that adequate financial and human resources are available in the relevant healthcare facilities to minimize the health and financial impacts of haze.

Keywords: Haze, Healthcare utilization, Respiratory illnesses, Financial implications





51st Asia-Pacific Academic
Consortium for Public
Health (APACPH)
Conference

SDGs in Reality

Turbo Talk Abstracts

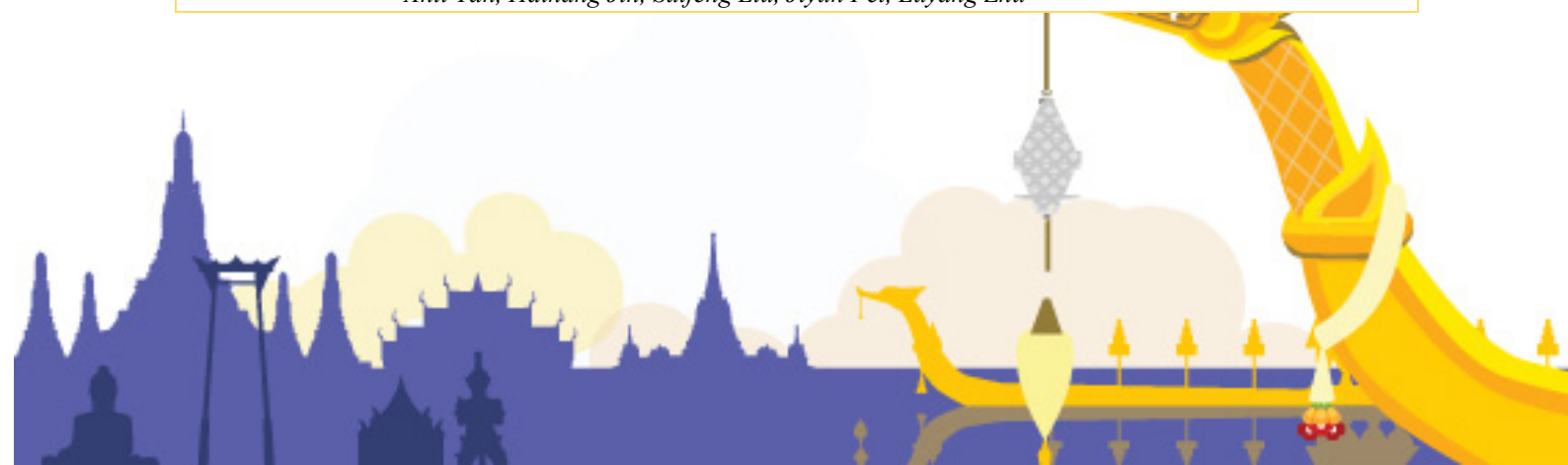
*November 21-22 , 2019
Amari Watergate, Bangkok, Thailand*

November 21, 2019



Amari Watergate, Bangkok, Thailand

12.30 - 13.30 Turbo Talk presentation		Banglampoo, Floor 6
	Chair : Professor Dr. Agustin Kasumayati <i>University of Indonesia, Indonesia</i>	
	Co-chair : Associate Professor Dr. Yuvadee Rodjarkpai <i>Burapha University, Thailand</i>	
T-1	Clustering of acute diarrhoea among children of under five years old in Sabah, Malaysia <i>Syed Sharizman Syed Abdul Rahim, Shamsul Azhar Shah, Mohammad Saffree Jeffree, Zahir Izuan Azhar, Mohd Rohaizat Hassan, Nazarudin Safian</i>	
T-2	In vitro evaluation of marine sediment-derived actinobacteria against two dominantly circulating <i>Leptospira</i> serovars in the Philippines <i>Rosario Clarissa Marie M. Lota, Rafael Adriano P. Nalupta, Mariya Klodyn D. Patron, John Derrick F. Sagum, Jann Loriell S. Solidiuma Edna M. Sabido, Doralyn S. Dalisay, Sharon Yvette Angelina M. Villanueva</i>	
T-3	Surveillance of leptospirosis among animals in Iloilo province, Philippines <i>Evalyn A. Roxas, Nina G. Gloriani, Philip Ian V. Padilla, Micaella C. Dato, Sharon Yvette Angelina M. Villanueva</i>	
T-4	Attitudes towards and beliefs about cancer and colorectal cancer (CRC) screening in Malaysia: A population-based survey <i>Darishiani Paramasivam, Désirée Schliemann, Michael Donnelly, Maznah Dahlui, Nor Salehabinti Ibrahim Tamin, Saunthari Somasundaram, Tin Tin Su</i>	
T-5	Premarital sexual behavior of pregnancy risk in adolescents: Qualitative case study in Pulogadung district health center, East Jakarta <i>Prihayati, Hermawan Saputra, Ridwan Amiruddin</i>	
T-6	The contribution of women empowerment in improving maternal health <i>Devi Syarief, Healthy Hidayanty, Ridwan Amiruddin, Dian Furwasyyih</i>	
T-7	Health care workers' perception on prevention of overweight and obesity among under 5 years old children in Fiji <i>Masoud Mohammadnezhad, Sharan Ram</i>	
T-8	Profile of nutritional status children aged 0-59 months in Banggai Regency, Central Sulawesi, Indonesia <i>Aspar Abdul Gani, Lucy Widasari, Anang S. Otohuwa, A. Razak Thaha</i>	
T-9	A school-based interventional study to improve healthy eating practices among Malaysian adolescents: Protocol for feasibility of quasi-experimental pilot trial <i>Shooka Mohammadi, Tin Tin Su, Muhammad Yazid Jalaludin, Maznah Dahlui, Mohd Nahar Azmi Mohamed, Angeliki Papadaki, Russell Jago, Zoi Toumpakari, Hazreen Abdul Majid</i>	
T-10	Examining depressive symptoms among parents with low socio-economic status in Kuala Lumpur, Malaysia <i>Nur Asyikin Yakub, Nor Ba'yah Abdul Kadir, Suzana Mohd Hoesni</i>	
T-11	Investigation of the status quo and influencing factors of obesity in young children in Hubei province <i>Anli Yan, Haihang Jin, Suifeng Liu, Jiyun Pei, Luyang Zhu</i>	



Turbo Talk presentation

T-1

Clustering of Acute Diarrhoea among Children of under Five Years Old in Sabah, Malaysia

Syed Sharizman Syed Abdul Rahim^{a,*}, Shamsul Azhar Shah^b, Mohammad Saffree Jeffree^a, Zahir Izuan Azhar^c, Mohd Rohaizat Hassan^b, Nazarudin Safian^b

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^bDepartment of Community Health, Faculty of Medicine, University Kebangsaan Malaysia, Kuala Lumpur, Malaysia,

^cDepartment of Population Health and Preventive Medicine, Faculty of Medicine, University Teknologi MARA (UiTM), Selangor, Malaysia

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Abstract

Background/Objectives: Diarrhoea is a major public health problem with an estimated 1.8 million death each year and the second leading cause of death in children. The aim of this study was to determine the factors associated with acute diarrhoea among children under 5 years old in Sabah.

Methods: This was a case-control study involving 584 samples in four districts in Sabah. The case-control data was analysed with SPSS 20.0. Spatial data was analysed using ArcGIS 10.0 and CrimeStat IV

Results: The associated factors of acute diarrhoea among under 5 years old were child's age, single parents, Peribumi Sabah mother, unemployed mother, less than RM2,000 monthly household income, no garbage collection, adjacent open garbage, average rainfall of 151mm or more and less than 1 year of breastfeeding. Four clusters were identified, and the factors associated with cluster of cases of acute diarrhoea among under 5 years old were Peribumi Sabah father, other water source, water interruption, adjacent open sewage and eating outside. Analysis of environmental features revealed a difference, especially regarding rivers and coastlines, between cases and controls.

Conclusions: The study has exhibited crucial usage of GIS in disease surveillance and disease pattern visualization for the benefit of public health authorities.

Keywords: Diarrhoea, Children, Cluster, Spatial analysis, GIS



Turbo Talk presentation

T-2

***In Vitro* Evaluation of Marine Sediment-derived Actinobacteria against Two Dominantly Circulating *Leptospira* Serovars in the Philippines**

Rosario Clarissa Marie M. Lota^a, Rafael Adriano P. Nalupta^a, Mariya Klodyn D. Patron^a, John Derrick F. Sagum^a, Jann Loriell S. Solidium^a, Edna M. Sabido^b, Doralyn S. Dalisay^b, Sharon Yvette Angelina M. Villanueva^{a,*}

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Abstract

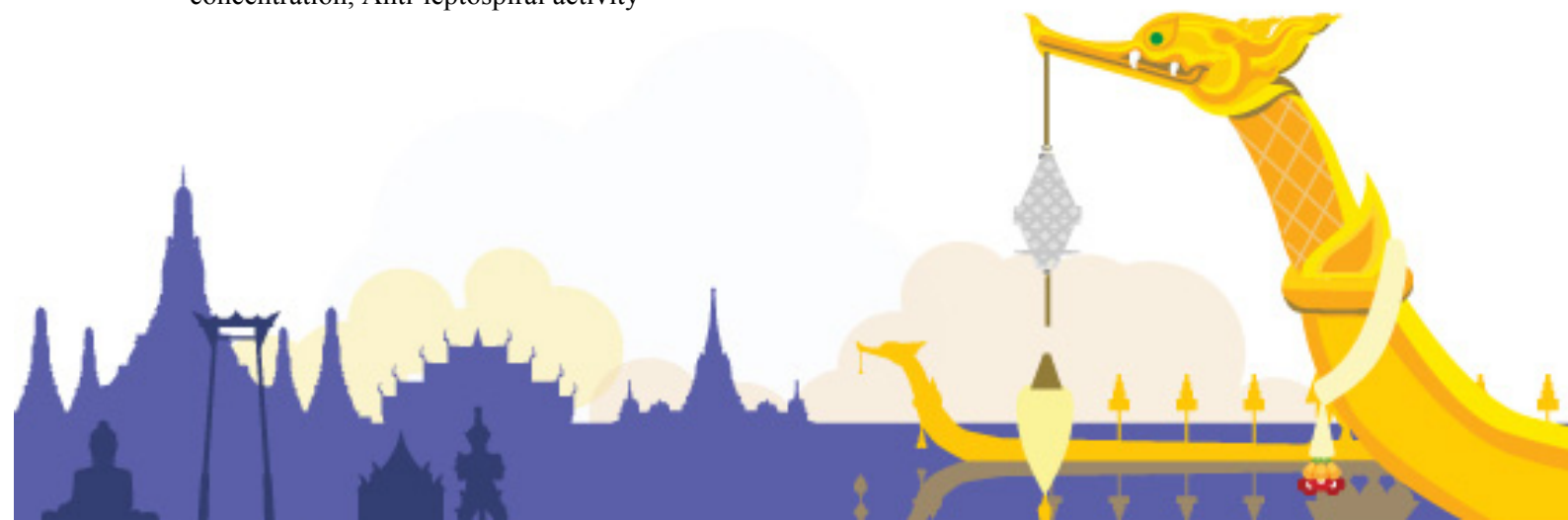
Background/Objectives: The world is currently beset with problems brought about by climate change, including leptospirosis. There is currently a need to discover novel therapeutic agents for leptospirosis as there are few to no antibiotics that are effective towards its treatment. This study aimed to determine the anti-leptospiral activity of 17 marine sediment-derived extracts of Actinobacteria, organisms reported to have antimicrobial properties, on 2 dominantly circulating *Leptospira* serovars in the Philippines.

Methods: The minimum inhibitory concentration (MIC) of each extract was determined using the broth microdilution technique. Two-fold serial dilutions of the extracts (500-3.9 µg/mL) using DMSO was done and were mixed with equal volumes of 1×10^8 leptospires/mL (*L. interrogans* serovars Manilae strain K64 and Losbanos strain K37). MIC was determined as the lowest concentration of extract that did not produce color change, and caused non-motility/non-growth of the leptospires as confirmed by darkfield microscopy. The minimum bactericidal concentration (MBC) was determined as the lowest concentration of extract that killed the leptospires, based on darkfield microscopy.

Results: Results showed that the 17 extracts inhibited the growth of leptospires at MIC of ≤ 3.9 µg/mL and no leptospires grew at MBC of ≤ 3.9 µg/mL. Upon examination under the darkfield microscope, majority of the extracts completely degraded the leptospires while 3 (USA 002 and USA 004 for strain K64, and USA 013 for strain K37) killed the bacteria without disintegrating the spirochetes, suggesting different modes of action.

Conclusions: These findings showed that all the Actinobacteria extracts caused the lysis of leptospires even at the lowest concentration. Results of this study may be helpful in exploring the use of Actinobacteria as alternative sources of treatment for leptospirosis and may serve as a jump off point in doing further studies on these extracts, particularly their mechanisms of actions.

Keywords: *Leptospira*, Actinobacteria, Minimum inhibitory concentration, Minimum bactericidal concentration, Anti-leptospiral activity





Turbo Talk presentation

T-3

Surveillance of Leptospirosis among Animals in Iloilo Province, Philippines

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Abstract

Background/Objectives: Iloilo province is known to be highly endemic for leptospirosis. Due to its public health and economic impact, surveillance of this zoonosis is very important. This study determined the prevalence of leptospirosis among rats, dogs, cattles, water buffaloes, swine, and goats from September 2016 to June 2017 in areas reported to have the highest number of human leptospirosis cases from 2008 to 2014. These were Iloilo City and the municipalities of Cabatuan, Sta. Barbara, Alimodian, and Dumangas.

Methods: Sera were tested for anti-*Leptospira* antibodies using the microscopic agglutination test (MAT), wherein a titer of $\geq 1:20$ and $\geq 1:80$ were considered as significant titers for rodents and domestic animals, respectively. Culture isolation of leptospire was also done on rat kidneys and urine samples of the rest of the animals and were subjected to *flaB* polymerase chain reaction (*flaB* PCR).

Results: Seroprevalance based on MAT results were as follows: (a) rodents = 66% (33/50); (b) dogs = 12.8% (5/39); (c) water buffaloes = 40.5% (17/42); (d) cattles = 28.8% (15/52); (e) goats = 10% (1/10), and (f) pigs = 0% (0/13). Antibodies were against serovars Canicola, Patoc, Pomona, Manilae, etc. Three of the 51 rat kidneys (6%) but none from the rest of the animals were culture-positive. However, 3 (2 from dogs and 1 from goat) urine samples and the 3 isolates from rats were *flaB* PCR-positive (1.82%).

Conclusions: The antibodies detected and the isolation of leptospire suggest the significance of the animals in the leptospirosis transmission cycle in selected sites in Iloilo province. These animals can possibly shed disease-causing leptospire even if they were asymptomatic and apparently healthy. Data from this study can be used to develop diagnostic kits and possible vaccine appropriate to the Philippines.

Keywords: Leptospirosis, Animal surveillance, Prevalence, Microscopic agglutination test



Turbo Talk presentation

T-4

Attitudes towards and Beliefs about Cancer and Colorectal Cancer (CRC) Screening in Malaysia: A Population-based Survey

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Abstract

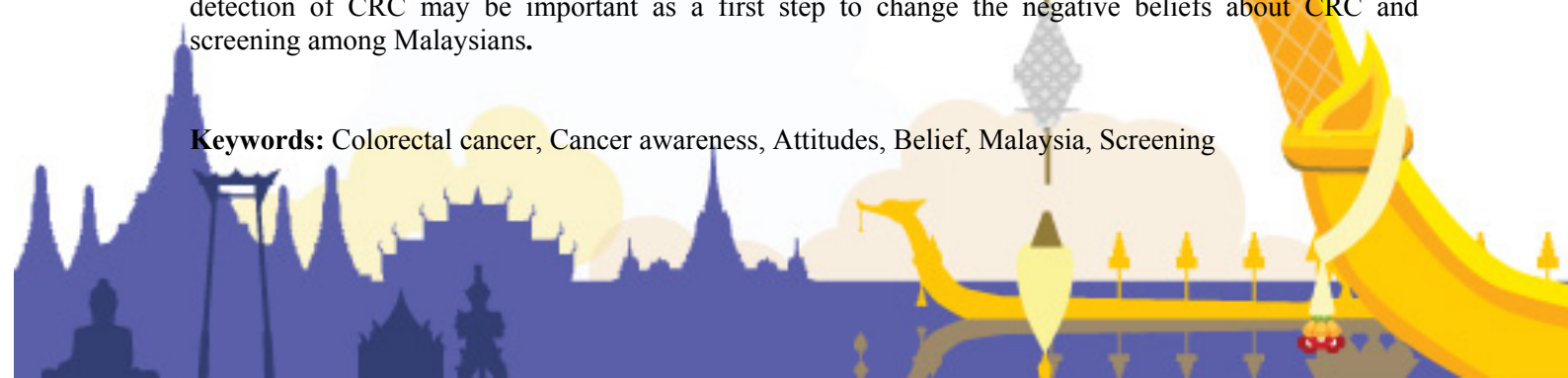
Background/Objectives: Among Malaysians, Colorectal cancer (CRC) is the most common cancer among males and the second most common cancer among females. Many cancer patients are diagnosed at late stages, which is partly due to negative beliefs and attitudes towards CRC and screening. We explored the beliefs and attitudes towards CRC and screening among males and females from Gombak district, Malaysia.

Methods: A cross-sectional household survey was conducted in Rawang (Gombak district, Selangor) between January and March 2018. The Department of Statistics Malaysia randomly selected 4000 households from a list of all households in Rawang. Trained data collectors visited households and recruited residents aged 40 years & above who fits the inclusion criteria, to participate in the face-to-face survey. A closed-ended questionnaire was used to gather socio-demographic information and attitudes towards and belief about cancer were assessed with the validated ABC questionnaire (Attitudes and Beliefs about Cancer) questionnaire.

Results: A total of 953 participants completed the survey. The findings suggest that negative beliefs towards cancer and CRC screening are still high among Gombak residence, e.g. 59.5% of participants agreed that “most cancer treatment is worse than the cancer itself”. Furthermore, the result indicate that significantly more females strongly agreed/agreed that “some people think that a diagnosis of cancer is a death sentence” compared to males (47.6% vs 41.6%; $p < 0.05$). Besides that, significantly more female participants strongly agreed/agreed that “going to the doctor as quickly as possible after noticing a symptom of cancer could increase the chances of surviving” compared to male participants (91.6% vs 87.5%; $p < 0.05$). There was no significant difference in CRC screening beliefs between genders. Moreover, significantly more female participants strongly agreed/agreed that “I would be too embarrassed” and “I would be worried about what the doctor might find” compared to male participants (14.4% vs 6.4%; $p < 0.05$; 32.8% vs 20.5%; $p < 0.05$).

Conclusions: Overall, the proportion of males and females from Gombak district that hold negative beliefs about CRC and screening is high. Education about the benefits of CRC screening and early detection of CRC may be important as a first step to change the negative beliefs about CRC and screening among Malaysians.

Keywords: Colorectal cancer, Cancer awareness, Attitudes, Belief, Malaysia, Screening





Turbo Talk presentation

T-5

Premarital Sexual Behavior of Pregnancy Risk in Adolescents:
Qualitative Case Study in Pulogadung District Health Center, East Jakarta

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Abstract

Background/Objectives: Adolescence has various sexual needs and is a crisis period which causes sexual activity deviations. This study aims to describe the sexual risk behavior of pregnancy in adolescents. The research problem is the deviant sexual behavior and lack of information from family and environment.

Methods: A qualitative approach study was performed on 22 informants, including 4 pregnant teenagers as the key informants and 18 people as triangulation informants, those are midwives, parents, religious leaders, community leaders, and the peers of the pregnant teenagers.

Results: The study reveals that adolescents disagrees with extramarital sex and they have sufficient knowledge. Most of them do not have risky behaviors such as smoking, as well as consuming alcohol and drugs. Communication of adolescents with the parents is less open and harmonious and they are affected by the environment of promiscuity and lack of access to information obtained from appropriate sources.

Conclusions: Promiscuity, lack of attention and family information are the most important aspects of premarital sexual behavior in adolescents. The step that needs to be done is an effort to increase adolescents and parents' awareness of the effects of premarital sexual behavior.

Keywords: Premarital sex behavior, Qualitative study



Turbo Talk presentation

T-6

The Contribution of Women Empowerment in Improving Maternal Health

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Abstract

Background/Objectives: The subordinate status of women is the key to social determinants of poor maternal sexual and reproductive health. Many factors cause women to fail to access health services. Therefore, a comprehensive approach that includes women empowerment is necessary to improve maternal health. The purpose of this review is to discuss how women empowerment can affect the quality of maternal health.

Methods: The study was designed using a literature review approach. The literature search was conducted manually and systematically (online journal database, such as Scopus, PubMed, Cochran, BMC, Lancet, One Search and DOAJ), as well as other sources coming from related research project reports. The keywords used were women empowerment and maternal health. The technical analysis used in this review was article synthesis. Forty articles from the last 10 years (2009-2019) were synthesized. The units analyzed were women empowerment and its relation to maternal health, as well as the factors influencing it.

Results: Most of the results of the review indicate that the role of women in improving maternal health from various manuscripts shows a significant correlation. The empowered women are capable of understanding their value to the community better, therefore they can demand their right to access to health services, state their needs, and take appropriate decision-making actions for their health. Thus, the prevention of delay-factor in deciding to seek care and achieve emergency services can be avoided. Additionally, some factors are identified as affecting women to fail to access health services.

Conclusions: Increasing women empowerment requires more concrete efforts. The interventions carried out should be performed on women as the direct target of the women empowerment program. The political, economic, social, and cultural actions also necessary to support the efforts to empower women.

Keywords: Women empowerment, Maternal health





Turbo Talk presentation

T-7

Health Care Workers' Perception on Prevention of Overweight and Obesity among under 5 Years Old Children in Fiji

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Abstract

Background/Objectives: Overweight and obesity are growing concern amongst children < 5 years of age. There is lack of data amongst childhood obesity in Fiji and there is lack of research in this area. Due to important role of health care workers (HCWs) in preventing obesity this study aimed to explore HCWs perception regarding overweight and obesity for children under 5 years old in Fiji.

Methods: This qualitative study applied purposive sampling. Six in-depth focus group discussions (FGDs) were conducted at three health facilities in Suva, Fiji, 2018. A semi-structured open ended questionnaire was used to collect data. Data were audio recorded, transcribed verbatim and analyzed using content analysis approach to identify the themes.

Results: Overall, the study shows that HCWs noted increases incidence of childhood overweight and obesity cases. It also shows that the culture of bigger body size is equated as healthy and happy babies with clear ethnic variation with *iTaukei* including others as opposed to Indo-Fijians. HCWs were aware if the sensitivities surrounding the adverse health status of child thus being careful about when discussing with parents. Several barriers were identified in tackling overweight and obesity. These included lack of parental knowledge, sensitivities surrounding the issue, lack of time, most importantly lack of capacity amongst the HCWs to address the issue. HCWs suggested registering children in a register to ensure overweight and obese children are followed up and HCWs provided guidelines on overweight and obesity by the health ministry.

Conclusions: The study findings suggest that childhood obesity is a growing problem and HCWs need to be adequately capacitated to address the issue in the same way as underweight amongst children less than 5 years old.

Keywords: Childhood obesity, Overweight, Qualitative study, Fiji



Turbo Talk presentation

T-8

Profile of Nutritional Status Children Aged 0-59 Months in Banggai Regency, Central Sulawesi, Indonesia

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Abstract

Background/Objectives: Nutritional problems in children aged 0-59 months are still a public health problem, one of which is characterized by the prevalence of stunting > 20%. Banggai Regency is one of the priority areas for national stunting handling programs. The purpose of this study was to describe the nutritional status problems of children aged 0-59 months in 10 villages in Banggai Regency.

Methods: This survey study involved a total sampling of 617 children aged 0-59 months in 10 villages collected from August to September 2018. Data were collected through anthropometric measurements using the Camry brand digital scales, length board, microtoise and interviews using a structured questionnaire. Data collection results processed and analysed with WHO anthro and SPSS 21 software.

Results: This study shows that nutritional status based on Weight for Age index is overweight 2,27%, Wellnourished 72,77%, Underweight 19,77% and Severely Underweight 5,19%. Nutritional status based on Height for Age index is Height 1,46%, Normal 64,67%, Stunted 24,80% and Severely Stunted 9,08%. Nutritional status based on Height for Weight index is Obesity 0,00%, Normal 90,76%, Wasted 6,16% and Severely Wasted 3,08%

Conclusions: Stunting problems in 10 villages in Banggai Regency are still very high, so it needs serious attention from all parties in their handling, one of the strategies in handling stunting is through the efforts of convergence and effectiveness of intervention of all parties involved.

Keywords: Nutritional status, Children aged 0-59 months





Turbo Talk presentation

T-9

A School-based Interventional Study to Improve Healthy Eating Practices among Malaysian Adolescents: Protocol for Feasibility of Quasi-experimental Pilot Trial

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Abstract

Background/Objectives: A school environment can influence its students' dietary habits. Hence, the implementation of healthy canteen intervention programme in schools has been recommended as a strategy to improve students' dietary intake. This study examines the feasibility of providing healthier food options in collaboration with selected secondary school canteen operators in Malaysia. It also aims to measure the changes in food choices before and after the intervention.

Methods: A pilot quasi-experimental feasibility study is conducted in six secondary schools (intervention, n = 4; control, n = 2) includes three rural and three urban schools in Selangor and Perak states in Malaysia. The intervention duration is four weeks among Malaysian adolescents (15 years of age). Two interventions are proposed which focus on providing healthier food options at the canteen and convenient shops in the selected schools. Intervention 1 and 2 entail training the canteen and school convenient shop operators. In addition, intervention 2 includes subsidizing the price of fruits, vegetables and low energy-dense kuih (traditional cake). The control group continues to sell the usual food. Trained dietitians will audit the canteen menu and food items sold by the school canteen and convenient shops in all schools. Study outcome measures will be assessed by 3-day diet history and anthropometric measurements conducted at baseline and post-intervention (4 weeks after intervention). Focus group discussions with students and interviews with headmasters, teachers and school canteen operators are conducted post-intervention to explore intervention acceptability. Under this Healthy School Canteen program, school canteens are prohibited from selling 'red flag' foods. This refer to foods which are calorie dense and not nutritious, such as confectionery and deep-fried food. They are also prohibited from selling soft drinks which are sugar-rich and without any nutritional content. Instead, the canteens are encouraged to sell 'green flag' food and drinks, such as fruits and vegetables).

Discussion: It is anticipated this feasibility study can provide a framework for the design and implementation of nutritional interventions at school canteens in Malaysia.

Keywords: Healthy eating, Adolescents, Intervention



Turbo Talk presentation

T-10

Examining Depressive Symptoms among Parents with Low Socio-economic Status in Kuala Lumpur, Malaysia

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Abstract

Background/Objectives: Numerous studies reported that those with low socio-economic status (SES) and among females were more frequent to experience depression. Therefore, this study aimed to examine the depressive symptoms among parents with low income status and the interaction between the other socio-demographic risk factors for depression.

Methods: A total of 205 parents with children from four People's Housing Project (PHP) around Kuala Lumpur completed a self-report questionnaire includes demographic profile form for screening the depressive symptoms availability using Beck's Depression Inventory (BDI). In order to measure all the socio-demographic risk factors that possibly related to the depressive symptoms among parents, the cross tabulation analysis and Chi Square test were used to present the data.

Results: The study showed the higher prevalence of high depressive symptoms among mothers, 24.7% compared to fathers, 20.3% but no significant association between the gender and the level of depression occurred. The Chi Square tests for other socio-demographic risk factors (age, number of children, employment status and the household income) were found that only the employment status has the significant association to the depressive symptoms among the parents.

Conclusions: The prevalence of the depressive symptoms among the low SES and the associated variable were determined. Further research on intervention to educate parents is needed to react the present findings and to reduce the transmission risk to the children as well as to develop the healthy nations.

Keywords: Depressive symptoms, Low SES, Parents, Depression





Turbo Talk presentation

T-11

Investigation of the Status Quo and Influencing Factors of Obesity in Young Children in Hubei Province

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Abstract

Background/Objectives: Children's overweight and obesity has become one of the common problems in the world. In the past 20 years, the overweight and obesity rate of young children in China has risen sharply. The key period to prevent childhood obesity is in infants and young children.

Methods: In this study, a cross-sectional descriptive study with 430 participants aged 1-3 years was conducted in five cities in Hubei Province by means of convenient sampling. Data was collected using The Young Children's Obesity Questionnaire. Multivariate logistic regression analysis was performed to identify the influencing factors.

Results: The rate of overweight and obesity were 18.1%, 14.0%, respectively. The influencing factors included birth patterns, sweets taking frequency, caregiver gender, family monthly income, and feeding method during infant age.

Conclusions: Caesarean section, eating sweets frequently, male caregiver sex and infants in family with high monthly household income were more likely to be overweight or obese.

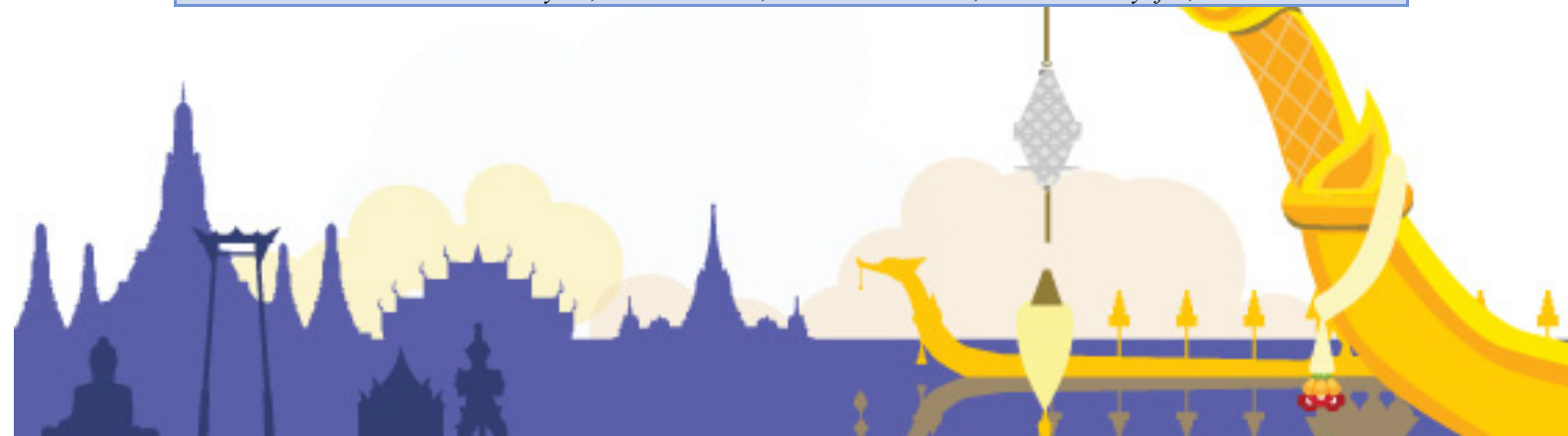
Keywords: Obesity, Infant, Young children



November 22, 2019

Amari Watergate, Bangkok, Thailand

12.20 - 13.30	Turbo Talk presentation	Banglampoo, Floor 6
	Chair : Professor Dr. Elahe Nezami <i>University of South California, USA</i>	
	Co-chair : Dr. Arthit phosri <i>Mahidol University, Thailand</i>	
T-12	A systematic review of health status of coastal community in Sabah, Malaysia <i>Amirah Azzeri, Goh Hong Ching, Hafiz Jaafar, et al.</i>	
T-13	Continuity of care in maternal comprehensive health services: A literature review <i>Adriana Palimbo, A. Ummu Salmah, Ridwan Amiruddin, et al.</i>	
T-14	Perceived benefit, perceived barrier and self-medication practice among rural people in Nepal <i>Sudhir Mishra, Nawarat Suwannapong, Mathuros Tipayamongkhogul, Natnaree Aimyong</i>	
T-15	Analysis on relationship between <i>Bacillus</i> and <i>Enterobacter</i> bacteria in air and hospital acquired infections potential in intensive care unit rooms of Dr. Wahidin Sudirohusodo hospital <i>Owildan Wisudawan B., Anwar Mallongi, Anwar Daud, Sukri Palutturi, Atjo Wahyu</i>	
T-16	The impact of air pollution control measures for the Beijing Olympics in 2008 on reducing respiratory and cardiovascular disease <i>Yi-Ting Lin, Hathaichon Boonhat, Ro-Ting Lin</i>	
T-17	Phthalate and their exposure from PVC floor maternal <i>Kamonwan Promtes, Bunyarit Panyapinyopol, Suphaphat Kwonpongsagoon, et al.</i>	
T-18	The religion quality improvement for primary health care character in South Sulawesi <i>Muhammad Tahir, Ridwan Amiruddin, Sukri Palutturi, et al.</i>	
T-19	Satisfaction evaluation of national health insurance patient; upgrade of care class at Lasinrang Pinrang general hospital <i>Marwah Thaha, Amran Razak, Indar, Fridawaty Rivai</i>	
T-20	Barriers for underutilization of maternal and child health services in Indonesia: A qualitative perspective <i>I Ketut Swarjana, Natkamol Chansatitporn, Nawarat Suwannapong, Punyarat Lapvongwatana</i>	
T-21	Does the health insurance governance system support health care programs? <i>Rini Anggraeni, Syahrir A. Pasinringi</i>	
T-22	A long-term care policy and smart care solution in Taiwan. <i>Yu-Sheng Lin, Korravarn Yodmai</i>	
T-23	Development of T-CBT model to improve the competence of midwives in prevention of depression in victims of child sexual violence <i>Triana Indrayani, Sukri Palutturi, Ridwan Amiruddin, Muhammad Syafar, Retno Widowati</i>	





Turbo Talk presentation

T-12

A Systematic Review of Health Status of Coastal Community in Sabah, Malaysia

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Abstract

Background/Objectives: Coastal communities are facing with numerous health issues. In Sabah, many of the coastal zones are isolated with lack of accessibility. Researches focusing on the health issues and health gaps of people at the coastal areas are lacking. The main objective of this study was to review published literatures on health status of coastal communities in Sabah, Malaysia.

Methods: A systematic electronic search strategy was conducted using the traditional search and citation forward and backward tracking with three databases, PubMed, Scopus, and Web of Science. The inclusion criteria applied in the literature search were: (1) full article journal, (2) studies that elicited health status/problem of a coastal community in Sabah, (3) studies that were published in English language and (4) studies that were published from 2009 to 2019.

Results: A total of 11 articles were finally considered and included in the review. Four main health issues found were: (i) malaria, (ii) tuberculosis (TB), (iii) seafood poisoning and (iv) antenatal problem. The incidence of malaria infection was estimated at 2.6/1,000 people/year in 2009-2011. The commonest species found was Plasmodium knowlesi, which was different from species in non-coastal area in Peninsular Malaysia. Factors that were associated with the risk of acquiring malaria infection in the studied coastal area were older adult, male, farmer, history of travel outside the village and rainy seasons. TB infection was occurred primarily among adult male. Many of the patients were diagnosed at later stage of the disease and 96% of the patients have low knowledge on TB disease. Poisoning due to seafood consumption is very common in Sabah. Studies have reported that, tetrodotoxin and paralytic shellfish poisoning were commonly reported with approximately 30-60 cases per year. Many of the pregnant ladies of the coastal community did not have adequate knowledge on national antenatal care program. Despite the low knowledge, 99% of the patients received antenatal care at public healthcare facilities with 92% of them had safe delivery. Nevertheless, majority of the pregnant women had iodine deficiency due to low iodised salt intake.

Conclusions: Findings from this review highlighted that coastal communities in Sabah are experiencing considerable health problem. Specific attentions are required to enhance better health and wellbeing of coastal communities in Sabah.

Keywords: Health status, Coastal, Sabah

Turbo Talk presentation

T-13

Continuity of Care in Maternal Comprehensive Health Services: A Literature Review

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Abstract

Background/Objectives: The continuity model of care is the interaction of antenatal care, labor, and puerperium. This is a shared responsibility between women (mother), family (husband) and midwives. Midwifery practices focus on women as partners who are holistic, including their physical, psychological, emotional, social, cultural, spiritual and reproductive health. The purpose of this study, exploring the core elements of Continuity of Care (CoC) antenatal, intranatal and postnatal is to get the benefits, coverage, and effectiveness of maternal health services on an ongoing basis.

Methods: The design of this study uses an electronic bibliographic database. Search was carried out systematically on PubMed, Proquest, and directives from 2009 to 2019. Selecting 761 qualitative and quantitative studies was identified by the keywords of continuity of pregnancy, delivery, after birth and maternity services, then synthesized as many as 30 selected articles according to the inclusion criteria. Articles divided into groups are analyzed inductively to findings.

Results: Continuity care midwives-led, obtained three aspects are benefits for midwives and students, coverages and effectiveness of CoC. Benefits to high satisfaction and professionalism in CoC midwives compared to midwives without CoC, although CoC midwives experience high caseload and burnout. Understanding the concept and the context of better CoC skills, high concern for mother's shown by clinical practice students is supported by learning methods and reliable mentoring. The coverage of ANC is at the highest percentage level compared to INC and PNC, a large dropout occurs between INCs to PNC, so that comprehensive figures are only shown at the 5% level. While the highest service effectiveness was obtained from home visit service satisfaction, maternal self-evaluation, and their high expectations.

Conclusions: Complete service coverage and providing benefits depend on supporting factors and constraints such as the characteristics of each mother, health systems and management, and the development of continuing professionalism. The authorities also need to establish policies and strengthen collaboration in other cross-professional practices.

Keywords: Continuity of care, Comprehensive, Maternal, Health services, Literature review





Turbo Talk presentation

T-14

Perceived Benefit, Perceived Barrier and Self-medication Practice among Rural People in Nepal

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Abstract

Background/Objectives: Inappropriate self-medication is one of the leading causes of growing antibiotic resistance in developing nations which poses a major public health threat worldwide. Hence the objective of the study was to assess perceived benefits, perceived barrier and its relationship on self-medication among rural people in Nepal.

Methods: This was a cross sectional study which was conducted in rural Rolpa Nepal. Total sample size was 720 randomly selected among 18 to 70 years by using the probability proportional to size for ward selection and then used the systematic random sampling for selection of household. Data collection was done by using structured questionnaire. Chi square and simple logistic regression was done to find the association between perceived benefit, perceived barrier and self-medication practice.

Results: 54.6% of rural people practiced regular self-medication in the last three. 63.7% of the respondents have low level of perceived benefits. Almost two-third (60.8%) of the respondents have low level of perceived barrier. There was statistically significant relationship between perceived benefit ($p < 0.001$), perceived barrier ($p < 0.042$) and self-medication practice. The use of self-medication by females is 2 times higher than male. Age with 30-49 have 4 times higher chance to use of self-medication compare with < 30 years ($p < 0.001$). People who have national health insurance have 2 times higher chance to use self-medication ($p < 0.001$).

Conclusion: To reduce the high regular self-medication practice require health promotional strategy for adult age female population. Awareness campaign in Hindu religion will help to reduce the high regular use of self-medication practice

Keywords: Self-medication, Perceived benefits, Perceived barrier, Rural Nepal



Turbo Talk presentation

T-15

Analysis on Relationship between Bacillus and Enterobacter Bacteria in Air and Hospital Acquired Infections Potential in Intensive Care Unit Rooms of Dr. Wahidin Sudirohusodo Hospital

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Abstract

Background/Objectives: Poor hospital building environment quality is due to presence of potential sources of airborne microbes and may lead to HAIs (Hospital Acquired Infections). The research aimed to find out the relationship between the Bacillus sp. and Enterobacter sp. bacterium in the air and HAIs incident potential.

Methods: This research was conducted in Dr. Wahidin Sudirohusodo hospital. This was an analytic observational research with the cross-sectional study design. Samples taken were human samples based on the criteria of the research as many as 61 patients, and the environmental samples were as many as 8 rooms. The data were analyzed using the Chi-square test.

Results: The research result indicates that the air quality related to the bacterium pollution in the air in intensive care unit room does not qualify. The result of the microorganism culture and identification is found the HAIs causing bacteria namely Bacillus sp. and Enterobacter sp. Based on the statistic test, the value of $p=0.014$ (95% confidence intervals) is obtained, so there is the relationship between Bacillus sp. and the hospital acquired infections incident potential. The Enterobacter sp. bacterium indicates the value of $p=0.437$ (95% confidence intervals), so there is not have the relationship between the Enterobacter sp. bacterium and the hospital acquired infections incident potential.

Conclusions: Aspects of hygiene and sanitation appeared to be important factor in maintaining low microbial load in the air and further research is needed related to fungi and viruses in the air because of the potential source of HAIs.

Keywords: Bacillus, Enterobacter, Hospital acquired infections, Intensive care unit





Turbo Talk presentation

T-16

The Impact of Air Pollution Control Measures for the Beijing Olympics in 2008 on Reducing Respiratory and Cardiovascular Disease

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Abstract

Background/Objectives: Regarding to improving air quality to hold a Green Olympics in 2008. The Beijing government achieved the fourteenth-stage Air Pollution Control Measures (APCM). The objective of this study was to investigate the extent of the implementation of the APCM for the 2008 Olympics on respiratory and cardiovascular disease.

Methods: First, we identified publications related to air pollution and Olympics. Second, we excluded duplicated publications and screened by titles and abstracts. Third, we excluded irrelevant publications. After that, we reviewed the full-text and qualified 12 publications as relevant to our study objective for systematic review. To our study objective, we included 8 publications, calculated and compared 24 kinds of respiratory and cardiovascular disease/indicator for the reduction rate during the APCM implementation.

Results: Previous study groups for indicators for respiratory and cardiovascular diseases were mainly focused on midlife and mature adulthood. Our finding showed the APCM resulted in the highest reduction rate in the daily number of outpatient asthma visits by approximately 40%–55% during the Olympics. As for cardiovascular-related indicators, the implementation of APCM had a stronger effect on the reduction in mortality rate in females and the elderly, followed by the number of emergency room visits (ERVs). However, the elderly have a higher reduction rate of cardiovascular ERVs than females. We also found the reduction rate of respiratory and cardiovascular disease/indicators were all back nearly to the pre-Olympic levels within one month.

Conclusions: When the 14th-stage APCM was implemented, the ambient air pollution reduced significantly, which is associated with the morbidity and mortality of respiratory and cardiovascular disease. Because of policy relaxing, the levels could not persistent after the Olympics and rebounded nearly to the levels in the pre - Olympic period. Therefore, we suggested that policy enforcement should be implemented persistently in order to decrease air pollution and increase long-term health benefits.

Keywords: Policy, Air pollution, Olympics



Turbo Talk presentation

T-17

Phthalate Dust and their Exposure from PVC Floor Material

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Abstract

Background/Objectives: Phthalates are used as additive in polyvinyl chloride (PVC) plastic products and are applied in hundreds of products such as, food packaging, pharmaceuticals, home care products and personal care products. Phthalates are semi-volatile organic compound where as their structure resemble to human hormone, hence, their exposure may interrupt hormonal function and cause of disease or malfunction of reproductive system, developmental system and metabolic system, etc. The emission of phthalate due to they are not bound with other matrixes, so, they emit into ambient environment then caught and sediment with dust. This study aimed to investigate phthalates in house dust from 99 houses in Bangkok, Thailand which divided into multi-family apartments with PVC floor material (n: 34), multi-family apartments without PVC floor material (n: 55) and single-family houses without PVC floor material (n: 10). Moreover, resident exposure from phthalates via dust ingestion were calculated.

Methods: Phthalate dust were collected from floor by portable vacuum cleaner with paper filter bags and 10 phthalates (dimethylphthalate, diethylphthalate, dipropylphthalate, diisobutylphthalate, dibutylphthalate, dipentylphthalate, benzylbutylphthalate, dihexylphthalate, di-2-hexylphthalate and diisononylphthalate) were analyzed by gas chromatography with mass spectrometry.

Results: Median of each phthalates in house dust were as follows di-2-hexylphthalate (1,739.3 $\mu\text{g g}^{-1}$) was the most concentration of phthalates in house dust, diisononylphthalate (611.1 $\mu\text{g g}^{-1}$), dibutylphthalate (32.4 $\mu\text{g g}^{-1}$), diisobutylphthalate (17.3 $\mu\text{g g}^{-1}$), benzylbutylphthalate (8.5 $\mu\text{g g}^{-1}$), dimethylphthalate (1.6 $\mu\text{g g}^{-1}$), diethylphthalate (1.4 $\mu\text{g g}^{-1}$), dihexylphthalate (1.0 $\mu\text{g g}^{-1}$), dipentylphthalate (0.4 $\mu\text{g g}^{-1}$), dipropylphthalate (0.2 $\mu\text{g g}^{-1}$) respectively. Multi-family apartments with PVC floor material had significant high of total phthalates 5,886.1 $\mu\text{g g}^{-1}$ than those multi-family apartments without PVC floor material (2,253.1 $\mu\text{g g}^{-1}$) and single family houses without PVC floor material (1,702.8 $\mu\text{g g}^{-1}$). The median and 95th percentile of total phthalate exposure in multi-family apartments with PVC flooring in preschool children were 98,100 and 180,400 and adult were 5,100 and 9,380 ng kg^{-1} body weight day⁻¹ respectively.

Conclusions: PVC floor material was associated abundant phthalates in house dust. Importance thing to reduce the phthalate exposure was substitution PVC flooring by use free-phthalate flooring particularly home and other environments which close to preschool children.

Keywords: Phthalates, House dust, Polyvinyl chloride, Dust ingestion



Turbo Talk presentation

T-18

The Religion Quality Improvement for Primary Health Care Character in South Sulawesi

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Abstract

Background/Objectives: Measurement of service quality with accreditation method is one of the tools to ensure the quality of service for community health center, but from several models of quality improvement it is considered to have weaknesses because no one pays attention to religion, so that the model is not properly used in Indonesia. The aims of this study was to analyze the effect of religious character on the continuous improvement of the quality of primary health services in South Sulawesi.

Methods: This research is a qualitative study with a case study approach. The data collection technique was carried out by *Focus Group Discussion (FGD)*. The informants in this study were 10 people consisting of surveyors, religious leaders, community health center heads, non-governmental organizations, lecturer and academics. Data analysis was done by *content analysis* method.

Results: The results of the study state that there were 10 religious characters that should be owned by health center officers, namely discipline, fair, honest, clean, trustworthy, good at communicating, patient, friendly, committed and wise.

Conclusions: It is recommended to community health center officers to apply this religious character so that service quality can be improved and sustainable.

Keywords: Service quality, Religious character, Community



Turbo Talk presentation

T-19

Satisfaction Evaluation of National Health Insurance Patient; Upgrade of Care Class at Lasinrang Pinrang General Hospital

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Abstract

Background/Objectives: Hospitals are expected to provide effective, efficient services and provide health information that is appropriate for the community, which is influenced by technological advances and the public socio-economic life. Efforts to improve the quality of hospital services continue to be improved to achieve patient satisfaction as one of the quality indicators, and expected to reduce the number of patient complaints. This study aims to determine the level patient satisfaction of National Health Insurance users who upgrade their care class at Lasinrang Pinrang General Hospital.

Methods: This study is a quantitative research with descriptive analytical approach conducted at Lasinrang Pinrang General Hospital in 2018 with a population of 22,254 patients.

Results: This study showed that out of 227 respondents, class improvement satisfaction in patients in class 3 users were 64.4% dissatisfied and 35.6% were satisfied. class 2 users were 58.1% dissatisfied and 41.9% were satisfied. class 1 users were 42.3% dissatisfied and 57.7% were satisfied.

Conclusions: Satisfaction of upgrade class in national health insurance patients at Lasinrang Pinrang General Hospital, especially Class 3 and Class 2, still needs to be improved. In general, the complaint is about costs to be paid by the patient, so it is recommended to conduct a socialization of the cost of upgrade the Class for participants of the National Health Insurance.

Keywords: Patient satisfaction, JKN-participants, Nursing classes





Turbo Talk presentation

T-20

Barriers for Underutilization of Maternal and Child Health Services in Indonesia: A Qualitative Perspective

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Abstract:

Background/Objectives: Maternal and neonatal mortality are the major global health problem among low and middle income countries including Indonesia. The target of Sustainable Development Goals (SDGs) goal three is to reduce maternal and neonatal mortality by 2030. The mortality related to underutilization of maternal and child health (MCH) services. This paper aimed to explore the barriers for underutilization of MCH services in Indonesia.

Methods: A qualitative data collection method was used with 12 head of communities, 12 head of MCH programs, and 24 mothers with babies under one year among three provincial income levels of Indonesia. The participants were selected using convenience sampling, and performed in depth interview. Then, thematic analysis was used for qualitative data analysis.

Results: Several consistent themes was found such as home delivery by traditional birth attendance (TBA), post-partum mothers may not going out from house within 42 days after delivery, lack of knowledge on minimum ante natal care (ANC) visits in each trimester, insufficiency of MCH services information, long distance from house to health facility, lack of public transportation, experiences being treated unequally by health care providers, and low ability to pay cost for MCH services, medicine, and transportation.

Conclusions: Minimize barriers for underutilization much needed by developing policies to improve knowledge of mothers in terms of minimum ANC visits in each trimester, institutional delivery, and post-partum visits. While trained the TBA, home visits and mobile health services are required to improve utilization of MCH services.

Keywords: Barriers, Underutilization, MCH services, Indonesia



Turbo Talk presentation

T-21

Does the Health Insurance Governance System Support Health Care Programs?

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Abstract

Background/Objective: Good governance principles used to arrange management of the health insurance system in the NHI era. To ensure the sustainability of this program, an evaluation of the implementation policies of NHI is needed. The research aimed to measured implementation good governance of NHI in Makassar.

Methods: This was a qualitative research with phenomenology design study. The research was conducted in health care system in Makassar (Hospital, PHC, General Clinic and Public Health Office). This study collected data using in depth interview from each leader and manager.

Results: BPJS as the manager of health insurance is not effective in managing health services openly, efficiently and accountably in the ease of access to data that can be used in the preparation of health planning and budgeting programs.

In the context of regulatory quality variables, BPJS has not been maximized for all policies made, where coordination and collaboration functions have not been carried out properly.

The resulting policy will be difficult to implement because of the discrepancy between policies and local conditions so that implementation becomes not optimal in some policies made centralized

Conclusions: Policies relating to governance should be made transparently by involving local governments and communities to accommodate every need of each party to support health care programs for improve the quality of health services.

Keywords: Health insurance, Good governance



Turbo Talk presentation

T-22

A Long-term Care Policy and Smart Care Solution in Taiwan

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Abstract

Background/Objectives: Currently, Taiwan has officially entered the stage of an aged society. In 2019, 14.05 % of Taiwanese people aged over 65 years old. By 2026, Taiwan will become a super-aged society. According to aged society, long-term care for older adults has been a priority for the past decade in Taiwan. The primary challenge confronting the long-term care system is the lack of both family and paid caregivers and their lack of professional training. Currently, the primary policy is the Long-Term Care Program 2.0. The policy goal is older in place. While, Thailand will be an aged society in a few years coming.

Methods: This documentation review aims to compared the long-term care policy between Taiwan and Thailand and study the smart care solution for older care in Taiwan.

Results: Our finding shown that long-term care policy between Taiwan and Thailand quite similar. Currently, Taiwan was running the second long-term care plan (2017-2026) or “long-term care plan 2.0”. This plan targeted young adults with dementia and disability. They integrated the healthcare information between the city and country care management center. They paid professional care managers to assess needs of care, determine level of care, plan with multidisciplinary term and assess an outcome of caring. LTC 2.0 is increased 7 innovative and integrated services plan included community comprehensive care services system by integrate long-term services for support an older with disability within 30 minutes. Smart healthcare composed of stipendiary (caregiving management), Tashi-unitech (face recognition of older in health facility and their home), and AUO care (healthcare monitoring system in healthcare facility). Moreover, the further vital signs monitor has been mentioned. It consists of Comdek (non-invasive monitoring medical devices such as oxygen saturation), smart eCare (monitoring and patients information records in health facility), and Ching luan international (vital signs monitoring device for individual).

Conclusions: Modern technology will be the best solution for healthcare system in the 21th century or common era. Sharing patient’s data will improve the quality of life in older people and support healthcare professional provide a safety and good quality of care.

Keywords: Older, Healthcare policy, Long-term care, Healthcare innovation



Turbo Talk presentation

T-23

Development of T-CBT Model to Improve the Competence of Midwives in Prevention of Depression in Victims of Child Sexual Violence

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Abstract

Backgrounds/Objectives: Sexual contact or violence of sexual acts experienced by female child throughout the world. Of the 28 countries that have experienced sexual coercion, 90% of them occurs in female child and said the perpetrators of the first incident were people they knew. This literature review aims to identify and explain empirical facts about research on sexual violence in children, early detection and prevention of ongoing depression. This study also explained the application of the T-CBT model to increase the competency of midwives in depressed services for victims of sexual violence in children.

Methods: Literature searches were taken from online journal databases, PubMed, Proquest, and Google Scholar, and other sources came from the Indonesian Child Protection Commission Report, P2TP2A, Indonesian Midwives Association, and appropriate theses and dissertations. Literature sources were taken from the last 10 years which were carried out manually and systematically from 2009 to 2019.

Results: The results of the review found that the T-CBT model effectively prevented the trauma of depression and the continuing anxiety of victims of child sexual violence as early as possible. From the empirical facts, there are effects of emotional reactivity and depressive symptoms that are shown such as the idea of suicide and attempted suicide, and emotional pressure. The results of other studies are also shown by a moderate correlation between psychopathology and objective characteristics of abuse, such as the number and type of violent events and the duration of abuse. The most common obstacle experienced of adolescents is having parents with a history of mental illness, intimidation, parental divorce or separation or physical, emotional or sexual abuse, neglect of children or traumatic events.

Conclusions: CBT model is a services strategies that strengthens behavioral skills-based interventions, information-based needs, family and parent involvement, and midwife services with a therapist's approach that is patient, understanding and respecting needs will greatly help find solutions to improve midwife competence and service effectiveness for adolescents who are experiencing ongoing trauma.

Keywords: Depression, Sexual violence, T-CBT





51st Asia-Pacific
Academic Consortium
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(APACPH) Conference

SDGs in Reality

Oral Presentation Abstracts

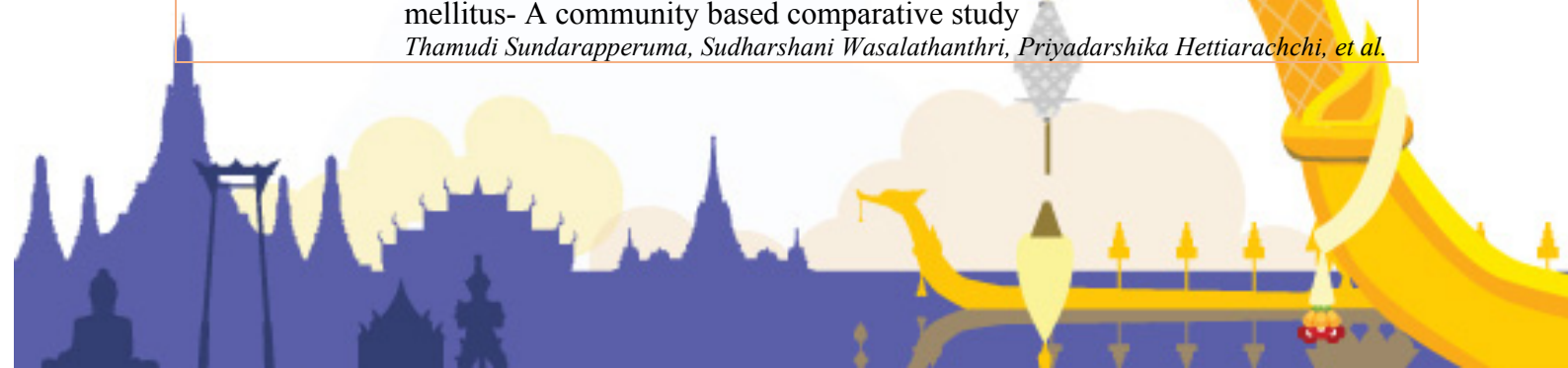
*November 21-22, 2019
Amari Watergate, Bangkok, Thailand*



November 21, 2019

Amari Watergate, Bangkok, Thailand

15.30 - 17.00	Oral presentation	Watergate Ballroom A, Floor 6
<p>Track 1: Emerging and re-emerging diseases Chair: Dr. Rajendra Surenthirakumaran <i>University of Jaffna, Sri Lanka</i> Co-chair: Associate Professor Dr. Manee Chanama <i>Mahidol University, Thailand</i></p>		
O-1	Incidence rates and risk factors of enterovirus 71 infections: A prospective cohort study in Taiwan <i>Wen-Chiung Chang, Wan-Yu Chung, Shu-Ting Luo, et al.</i>	
O-2	Treatment quality and outcome for multidrug-resistant tuberculosis patients in four Chinese provinces <i>Xubin Zheng, Qi Zhao, Yi Hu, Zhu Ning, et al.</i>	
O-3	Are countries' self-reported assessments of their capacity for infectious disease control reliable? Associations among countries' self-reported international health regulation 2005 capacity assessments and infectious disease control outcomes <i>Feng-Jen Tsai, Mathuros Tipayamongkhogul</i>	
O-4	Patient's perspective of satisfaction when antiretroviral therapy was task-shifted in northern Thailand <i>Tsutomu Kitajima, Saiyud Moolphate, Waranyu Jumnongparasatporn, et al.</i>	
O-5	Detection and serotyping of <i>Legionella pneumophila</i> in cooling tower and faucets of selected intensive care units of a tertiary hospital in Philippines <i>Dianne Melody A. De Roxasa, Lilen DC. Sarola</i>	
15.30 - 17.00	Oral Presentation	Watergate Ballroom B, Floor 6
<p>Track 2: Health promotion/health literacy/healthy city Chair: Professor Dr. Maznah Dahlui <i>University of Malaya, Malaysia</i> Co-chair: Associate Professor Dr. Surintorn Kalampakorn <i>Mahidol University, Thailand</i></p>		
O-6	Counseling model for improving the quality of life of drug resistant TB in the undata hospital in Palu in central Sulawesi province <i>Baharuddin Condeng, Muh Syafar, M. Furqaan Naiem, et al.</i>	
O-7	Neighborhood built environment and leisure-time physical activity: A cross-sectional study in Southern China <i>Ting Yu, Yuliang Zou</i>	
O-8	Effectiveness of a confidence-building intervention for breast feeding in a baby-friendly hospital in the Lao PDR <i>Keiko Nanishi, Chanthida Vanlasy, Sengchanh Kounnavong</i>	
O-9	Correlates of sedentary behaviour in Asian adults: A systematic review <i>Andre Matthias Müller, Bozhi Chen, Nan Xin Wang, et al.</i>	
O-10	Effectiveness of a culturally sensitive lifestyle intervention in reducing anthropometric parameters of mothers with a history of gestational diabetes mellitus- A community based comparative study <i>Thamudi Sundarapperuma, Sudharshani Wasalathanthri, Priyadarshika Hettiarachchi, et al.</i>	

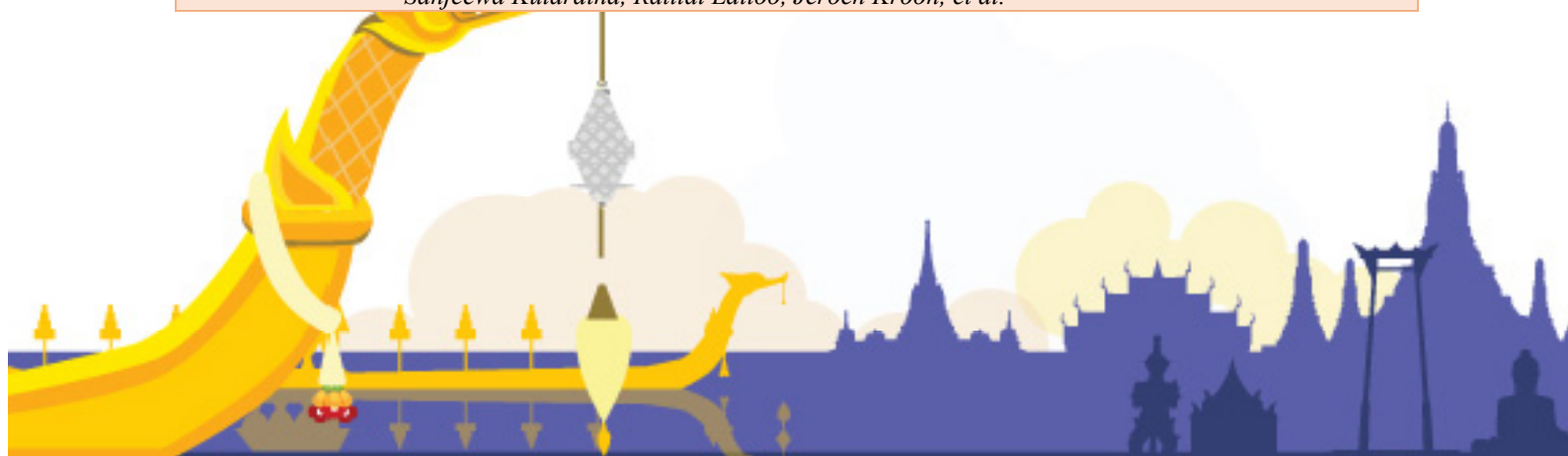




November 21, 2019

Amari Watergate, Bangkok, Thailand

15.30 - 17.00	Oral presentation	Watergate Ballroom C, Floor 6
<p>Track 3: Non-communicable diseases and risk factors Chair: Professor Dr. Sanjay Rampal <i>University of Malaya, Malaysia</i> Co-chair: Associate Professor Dr. Arpaporn Powwattana <i>Mahidol University, Thailand</i></p>		
O-11	Physical activity participation and the risk of chronic diseases among South Asian adults: A systematic review and meta-analysis <i>Susan Paudel, Alice J. Owen, Ebenezer Owusu-Addo, Ben J. Smith</i>	
O-12	Modifying effects of fruit and vegetable intake on the association between total fat intake and incident hypertension: A prospective cohort study among Chinese adults <i>Minzhe Zhang, Shuai Yuan, Qiqiang He</i>	
O-13	Projection of the future prevalence of osteoarthritis in South Korea <i>Yunsun Jung, Young-Eun Kim, Dun-Sol Go, et al.</i>	
O-14	Reasons to undergo screening for non-communicable diseases by apparently healthy people: A qualitative study from Sri Lanka <i>Thilini Herath, Manuja Perera, Anuradhani Kasturiratne</i>	
O-15	Obesity factors in Indonesian women based on clinical breast examination <i>Sri Idaiani, Tince Arniati, Jovina, Danny Fajar Mogsa, Widiyanto Pancaharjono</i>	
15.30 - 17.00	Oral presentation	Room A@7, Floor 7
<p>Track 4: Community participation and mobilization/ injury prevention and disaster management/ oral health Chair: Professor Dr. Victor Hoe <i>University of Malaya, Malaysia</i> Co-chair: Assistant Professor Dr. Tassanee Silawan <i>Mahidol University, Thailand</i></p>		
O-16	Role of civil society organization and community-based reproductive health workers in providing reproductive health services in disaster-affected Delta areas in Ayeyarwady Region, Myanmar <i>Paing Soe, Aung Hpone Myint, Myat Sandi Min, et al.</i>	
O-17	Association between early childhood caries and its maternal factors among young Cambodian children <i>Yu Kubota, Nhep San Pech, Callum Durward, Hiroshi Ogawa</i>	
O-18	The relationship between the complete denture policy for the elderly and nutrition in Tainan <i>Chia-Jen, Teng, Pei-Shan Ho, Shu-Chuan, Chen, Yi Chen</i>	
O-19	Demonstration of high value care to improve oral health of a remote indigenous community in Australia <i>Sanjeewa Kularatna, Ratilal Laloo, Jeroen Kroon, et al.</i>	



November 21, 2019

Amari Watergate, Bangkok, Thailand

15.30 - 17.00	Oral presentation	Room C@7, Floor 7
	Track 5: Other public health relates Chair: Professor Dr. Indika Karunathilake <i>University of Colombo, Sri Lanka</i> Co-chair: Associate Professor Dr. Oranut Pacheun <i>Mahidol University, Thailand</i>	
O-20	Social and gender inequities and health systems: Immunisation among infants in Southeast Asian countries <i>Paolo Miguel Manalang Vicerra, Jeofrey Abalos</i>	
O-21	National and subnational burden of disease by socio-demographic index in Korea <i>Dun-Sol Go, Young-Eun Kim, Seok-Jun Yoon</i>	
O-22	Trends of breast cancer mortality in Chinese women from 1990 to 2015: An age-period-cohort analysis <i>Yani Ding, Qing Liua</i>	
O-23	Changes in perinatal mortality after the implementation of the two-child policy in Zhejiang Province China <i>Li-Qian Qiu, Wei-Wei Wu, Xiao-Bo Wang, et al.</i>	
O-24	The potential of <i>Chanos chanos</i> (Milkfish) skin gel extract as an alternative approach in treating first degree burn <i>Brian Kenneth E. Eduarte, Nicole Andrey Acosta, Jenela Pauline Lumanlan, et al.</i>	





Track 1: Emerging and Re-emerging Diseases

O-1

Incidence Rates and Risk Factors of Enterovirus 71 Infections: A Prospective Cohort Study in Taiwan

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Abstract

Background/Objectives: Enterovirus 71 (EV71), a pathogen circulating in the Asia-Pacific region, causes hand-foot-mouth disease (HFMD) and herpangina, and is related to neurological and systemic complications. Evidence of its incidence rates and risk factors based on longitudinal cohort studies is scarce. This study aims to investigate age-specific and cumulative incidence rates and risk factors of EV71 infections.

Methods: A total of 759 neonates born between 2006 and 2009 were recruited. Participants' sera were collected at their 6, 12, 24, 36, 48, 60, and 72 months of age to conduct serum neutralization test. In addition, throat swabs of the participants who presented symptoms of HFMD or herpangina were collected for virus isolation and molecular tests to detect EV71 infections. Asymptomatic primary infections and reinfections were identified based on ≥ 4 -fold rise of serum neutralizing antibody titers in consecutive sera. We calculated age-specific and cumulative incidence rates, and fitted a Cox proportional hazards model to identify risk factors of EV71 infections.

Results: Among the 576 participants being followed, 127 persons (22.0%) were confirmed as with EV71 infections (70 symptomatic, 57 asymptomatic cases). Of the 127 cases, 22 (17.3%) occurred their second ($n=20$) or third ($n=2$) reinfections (all asymptomatic) after the primary infection. Age-specific incidence increased from 2.03 per 100 person-years during 0-6 months of age to 19.33 during 49-60 months of age, and reduced to 9.57 during 61-72 months of age. The cumulative incidence till 72 months of age was 31.78%. A higher number of co-residing children under 5 years old was associated with higher risk of EV71 infections (hazard ratio=1.28, 95% CI: 1.03-1.59).

Conclusions: Our results indicated incidence rates increased with age and peaked at 5 years-old, cumulative incidence rate was nearly 32% by 6 years of age, and higher number of co-residing young children was associated with higher risk of EV71 infections. This longitudinal cohort study contributes to precisely estimate incidence rates of EV71 infections via a long-term follow-up, and provides insights into clinical trial designs of EV71 vaccines.

Keywords: Enterovirus, Cohort, Incidence, Risk factors



Track 1: Emerging and Re-emerging Diseases

O-2

Treatment Quality and Outcome for Multidrug-resistant Tuberculosis Patients in Four Chinese Provinces

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Abstract

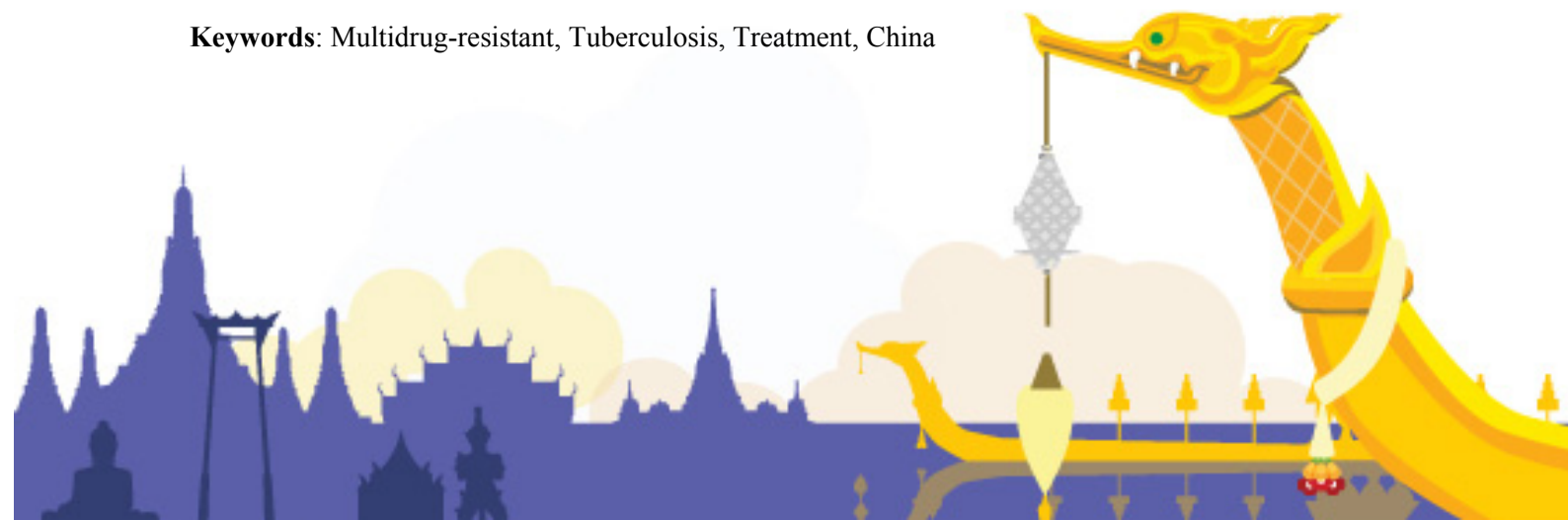
Background/Objectives: As a country with high burden of multidrug-resistant tuberculosis (MDR-TB), China incurs not only an extremely low case detection rate (19%) but also a low to 45% treatment coverage. This study aimed to understand the treatment quality and outcome of the detected MDR-TB patients through an up to 4-year follow-up.

Methods: Laboratory-confirmed MDR-TB patients were enrolled in four geographic varied TB/MDR-TB designated hospitals in China from 2014 to 2016. A patient cohort was built and followed-up during anti-TB treatment. At the end of 2018, a final visit was given to confirm patients' TB status. Drug susceptibility testing (DST) for first- and second-line anti-TB drugs was performed in the participating hospitals and confirmed in the provincial reference lab using the proportional method on solid medium. MDR-TB regimen was defined as a combination of at least five effective second-line drugs. Fisher's exact test, Mann-Whitney U test and multivariate logistic model were applied for statistical analysis.

Results: In total, 58 MDR-TB were diagnosed among 1,168 TB patients, with 84.5% being male and 43.1% having a TB treatment history. Apart from resistant to isoniazid and rifampicin, 27 (46.6%) cases had additional resistance to fluoroquinolones and/or second-line injective drugs. It was disappointing that MDR-TB regimen was only applied in 8 (13.8%) patients, and the rest of them (86.2%) continued with first-line anti-TB regimen for susceptible TB because DST results arrived months later. Among the patients treated with non-MDR-TB regimen, 58.0% were reported as "treatment success" with a sputum culture conversion, while 32.0% were lost to follow-up and 10.0% died during treatment. Multivariate analysis showed that patients treated with MDR-TB regimen had higher treatment success rate (87.5% vs. 58.0%, $P < 0.05$). Of the 29 reported "treatment success" patients taking non-MDR-TB regimen, the final visit showed that 4 (13.8%) subsequently died, 2 (6.9%) were lost to follow-up and 8 (27.6%) were confirmed with TB relapse.

Conclusions: A high proportion of MDR-TB patients didn't receive MDR-TB regimen. The reported "treatment success" cases taking non-MDR-TB regimen had high risk of relapse. Rapid DST and regulated treatment are critically important for the quality of MDR-TB treatment in China.

Keywords: Multidrug-resistant, Tuberculosis, Treatment, China





Track 1: Emerging and Re-emerging Diseases

O-3

Are Countries' Self-reported Assessments of their Capacity for Infectious Disease Control Reliable? Associations among Countries' Self-reported International Health Regulation 2005 Capacity Assessments and Infectious Disease Control Outcomes

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Abstract

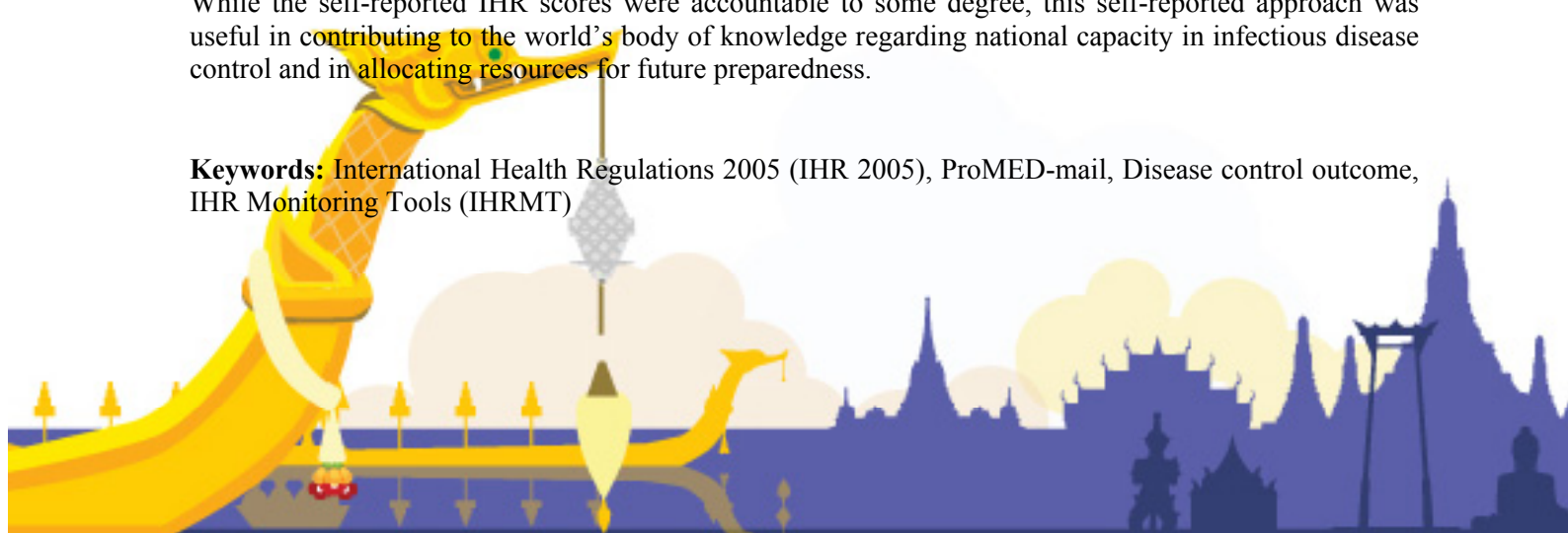
Background/Objectives: This study aimed to evaluate associations among countries' self-reported International Health Regulation 2005 (IHR 2005) capacity assessments and infectious disease control outcomes.

Methods: Countries' self-reported assessments implemented by percentages as IHR Monitoring Tools (IHRMT) in 2016 and 2017 were used to represent national capacity regarding infectious disease control. WHO Disease Outbreak News and matched diseases reports on ProMED-mail, were collected in 2016 to represent disease control outcomes of countries which divided in good, normal and bad groups based on the development of outbreaks. The Human Development Index (HDI), density of physicians and nurses and total health expenditure, and the number of arrivals of international tourists were collected. Chi-square test and logistic regression were applied for analysis.

Results: A total of 907 cases occurred in 92 countries. For all diseases, cases occurring in high international travel volume countries presented twice the risk of having a bad disease control outcomes than cases occurring in low international travel volume countries (OR = 2.19 for IHR 2016, OR = 2.97 for IHR 2017). Cases occurring in low IHR average score countries had significant higher risk (OR = 7.83 for IHR 2016 and OR = 2.23 for IHR 2017) of having a bad disease control outcomes than countries with high IHR average scores. For only human diseases, cases occurring in high international travel volume countries presented twice the risk of having a bad disease control outcomes than cases occurring in low international travel volume countries for IHR 2017 (OR = 2.79). Cases occurring in low IHR average score countries had significant higher risk (OR = 11.16 for IHR 2016 and OR = 3.45 for IHR 2017) of having a bad disease control outcomes than countries with high IHR average scores.

Conclusions: Countries' self-reported infectious disease control capacities positively correlated with their disease control outcomes. The better the IHR scores, the better the disease control outcomes are. While the self-reported IHR scores were accountable to some degree, this self-reported approach was useful in contributing to the world's body of knowledge regarding national capacity in infectious disease control and in allocating resources for future preparedness.

Keywords: International Health Regulations 2005 (IHR 2005), ProMED-mail, Disease control outcome, IHR Monitoring Tools (IHRMT)



Track 1: Emerging and Re-emerging Diseases

O-4

Patient's Perspective of Satisfaction when Antiretroviral Therapy was Task-shifted in Northern Thailand

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Abstract

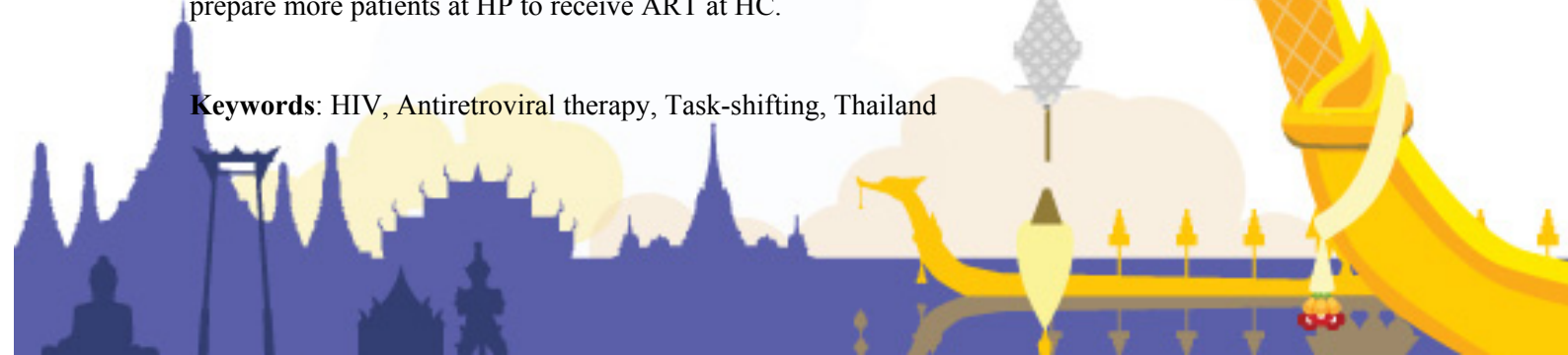
Background/Objectives: The Ministry of Public Health, Thailand announced a policy of task-shifting the care of patients receiving antiretroviral therapy (ART patients) from hospitals to health centers (HC) in 2014, but the number of health facilities implementing the policy is still small. A community hospital in northern Thailand started shifting ART patients who were clinically stable and agreed to be moved to a local health center. However, researchers found that ART patients at HC (pre-HC group, n=66) were less satisfied than those being treated in the hospital (pre-HP group, n=132). To improve ART services at HC, the JICA Grassroots Project, “Strengthening community-based health services for people living with HIV in northern Thailand” was used to train nurses at HC. The project held 3-day training programs in May and August 2018. In this paper, the assessment of patient satisfaction 3 months after the training program is discussed.

Methods: The study was conducted in Sanpatong District, Chiang Mai Province. In December 2018, 85 patients receiving ART at HC (post-HC group) and 179 at the hospital (post-HP group) were interviewed with a structured questionnaire including Short-Form Patient Satisfaction Questionnaire to measure their satisfaction by 7 domains. A comparison of scores for each domain was made using Mann-Whitney U test.

Results: The Post-HC group had significantly higher scores in “general satisfaction”, “technical quality”, “communication”, “time spent with provider” than the pre-HC group, and higher scores in all except “technical quality” than the pre-HP group. However, the post-HP group had significantly higher scores in all except “financial aspects” and “accessibility and convenience” in which the post-HC ranked higher.

Conclusions: The study indicated that satisfaction of ART patients at HC has improved. It may be plausible that the training program had a positive impact on services at HC. Procedures for shifting ART service to HC in Sanpatong District can be a model for other districts. Further studies are necessary to investigate what additional training would be needed to improve services at HC and how to persuade and prepare more patients at HP to receive ART at HC.

Keywords: HIV, Antiretroviral therapy, Task-shifting, Thailand





Track 1: Emerging and Re-emerging Diseases

O-5

Detection and Serotyping of *Legionella pneumophila* in Cooling Tower and Faucets of Selected Intensive Care Units of a Tertiary Hospital in the Philippines

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Abstract

Background/Objectives: Hospitals' water distribution system and aerosol-generating devices like faucets and cooling towers facilitate nosocomial transmission of *Legionella* spp. to immunocompromised patients. Thus, this study was conducted to determine the presence of *Legionella pneumophila* in the cooling tower and the faucets found in selected Intensive Care Units of a tertiary hospital in Metro Manila.

Methods: A descriptive cross-sectional study design was used where the proportion positive for the bacterium was determined. The species and serogroups of the isolates and the best conditions for the isolation of *Legionella* spp. were also identified. Water and swab samples from the cooling tower and 18 faucets from the four selected ICUs were collected and tested. Cysteine dependence test, gram staining and latex agglutination test were utilized for the identification of the species and serogroups of *Legionella* isolates.

Results: *Legionella* spp. were detected in the cooling tower and in 3 (16.67 %) out of 18 faucets. The cooling tower positive isolates were identified as *Legionella pneumophila* serogroup 2-14, while isolates from the faucets were identified as *Legionella* species other than *pneumophila*. Moreover, results suggested that the combination of a swab sample, heat treatment method and use of the selective medium GVPC provides the more sensitive and specific method for the isolation of *Legionella* spp. in environmental samples.

Conclusions: These findings showed that *Legionella* spp. were present in the cooling tower and faucets of the ICUs of the hospital, potential sources of infectious aerosol that can be disseminated in the hospital and affect the immunocompromised patients.

Keywords: *Legionella pneumophila*, Hospital, Faucets, Cooling tower



Track 2: Health Promotion/Health Literacy/Healthy City

O-6

Counseling Model for Improving the Quality of Life of Drug Resistant TB in the Undata Hospital in Palu in Central Sulawesi Province

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Abstract

Background/Objectives: Drug resistant tuberculosis (TB) is a direct infectious disease caused by Mycobacterium Tuberculosis. Until now, Tuberculosis is still a world health problem. The WHO report in 2017 shows that Indonesia is second only to India. This disease can have an impact on the quality of life of patients until the stage of death. This study aimed to determine the counseling model for improving the quality of life of Drug Resistant Tuberculosis based on family income, co-morbidities, medication adherence, nutritional status and smoking behavior at the Undata Hospital in Palu, Central Sulawesi Province.

Methods: this study was a quasi-experimental or quasi-experimental pre test and post test control group design which one type of research design that showed subjects to get one of the research factors.

Results: This study showed that of 159 drug-resistant cases 63.6% successfully completed treatment and 36.4% did not complete treatment. There are 62% male sex and 38% female. Resistant Tuberculosis Patients who have not recovered due to medication disobedience, the weak role of supervisors to take medication, the low role of Tuberculosis cadres, lack of counseling for Tuberculosis sufferers.

Conclusions: Drug-resistant Tuberculosis sufferers who have not yet reached the target of Central Sulawesi Province at 90%, so it is necessary to make efforts to improve patient services by building a counseling model for people with tuberculosis.

Keywords: Drug-resistant, Counseling model, Quality life





Track 2: Health Promotion/Health Literacy/Healthy City

O-7

Neighborhood Built Environment and Leisure-time Physical Activity: A Cross-sectional Study in Southern China

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Abstract

Background/Objectives: Physical inactivity is an important risk factor for chronic diseases. Increasing empirical evidence support associations between neighborhood environment attributes and physical activity. However, most studies were conducted in high-income countries, few evidence is available in low and middle-income countries, especially China.

Methods: A total of 986 participants (mean age = 40.7 years, 53.3% females) were included. Descriptive statistics were used to describe the socio-demographic variables, leisure-time walking (LTW) and moderate and vigorous intensity physical activity (MVPA) in leisure-time by gender. Multivariable logistic regression models were used to examine the association between neighborhood environment characteristics and the likelihood of engaging in LTW and MVPA for at least 150 minutes per week.

Results: Only 20.7% of participants engaged in active LTW and 17.8% active MVPA. Better road conditions was associated with higher likelihood of active (at least 150 min/week) LTW and leisure-time MVPA. High perceived esthetics was positively associated with LTW and MVPA. Better neighborhood traffic condition was associated with higher likelihood of active LTW.

Conclusions: The improvement of the neighborhood environment characteristics can promote LTPA among adults living in Shenzhen, China. Our findings support the importance of considering population health effects in urban planning and development.

Keywords: Physical activity, Built environment, Adults, China



Track 2: Health Promotion/Health Literacy/Healthy City

O-8

Effectiveness of a Confidence-building Intervention for Breastfeeding in a Baby-friendly Hospital in the Lao PDR

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Abstract

Background/Objectives: Breastfeeding benefits maternal and child health and is therefore recommended. We assessed the effectiveness of a confidence-building intervention on breastfeeding outcomes in a Baby-Friendly Hospital in Vientiane Capital.

Methods: An intervention study was conducted among 392 primiparous women with a term singleton delivery. Alongside routine hospital care, the intervention group (N=198) received individual breastfeeding counseling from trained midwives or nurses, including face-to-face counseling before discharge and telephone counseling at 1, 3, and 9 weeks after delivery, with the aim of enhancing breastfeeding confidence. Breastfeeding confidence was followed up until 14 weeks postpartum, using a psychological scale, and breastfeeding outcomes were followed up until 6 months postpartum. The differences between the two groups were analyzed using the Generalized Estimating Equation for breastfeeding confidence and multiple logistic analysis for breastfeeding outcomes.

Results: Among those who underwent vaginal delivery, the intervention group showed higher breastfeeding confidence ($p < 0.01$). The intervention significantly reduced supplementation with infant formula within the first three days of birth (AOR: 0.50, 95% CI 0.27–0.92 for vaginal delivery, AOR 0.14, 96% CI 0.04–0.55 for C-sections). Further, the intervention improved the full breastfeeding rate at 6 weeks postpartum (AOR: 1.83, 95% CI 1.02–3.28) among women who underwent vaginal delivery. No significant effect was observed after 14 weeks postpartum.

Conclusions: The confidence-building intervention helped improve breastfeeding outcomes until 6 weeks postpartum for women who underwent vaginal delivery. Further studies are warranted to develop an effective intervention for C-section cases and achieve the long-lasting effect.

Keywords: Breastfeeding, Confidence, Baby-friendly hospital, Lao PDR





Track 2: Health Promotion/Health Literacy/Healthy City

O-9

Correlates of Sedentary Behaviour in Asian Adults: A Systematic Review

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Abstract

Background/Objectives: Sedentary behaviour (SB) is linked to non-communicable diseases and needs to be on the public health agenda in Asia. To make progress, region-specific SB correlates need to be identified. This systematic review aimed to identify the multilevel correlates of SB in Asians.

Methods: We conducted a systematic search using terms related to SB, correlates and Asia in eight databases. Eligible studies were observational and used quantitative methods to examine correlates of total and domain-specific SB in Asian adults living in Asia. Title, abstract and full-text screening was conducted independently by two reviewers. Study characteristics, correlates studied and SB outcomes were extracted from included studies by one author. Extraction checks and bias assessments were conducted by co-authors. A narrative synthesis was employed to summarise the evidence on individual, physical environment, social environment and political/cultural correlates of total and domain-specific SB. The protocol was registered with PROSPERO (Registration ID: CRD42018095268).

Results: Of 13241 studies screened, 49 cross-sectional studies from 12 countries were included. Most were from East Asia (n=28), followed by the Middle East, South-East Asia and South Asia, with four including mixed samples. The majority assessed total SB (n=31), although only seven used accelerometers. Screen-time, leisure-time SB, transport-related SB and occupational SB were studied less. Researchers examined 119 correlates, with 75% of studies investigating individual factors. Higher age and education were commonly positively associated with total SB, while higher income was associated with more leisure-time SB. Mixed findings were observed for behavioural correlates with some evidence that smoking is associated with more occupational and leisure-time SB. Physical environment correlates were assessed in 23 studies, mainly from East Asia. The number of transit points, urban residence and residential density appeared to be associated with total SB. Social environment correlates featured in 19 studies. Being unmarried was often associated with increased total SB; this was especially apparent for females in the Middle East.

Conclusions: Being older, unmarried, having higher education, living in an urban area lacking access to public transport were factors commonly associated with higher total SB. The lack of studies in most regions and on environmental and political/cultural factors needs to be addressed.

Keywords: Activity, Correlates, Lying, Reclining, Determinants, Asia, Review



Track 2: Health Promotion/Health Literacy/Healthy City

O-10

Effectiveness of a Culturally Sensitive Lifestyle Intervention in Reducing Anthropometric Parameters of Mothers with a History of Gestational Diabetes Mellitus- A Community Based Comparative Study

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Abstract

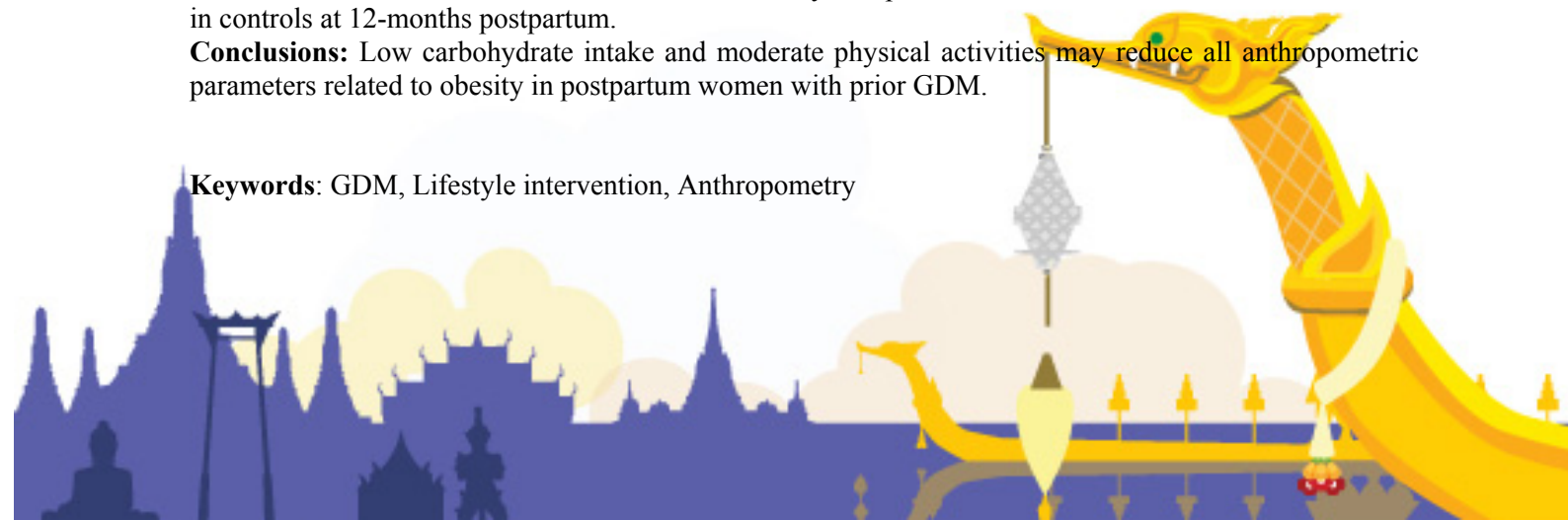
Background/objectives: T2DM is a sequel of GDM and obesity is known to promote its conversion. This study evaluated the effectiveness of a tailor-made lifestyle intervention programme to reduce obesity parameters in postpartum women with prior GDM.

Methods: This quasi experimental study was conducted in three districts of Sri Lanka. Mothers with prior GDM were divided to intervention (n=50) and control (n=50) arms by cluster randomization and the intervention which consisted of dietary and physical activity modifications was introduced to the intervention group. Anthropometric measurements were taken at baseline and at 12-months postpartum. Data were analyzed by SPSS 21.

Results: Median difference in weight, BMI and waist circumference in intervention vs controls between baseline and 12-months were 5.00vs1.00, $p=0.00$; 2.21vs0.41, $p=0.00$; 6.5vs1.5, $p=0.00$. Strong, negative correlations were observed between carbohydrate intake and change in weight ($r=-0.586, p=0.00$), BMI ($r=-0.577, p=0.00$) and waist ($r=-0.615, p=0.00$). Although protein and fat intakes also showed significant negative correlations, they were moderate. Positive correlations were observed between moderate physical activity and change in weight ($r=0.393, p=0.00$), BMI ($r=0.401, p=0.00$) and waist ($r=0.379, p=0.00$). Walking correlated positively only with change in weight ($r=0.30, p=0.012$) and BMI ($r=0.311, p=0.00$) while vigorous activities showed a positive correlation only with waist ($r=0.25, p=0.034$). Percentages of obese and overweight in intervention vs control groups at 12-months were 0%vs27.8% and 29.47%vs33.33%. Abdominal obesity was present in 44.12% in intervention and 91.66% in controls at 12-months postpartum.

Conclusions: Low carbohydrate intake and moderate physical activities may reduce all anthropometric parameters related to obesity in postpartum women with prior GDM.

Keywords: GDM, Lifestyle intervention, Anthropometry





Track 3: Non-communicable Diseases and Risk Factors

O-11

Physical Activity Participation and the Risk of Chronic Diseases among South Asian Adults: A Systematic Review and Meta-analysis

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Abstract

Background/Objectives: Chronic diseases are emerging as a public health challenge in South Asia. Global evidence supports the role of physical activity (PA) in chronic disease prevention. However, South Asia specific reviews with a focus on PA domains (transport, occupation, household and leisure) are lacking. The purpose of this study was to systematically review published literature to identify the association between PA domains and chronic diseases and to provide summary estimates of the strength of association among South Asian adults aged 40 years and over.

Methods: Nine electronic databases were searched for published, peer-reviewed English language, quantitative studies examining the association between PA and selected chronic diseases. Inclusion criteria included population (South Asian adults 40 years or older), exposure (PA or sedentary behaviour) and outcome (type 2 diabetes mellitus, breast cancer, colorectal cancer, coronary heart disease, stroke, vascular disease and musculoskeletal diseases and their markers). The overall quality of evidence was graded using the Grading of Recommendations Assessment, Development and Evaluation framework. A random-effects meta-analysis was carried out for cardiometabolic outcomes whereas narrative synthesis was completed for other outcome variables.

Results: A total of 24 cross-sectional or case-control studies (26,092 participants) from 6 South Asian countries were included in the review. Inactive or poorly active South Asian adults were at 31% (range, 7-60%) higher risk of being hypertensive. The risk of cardiometabolic outcomes was 1.34 times higher (pooled OR: 1.34 (1.10-1.63), $I^2 = 64\%$) among inactive people compared to those with higher levels of total PA. Household PA was found to have a protective effect for breast cancer risk. Total PA had a protective effect on osteoporosis among males, and there was a protective effect of leisure time PA among females.

Conclusions: The review findings continue to support the role of total PA in addressing the burden of hypertension and cardiometabolic conditions in South Asia. Contemporary studies with a longitudinal design, representative samples, valid and reliable assessment of different domains are needed to establish the role of PA in chronic disease prevention in the region.

Keywords: Physical activity, Chronic diseases, South-Asia, Systematic review, Meta-analysis



Track 3: Non-communicable Diseases and Risk Factors

O-12

Modifying Effects of Fruit and Vegetable Intake on the Association between Total Fat Intake and Incident Hypertension: A Prospective Cohort Study among Chinese Adults

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Abstract

Background/Objectives: Evidence on the combined effect of fruit and vegetable intake (FVI) and total dietary fat intake (FI) on hypertension is scarce. Therefore, our aim was to explore the relationship between FVI, FI and the risk of hypertension among Chinese adults.

Methods: Individuals who participated in the China Health and Nutrition Survey (year 2004, 2006, 2009 and 2011), and free of hypertension at baseline (n=4368), were categorized into quartiles (Q1-lowest; Q4-highest) according to their dietary FVI and FI. Generalized estimation equation models, adjusted for confounders, were used to explore the relationship of FI with hypertension, systolic (SBP) and diastolic blood pressure (DBP) among all adults and within quartiles of FVI.

Results: A total of 1086 adults developed hypertension during the median follow-up of 5 years. In the total population, the odds ratio (OR (95%CI)) of the highest quartile of FI was 1.40 (1.12, 1.75) compared with the lowest. Among individuals with low FVI, the odds of hypertension for those in Q3 (1.97 (1.37, 2.83)) and Q4 (1.81 (1.14, 2.90)) of FI, compared to individuals in Q1, were even higher than for the overall sample. For each increase of 50 g FI per day, SBP increased by 1.08 mmHg (0.03, 2.13) in the FVI Q1 group, while the association was statistically nonsignificant in the FVI Q2-Q4 group.

Conclusions: FVI modifies the relationship between FI and hypertension, whereby high FVI may offset the detrimental effect of FI on hypertension. Increased FVI and controlled FI are recommended to prevent hypertension in Chinese adults.

Keywords: Diet, Hypertension, Cohort





Track 3: Non-communicable Diseases and Risk Factors

O-13

Projection of the Future Prevalence of Osteoarthritis in South Korea

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Abstract

Background/Objectives: Chronic diseases are increasing as the elderly population increases, and osteoarthritis is one of those with a high prevalence rate. According to a Korean National Burden of Disease study (KNBD), osteoarthritis (OA) was the second-highest disease burdens (DALYs) in 2015. The objective of this study was to project the prevalence of OA for the next 15 years (through 2030) in the Korean population.

Methods: In this study, using the recent 15-year national data, we applied four different statistical methods, generalized linear model (GLM), a predictive model reflecting the latest minimum change rate, Auto-regressive Integrated Moving Average (ARIMA) and a predicted model considering health risk factors, to estimate the prevalence of future OA in the Korean population.

Results: We compared the results of the four predictive models and performed model validation by comparing with observed estimates for the most recent year. From all the results, the OA prevalence through 2030 was predicted to continue to rise. Among the four models, OA prevalence was predicted to be the highest in the model considering health risk factors (respectively: male, 5.83%; female, 8.63%).

Conclusions: Over the past 13 years, the prevalence of osteoarthritis in both male and female has been increasing in South Korea, and by 2030, it is predicted to continue to increase. This increase will result in considerable socioeconomic burdens, and will require intensive strategies to ensure sufficient resources to meet these needs. Also, the predicting prevalence of other diseases other than osteoarthritis will be useful in predicting the chronic disease structure and in setting policy priorities.

Keywords: Prediction, Osteoarthritis, Prevalence, South Korea



Track 3: Non-communicable Diseases and Risk Factors

O-14

Reasons to Undergo Screening for Non-communicable Diseases by Apparently Healthy People: A Qualitative Study from Sri Lanka

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Abstract

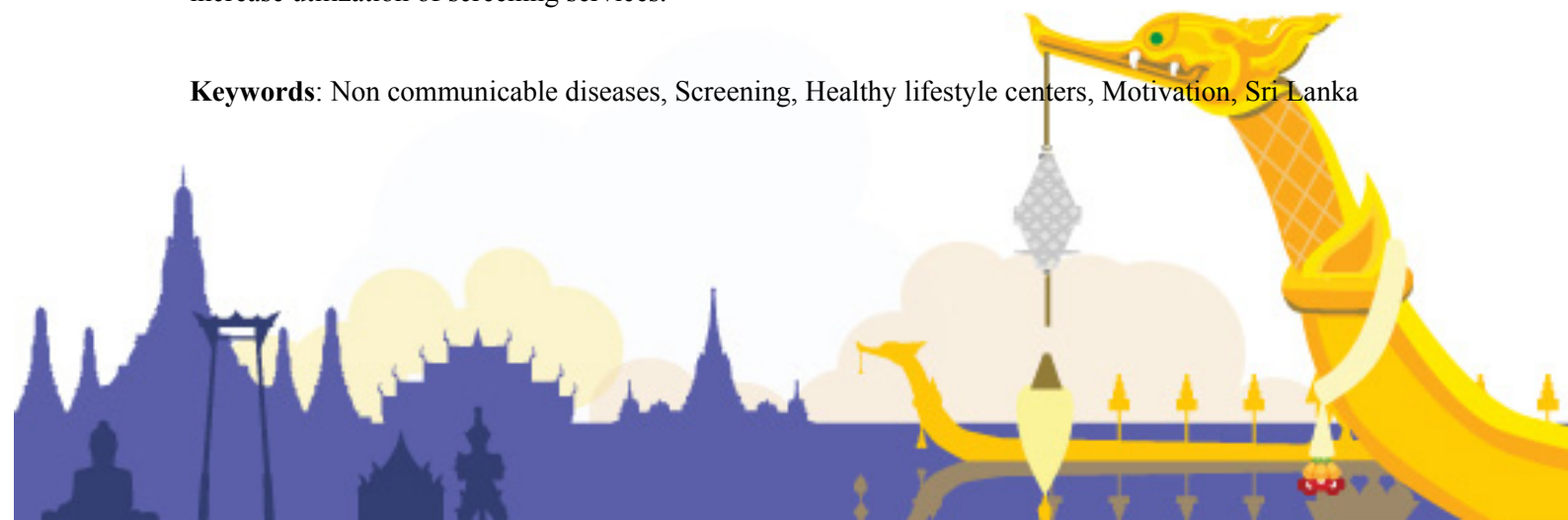
Background/Objectives: Healthy Lifestyle Centres (HLCs) in Sri Lanka, provide screening for Non-Communicable Diseases (NCDs) for adults aged 35 to 65 years. Even though the services are delivered free-of-charge, there is a significant underutilization of HLCs. There is a dearth of evidence on motivational and de-motivational factors for apparently healthy people to undergo screening for NCDs, which will support to develop strategies to improve utilization of HLCs. This study aimed to address that evidence gap.

Methods: Thirty-two qualitative interviews (19 in-depth interviews and 13 focus group discussions) were held among clients and targeted population of HLCs selected using a purposive sampling method. A semi-structured interview guide was used to explore the reasons for utilizing the HLC by its clients and reasons for NCD screening and non-utilization by the targeted population who had not yet utilized the HLC. Interviews were transcribed and analyzed using thematic analysis.

Results: Reasons for undergoing screening for NCDs emerged in eight categories. Positive attitudes on being healthy - perceived importance of a healthy lifestyle and early screening; Motivation to act – for initiation and sustenance of a healthy lifestyle and appropriate screening; Resilience to negative norms on screening – participants’ internal resilience to negative norms and external de-motivational factors; Self recognition of own vulnerability - presence of a family history and symptoms; Awareness on services rendered by HLCs (For HLC clients only) - services such as lifestyle counseling session and exercise programs; Family support - screening behavior had been initiated or sustained with family support; Social support and positive social norms - positive recommendations by the community and societal networks; Referral by a health care provider – Extrinsic motivation for early screening when their susceptibility and severity of complications were highlighted by a health care provider.

Conclusions: Factors arise from diverse range of individual, family and societal level categories. The strategies to motivate apparently healthy people to undergo screening for NCD should aim for improving awareness on services, positive attitudes on health and resilience for negative norms at individual level. Generating positive social norms and opportunistic referrals by other health care providers would also increase utilization of screening services.

Keywords: Non communicable diseases, Screening, Healthy lifestyle centers, Motivation, Sri Lanka





Track 3: Non-communicable Diseases and Risk Factors

O-15

Obesity Factors in Indonesian Women based on Clinical Breast Examination

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Abstract

Background/objective: Obesity in women is often associated with breast cancer. Obese women have risk more breast cancer even though there are many other factors influence it. This analysis aims to determine the role of obesity and overweight for breast tumors in Indonesian women who participated in the 2016 Non-Communicable Diseases Research (NCD Research) in Indonesia.

Methods: In each province was chosen two urban municipalities or cities therefore there were 76 municipalities / cities as sample sites. The design of NCD research was a survey with national urban representation. We selected the households by multi stage sampling. Each selected household was assigned one woman who meets the criteria using the Kish table. The number of subjects analyzed were 37,984 people, aged 25-64 years. Breast tumor was examined by clinical breast examination (CBE) by trained health personnel. The analysis used was logistic regression.

Results: After been controlled by several sociodemographic, reproductive and history of individual and family cancers, abdominal obesity was a breast tumor protection factor (OR = 0.803; 95% CI 0.698-0.922, $p = 0.002$).

Conclusions: The abdominal obesity is a protective factor that plays a role in breast tumors in women aged 25-64 years in Indonesia. Women especially they who have not entered menopause are encouraged to do physical activity regularly to maintain the body weight in menopause period later.

Keywords: Obesity, Breast tumor, Non-communicable disease research



Track 4: Community Participation and Mobilization/ Injury Prevention and Disaster Management/ Oral Health

O-16

Role of Civil Society Organization and Community-based Reproductive Health Workers in Providing Reproductive Health Services in Disaster-Affected Delta Areas in Ayeyarwady Region, Myanmar

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Abstract

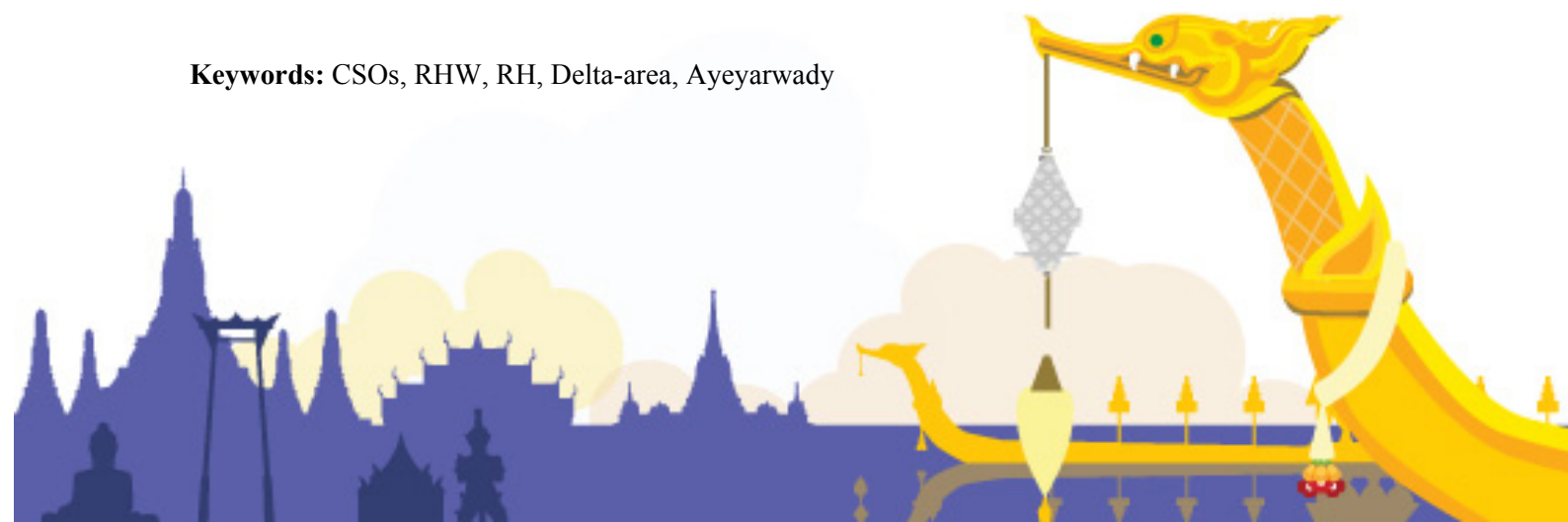
Background/Objectives: In the rural Ayeyarwady Delta regions in Myanmar, access to reproductive health services is challenging because of low community health literacy, frequent natural disasters, and limited road infrastructure and transportation. Thus, local civil society organizations like Baythitzadarna have empowered volunteers to provide reproductive health services as community-based reproductive health workers (RHW) since 2012. In order to achieve SDGs in reality, this study will assess reproductive health services provided by community-based RHW and determine the barriers and facilitators for implementation.

Methods: This mixed methods study included quantitative analysis of routine program data of 20 villages from January-December 2018, and qualitative content analysis of 9 in-depth interviews with midwives, RHWs and women who received health services provided from Baythitzadarna.

Results: Among 3787 reproductive-aged women (15-49 years) in project coverage area, 435 pregnant women received antenatal care from RHWs, among whom 27.3% delivered by RHWs and 28.5% received postnatal care by RHWs in 2018. Modern contraceptive services were provided to 1195 women, of whom 32.7% used oral contraceptive pills, 67.2% used Depo-Provera injection, and 1.2% used male condoms. Strengths of the RHW approach identified by respondents included acceptance of RHWs by their communities, the RHW's deep knowledge of the socio-cultural dimensions of the communities they serve, and their ability to work cooperatively with government midwives to identify high-risk pregnancies and refer to higher levels of care. Barriers to successful program implementation included limited training and supply chain issues for essential drugs.

Conclusions: Baythitzadarna's RHWs provided essential reproductive health services including antenatal care, normal vaginal delivery, postnatal care and family planning. The role of frontline healthcare workers and local CSOs remains crucial for providing reproductive health-care services in remote, disaster-affected delta areas of Myanmar. Adequate support and supervision to community-based RHWs may fill service gaps between healthcare service providers and beneficiaries.

Keywords: CSOs, RHW, RH, Delta-area, Ayeyarwady





Track 4: Community Participation and Mobilization/ Injury Prevention and Disaster Management/ Oral Health

O-17

Association between Early Childhood Caries and Its Maternal Factors among Young Cambodian Children

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Abstract

Background/Objectives: Maternal factors play important roles in the development of early childhood caries (ECC). The purpose of this cross-sectional study was to investigate the association between ECC and its maternal factors among 18- to 36-month-old Cambodian children.

Methods: Data, from 80 mother-child pairs (male = 42, female = 38; mean age = 25.45±6.43 months), were collected at several villages in Kampong Cham province. ECC and maternal caries experience were recorded following WHO guidelines. Maternal factors, such as socio-economic status and child-rearing behaviors, were assessed through an interview questionnaire for their mothers.

Results: ECC and maternal caries prevalence were 60.0% and 87.5%, respectively. Significant associations were found between ECC and maternal knowledge about oral health, nocturnal breastfeeding beyond 18 months ($p < 0.05$), maternal caries experience, and the late introduction of tooth brushing for children ($p < 0.01$). A logistic regression revealed that children whose mother had DMFT > 1 were more likely to have ECC (OR=10.57, 95%CI=1.86-60.11, $P=0.008$), and that children who had tooth brushing introduced late were more likely to develop ECC (OR=3.13, 95%CI=1.01-9.72, $P=0.048$).

Conclusions: The findings of this study suggest that maternal caries experience and several oral health related child-rearing practices were associated with the presence of ECC in this population. Oral health programs targeting mothers should be conducted to prevent ECC.

Keywords: Early childhood caries, Cambodia, Maternal factors.



Track 4: Community Participation and Mobilization/ Injury Prevention and Disaster Management/ Oral Health

O-18

The Relationship between the Complete Denture Policy for the Elderly and Nutrition Tainan

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Abstract

Background/Objectives: In Taiwan, the complete denture policy for the elderly is implemented in many city governments. In Tainan, the Public Health Bureau has done a lot of tracking on this policy to understand its benefits. Previous studies have shown that there is a considerable improvement on oral-related quality of life for the elderly after 1 year of device follow-up, and it can even reach the same standard with the other elderly. Now, the current tracking point has moved to the changes of the elderly's nutrition.

Methods: This study analyzes the results of community-integrated screening for the elderly before and after receiving subsidized denture. By studying its indicators including albumin, heme, BMI, and so on, this study tracks the changes of the elderly's nutrition conditions and compare them with the other elderly.

Results: The results of the study shows that after 3 years of follow-up, in the performance of albumin and heme, the elderly with full-mouth active dentures have lower declination than the other elderly, and this is statistically significant. However, there is no significant difference in their performance of BMI.

Conclusions: After implementing the denture subsidy policy, the elderly increase the variety of their food intake patterns and benefits their nutrition maintenance. It should have better results with the support of the public health units and dental clinics.

Keywords: Complete denture, Nutrition, Elderly





Track 4: Community Participation and Mobilization/ Injury Prevention and Disaster Management/ Oral Health

O-19

Demonstration of High Value Care to Improve Oral Health of a Remote Indigenous Community in Australia

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Abstract

Background/Objectives: The oral health of Indigenous children in remote communities is much worse than other population groups in Australia. Providing and maintaining an oral health service is challenging due to the remoteness of communities, the associated high cost, and the low retention of clinical staff. An annual preventive intervention delivered by fly-in clinicians or local health workers may be a more cost-effective way to manage this problem.

Methods: A cost-effectiveness analysis was conducted based on an annual preventive intervention protocol. This included treating all dental decay in those with disease, applying fissure sealants, a disinfectant swab, fluoride varnish and providing oral hygiene instructions and dietary advice to all participating school children. These children were followed up for two years after the initial preventive intervention. A Markov model was built to assess the cost-effectiveness of the intervention compared with the usual care. Costs of treatment from the Queensland Department of Health were used and effectiveness was measured as quality-adjusted life years (QALYs) with the CHU-9D. One-way and probabilistic sensitivity analyses were conducted to identify key drivers and quantify uncertainty. This study included an intervention group and a natural comparison group in a remote Indigenous community in Far North Queensland, Australia.

Results: The preventive intervention was found to be RL, highly cost-effective. The incremental cost per QALY gained was AU\$3,747. Probability of new caries and treatment seeking were identified as the main drivers of the model. In probabilistic sensitivity analysis intervention was cost effective in 100% of simulations.

Conclusions: An annual preventive intervention for remote Indigenous communities in Australia is a highly cost-effective strategy to prevent dental caries and improve the quality of life of children.

Keywords: Oral health, Caries, Cost effectiveness, Prevention



Track 5: Other Public Health Relates

O-20

Social and Gender Inequities and Health Systems: Immunisation among Infants in Southeast Asian Countries

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Abstract

Background/Objectives: Communicable diseases have undergone decline or eradication in some societies. An intervention that has been successful on addressing such public health issues are infant immunisation programmes but some countries have yet to achieve this as those in Southeast Asia which may be due to social inequities in education, socioeconomic status, and gender structures.

Methods: The Demographic and Health Survey (DHS) is a standardised instrument that collect measures on maternal and child health along with social characteristics. For this study, the Southeast Asian countries included are those where DHS is collected. These countries with the year of collection are: Cambodia (2014), Indonesia (2012), Myanmar (2015-16), and the Philippines (2013). The analytic sample for the study is limited to the last child born to every woman. Censored in the sample are those born 12 months' prior the surveys. The immunisation schedule standard used for this study is from the World Health Organization whereby BCG, OPV I and II, DPT I and II, and Measles vaccines are to be administered at specific time of an infant's life.

Results: Certain factors are observed to be associated with completed adherence to the recommended immunisation schedule but with varying statistical significance between societies. Sociodemographic factors that exhibit this are increasing age of mother at birth and higher education attainment of parents. For gender autonomy factors, autonomy in household decision making and unintentional births are associated with better adherence to immunisations. The sole factor that is statistically significant with the immunisation adherence across the four countries is improving socioeconomic status of household.

Conclusions: Policies have to be created with consideration on social and cultural factors. Health policies are to be integrated with other social systems such as gender and household dynamics in order to bear positive outcomes. Nevertheless, socioeconomic situation of households has to be given particular attention because infant health may be afforded less prioritisation when resources are scarce.

Keywords: Infant health, Immunisation, Health Inequity





Track 5: Other Public Health Related

O-21

National and Subnational Burden of Disease by Socio-demographic Index in Korea

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Abstract

Background/Objectives: The GBD study has developed a socio-demographic index (SDI), which suggests that a country's burden of disease varies according to the degree of socioeconomic development. The SDI is a composite index of income per capita, educational attainment, and the total fertility rate under the age of 25. It has a geometric mean of 0 to 1; higher values indicate a higher sociocultural level. The purpose of this study is to investigate the national and subnational burdens of disease by SDI and health determinants in Korea.

Methods: The burden of disease was measured using the disability-adjusted life years (DALYs) on the incidence-based approach. We used National Health Insurance Services claims data and the cause-of-death statistics. For the indicators of subnational SDI, the income per capita data was extracted from community health surveys, the educational attainment data was obtained from the Population and Housing Census, and the fertility rate data came from Internal Migration Statistics.

Results: The national SDI of Korea was 0.870 based on 195 countries. The SDI of Korea has increased from 0.60 in 1980 to 0.87 in 2017 and has been 0.85 or higher since 2009. The Korean subnational SDIs for 250 regions were correlated with YLLs ($r=-0.736$, $p<.0001$), YLDs ($r=-0.362$, $p<.0001$), and DALYs ($r=-0.459$, $p<.0001$) in 2016. The correlation between the SDI and the YLLs was stronger in big cities ($r=-0.827$, $p<.0001$) rather than small cities ($r=-0.802$, $p<.0001$) and rural areas ($r=-0.197$, $p=.008$). The higher the SDI group, the higher the coefficient. When we consider the composite index together with health indicators (socioeconomic factors, demographic structure, resources), in addition to income, education level, and fertility rate, the index significantly correlated with mortality ($r=-0.690$, $p<.0001$), YLLs ($r=-0.770$, $p<.0001$), YLDs ($r=-0.352$, $p<.0001$) and DALYs ($r=-0.455$, $p<.0001$).

Conclusions: The composite index can be used to summarize complex and multidimensional realities from the perspective of supporting policy decisions and is highly utilized when comparing levels in countries and regions. Thus, the subnational SDI of health determinants should be developed and used as a standard for evaluating the health status.

Keywords: Health determinants, Socio-demographic index, Burden of disease, Korea



Track 5: Other Public Health Relates

O-22

**Trends of Breast Cancer Mortality in Chinese Women from 1990 to 2015:
An Age-period-cohort Analysis**

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Abstract

Background/Objectives: With lifestyle changes, breast cancer has become the number one malignant tumor in China, and its mortality rate has risen sharply in the past 25 years. The aim of this study was to describe the time trends of breast cancer mortality in Chinese urban and rural women and to better elucidate the causes of these trends.

Methods: Documented age-specific women breast cancer mortality rates in 1990–2015 were decomposed into age, period, and cohort effect using APC-modeling method and intrinsic estimator (IE) technique. The estimated effects were further analyzed by numerical differentiation.

Results: The mortality rate of breast cancer among Chinese urban women shows basically the same trend of increase and decrease during 1990 and 2015. But from 2000 to 2004, the mortality rate of female cancer in urban areas decreased rapidly, and the mortality rate of breast cancer in rural female showed a slow upward trend. The cohort effect showed that both Chinese urban and rural women born after 1906 had a reduced risk of breast cancer death, with the former generally at a higher risk of death. The period effect shows that from 1990 to 2015, the annual average rate of the period effect of breast cancer mortality in Chinese rural women increased faster than that in urban women. The effect of age on breast cancer mortality in Chinese urban and rural women essentially shows an inverted "J" shape with age. From 20-24 to 80-84, the relative risk of the latter group was twice as high.

Conclusions: The estimated cohort and period effects of this study suggest that changes in Chinese women breast cancer mortality risk from high-risk phase to low risk phase during 1906–2015. It may be due to socio-economic development, the further improvement in health awareness and health care, minimizing the mortality risks for women breast cancer and maximizing the opportunity for survival.

Keywords: Breast cancer, Mortality, APC



Track 5: Other Public Health Related

O-23

Changes in Perinatal Mortality after the Implementation of the Two-child Policy in Zhejiang Province China

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Abstract

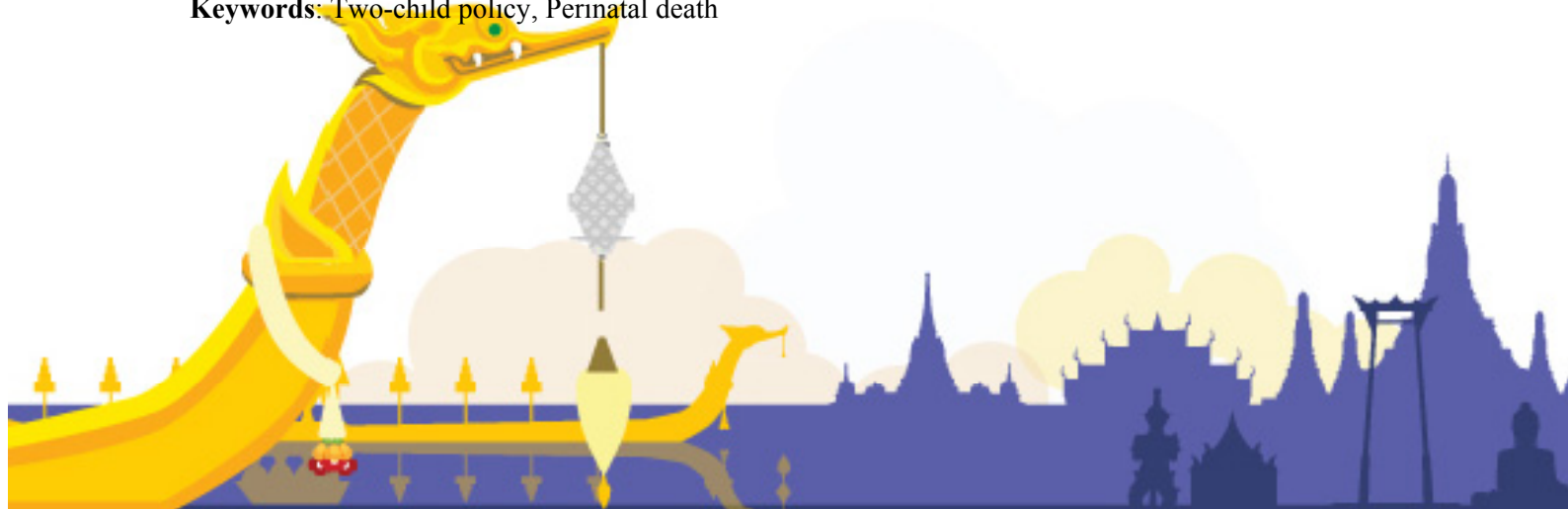
Background/Objectives: The Chinese government implemented a new population policy in 2015 allowing each family to have two children (no restrictions for minority ethnic groups). The aim of this study is to document the impact of that policy on pregnancy outcome and perinatal deaths (PD). This study analyzed the delivery record information during 2015-2017 in the largest women's hospital in Zhejiang Province, China. The report and analysis includes factors which are related to PD.

Methods: Women's registration data from infant deliveries in the women hospital Zhejiang Province China were analyzed for 2015-2017. It should be noted that all deliveries in Zhejiang Province take place in hospitals. Initial single factor analyses were done by chi-square for enumeration data, and the measurement data were compared by "t" test. High risk factors were further analyzed by multiple regression analysis.

Results: A total of 57376 babies were delivered during 2015-2017, and numbers reached a peak in 2016 which is one year after the new policy started. A total of 768 perinatal deaths were reported. The perinatal mortality increased from 13 per 1000 in 2015 to 15 per 1000 in 2017. Overall average maternal age increased during these 3 years, 30.5, 30.8, 31.5 years old respectively. Birth defects are the major cause of perinatal death and were reported from 58% of all deaths. Maternal age less than 20 and more than 45 were higher risk age groups for PD rate. Other factors relating to perinatal death are also analyzed. Multipara are more likely have PD than primipara (OR = 1.931, 95% CI 1.641, 2.271). Migrant women (OR=1.401, 95%CI 1.198, 1.639), multiple pregnancy (OR=1.578, 95%CI 1.234, 2.016) are also likely suffering PD. Multiple regression analysis showed that younger maternal age and age over 45 years old, multipara, non-Zhejiang provincial residents, multiple pregnancies were the risk factors of perinatal death.

Conclusions: After the two-child policy was launched, hospital based PD rate increased. There are multiple reasons may cause this increase which may respond to health promotion. More effort should be put on systematic maternal health care including encouraging women to have their babies at an appropriate age. Improved birth defect screening and control is another challenge for perinatal death prevention.

Keywords: Two-child policy, Perinatal death



Track 5: Other Public Health Relates

O-24

The Potential of *Chanos chanos* (Milkfish) Skin Gel Extract as an Alternative Approach in Treating First Degree Burn

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Abstract

Background/Objectives: The fire related injuries such as burns is a less common problem in the community but is still a public health concern. It is because of the insufficient awareness in wound healing and lack of financial capabilities that result to people opting for self-medication. In this study, the researchers prepared an ointment from milkfish skin and scale extract as an alternative burn wound healing agent.

Methods: The milkfish extract was added to a soft paraffin the mixture congealed. The milkfish scale has high content of riboflavin and vitamin B complex that could hasten the first-degree burn healing process. The milkfish skin and scales were subjected to Gamma Irradiation as a manner of sterilization and for preservation of collagen and vitamin B content. The experimental rats were induced of burn wounds for 5 seconds in the back part using cylindrical heat steel to be associated in 100C boiling water which were treated with the prepared ointment.

Results: The epithelialization times, wound contraction and histological examination were observed and the data recorded were analyzed using one-way ANOVA. It was revealed in all the data sets, at a p value of <0.05 that there is a significant difference in the percent wound contraction among groups A to E from days 2 through 15. The data on the Day 8 of treatment was subjected to post-hoc analysis, as it is the earliest day in which all the experimental groups A to D showed a significant difference in wound contraction against the untreated (negative control) group or Group E. This had been a consistent observation until the Day 15, in which still, Groups A (60% v/v), B (40%), C (20%), and D (10%) have a significant difference with Group E (Negative Control).

Conclusions: This study dealt with scientific experimentation to identify the potential of Milkfish skin and scale in wound healing. Findings show that there is a significant difference in the rate of wound contraction, and time of epithelization of the rats treated with the experimental ointment and rats in the negative control. This finding could pave the way in innovative methods of treating burn wounds.

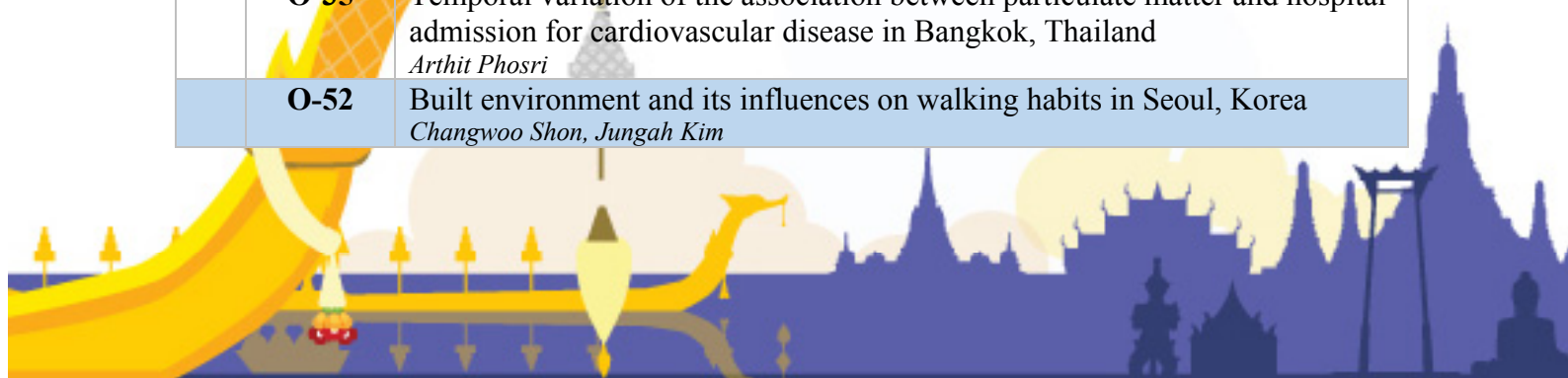
Keywords: Riboflavin, Vitamin C complex, Gamma irradiation, Milkfish, Burns





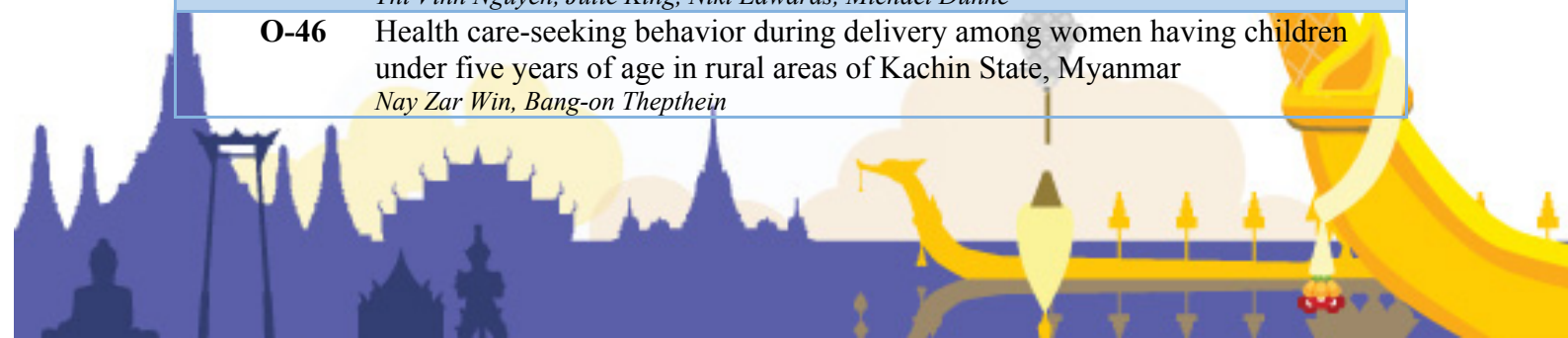
November 22, 2019

13.30 - 15.00	Oral presentation	Watergate Ballroom A, Floor 6
	Track 6: Life course health Chair : Professor Dr. Kazuhisa Miyashita <i>Wakayama Medical University, Japan</i> Co-chair : Associate Professor Dr. Orawan Kaewboonchoo <i>Mahidol University, Thailand</i>	
O-25	Depression and associated psychosocial factors among post-partum mothers in Medical Officer of Health area Kolonnawa, Colombo, Sri Lanka <i>Shermi Jayasumana, Kasun Wasala</i>	
O-26	Socioeconomic status, health behaviors and children's body mass index in China: Longitudinal study <i>Jing Liang, Peigang Wang</i>	
O-27	Effect of progressive muscle relaxation training and nursing information support on anxiety of elderly multiparas <i>Quan Shen, Yan-Qiong Ouyang, Shan Ju</i>	
O-28	Life expectations, reasons for school dropouts and health related problems among adolescents and youth Not on Education, Employment or Training (NEET) in Anuradhapura district <i>Dilhari G.I., Dilrukshi K.L.S., Dias W.P.N., et al.</i>	
O-29	Social network diversity and active aging among the Japanese elderly persons, a survey in 2019 <i>Myo Nyein Aung, Motoyuki Yuasaa, Satomi Ureno, et al.</i>	
O-30	Factors associated with the continuum of care for maternal, newborn and child health care services in the Gambia <i>Jiyoung Oh, Kyung Hee Kim, Jae Wook Choi</i>	
13.30 - 15.00	Oral presentation	Watergate Ballroom B, Floor 6
	Track 7: Occupational and environmental health Chair : Associate Professor Dr. Chalermchai Chaikittiporn, <i>Thammasat University, Thailand</i> Co-chair : Assistant Professor Dr. Plernpit Boonyamalik <i>Mahidol University, Thailand</i>	
O-31	Leptospirosis among urban service workers in Sabah, Malaysia Borneo 2017 <i>Mohammad Saffree Jeffree, Azman Atil, Rohaizat Hassan, et al.</i>	
O-32	Recognition and prevention of overwork-related cerebrovascular and cardiovascular disease in Taiwan <i>Ro-Ting Lin</i>	
O-33	Residential radon and histological types of lung cancer: A meta-analysis of case-control studies <i>Cong Li, Wenshan Zhou, Jun Yu, Yongsheng Fan, Duanya Liu, Chunhong Wang, Tingming Shi</i>	
O-34	Leukemia and petrochemical exposure: A meta-analysis <i>Hathaichon Boonhat, Ro-Ting Lin</i>	
O-35	Temporal variation of the association between particulate matter and hospital admission for cardiovascular disease in Bangkok, Thailand <i>Arthit Phosri</i>	
O-52	Built environment and its influences on walking habits in Seoul, Korea <i>Changwoo Shon, Jungah Kim</i>	



November 22, 2019

13.30 - 15.00	Oral presentation	Watergate Ballroom C, Floor 6
Track 8: Health for all and health in all policies Chair : Professor Dr. Phillip Baker <i>Deakin University, Australia</i> Co-chair : Associate Professor Dr. Charuwan Tadadej <i>Mahidol University, Thailand</i>		
O-36	Do lower medication costs increase the incentive for smokers' quit attempts after relapse? <i>Yi-Wei Wang, Ying-Wei Wang, Yi-Wen Tsai, et al.</i>	
O-37	Childhood immunization in post-conflict, hard-to-reach areas by collaboration between ethnic health organizations and government providers in Kayin State, Myanmar <i>Myat Sandi Min, Sithu Naing, Wai Linn Kyaw, Merdin Myat Kyaw, Khine Wai Wai Oo, Rachel Whelan</i>	
O-38	Patterns of access to maternal, newborn, and child health services by parents' employment status and health insurance eligibility in Cambodia: A cross-sectional study <i>Akira Shibanuma, Inrasothythep Neth, Kim Net, Masamine Jimba</i>	
O-39	Towards understanding socioeconomic inequalities in unmet healthcare needs in Korea <i>Jongnam Hwang</i>	
O-40	Trend in mortality of viral hepatitis associated with economic and healthcare policy development in China: An age-cohort-period characteristic analysis <i>Ying Li, Junfeng Jiang, Jianchuan Qi, Yumeng Li</i>	
O-41	Review of equity in access, quality and health system of maternal mortality towards effective universal health coverage in Indonesia <i>Rooswanti Soeharno, Budi Hidayat</i>	
13.30 - 15.00	Oral presentation	Room A@7, Floor 7
Track 9: Health in marginalized population Chair : Professor Dr. Masamine Jimba <i>University of Tokyo, Japan</i> Co-chair : Assistant Professor Dr. Pensri Watchalayann <i>Thammasat University, Thailand</i>		
O-42	Understanding lived experiences of at-risk teenage boys in Taiwan through photovoice <i>Victor Hsiao, Sunya Chen, Mellissa Withers</i>	
O-43	Physical and mental health of live-in female foreign domestic Workers. A quantitative survey in Hong Kong <i>Roger Yat-Nork Chung, Jonathan Ka-Long Mak</i>	
O-44	Relationship of HIV prevention and treatment services utilization, risky behaviors and HIV risk among drug users in the border areas of Yunnan, China: A latent class analysis <i>Han Wang, Hong Yan</i>	
O-45	Women with physical disabilities in Northern Vietnam: Impacts of pregnancy on their life <i>Thi Vinh Nguyen, Julie King, Niki Edwards, Michael Dunne</i>	
O-46	Health care-seeking behavior during delivery among women having children under five years of age in rural areas of Kachin State, Myanmar <i>Nay Zar Win, Bang-on Thepthein</i>	





November 22, 2019

13.30 - 15.00		Oral presentation	Room C@7, Floor 7
		Track 10: Health and social innovation and health technology Chair : Professor Dr. Bruce Maycock <i>Curtin University, Australia</i> Co-chair : Associate Professor Dr. Usa Lek-Uthai <i>Mahidol University, Thailand</i>	
O-47		Sports monitoring with flying drones (moving aerial cameras) maybe cost efficient if injuries are prevented <i>Deborah Hilton</i>	
O-48		Validity of anthropometric and percentage body fat values estimated from a novel computer-based body image assessment program <i>Masaharu Kagawa, Sayumi Iwamoto, Kiyoko Sugita, et al.</i>	
O-49		Performance of rapid diagnostic tests for malaria diagnosis in children: A systematic review <i>Wen-Jun Zhu, Wen-Ru Shang, Yan-Qiu Du, et al.</i>	
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Track 6: Life Course Health

O-25

Depression and Associated Psychosocial Factors among Post-partum Mothers in Medical Officer of Health Area Kolonnawa, Colombo, Sri Lanka

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Abstract

Background/Objectives: Post-partum depression is gaining importance as a public health concern globally with increasing incidence in diverse cultures in different parts of the world. The prevalence of postpartum depression in Sri Lanka ranges from 27.1% to 32.1%. This study aimed to determine the prevalence of depression among post-partum mothers in MOH area, Kolonnawa, Colombo, Sri Lanka and to describe the psychosocial factors associated.

Methods: A clinic-based cross-sectional study was conducted among post-partum mothers in 4-8 weeks post-partum period attending to child welfare clinics at MOH area Kolonnawa, during the 1st quarter of year 2017, excluding mothers with mental retardation and diagnosed psychiatric illnesses (N=341). A self-administered questionnaire including Sinhala version of Edinburgh Post-Partum Depression Scale (EPDS) was used for data collection. A cut off value of 9 was used for the EPDS.

Results: Median EPDS score among post-partum mothers was 4(IQR 2–8). Prevalence of post-partum depression in this study sample was 15.24% (n = 52). Thought of self-harming (item number 10 of EPDS) was reported by 21 post-partum mothers (6.15%). None of the psychosocial factors (age, parity, intended/unintended pregnancy, no of living children, educational level and income) were significantly associated with post-partum depression or thought of self-harming in this study sample.

Conclusions: Prevalence of post-partum depression in MOH area Kolonnawa, Colombo, Sri Lanka was relatively high, which is compatible with available literature in Sri Lankan studies. And depression can occur in post-partum mothers irrespective of their psychosocial status. Therefore active screening is necessary during post-partum period.

Keywords: Depression, Post-partum mothers, Psychosocial factors





Track 6: Life Course Health

O-26

Socioeconomic Status, Health Behaviors and Children's Body Mass Index in China: Longitudinal Study

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Abstract

Background/Objectives: Childhood obesity has increased rapidly in China, but understanding is limited on how socioeconomic status background affects children's body mass index. This study focuses on two questions: to what extent does socioeconomic status contribute to change in children's body mass index? And children's health behaviors can explain what extent?

Methods: children's socioeconomic status, bmi z-score and health behaviors from the China Health and Nutrition Surveys were assessed at baseline and in follow-up surveys for 2463 children aged 2-17 years during 2000-2011. Associations were tested using mixed effect model.

Results: A high socioeconomic status background was significantly associated with higher children's bmi z-score (beta coefficient: 0.293,95%CI:0.041-0.544). Preschool children (2-6 years) (beta coefficient: 0.314,95%CI:0.063-0.564; girls(beta coefficient: 0.343,95%CI:0.029-0.656); rural children (beta coefficient: 0.365,95%CI:0.072-0.657) children had higher bmi z-score. There are differences among the health behaviors in different socioeconomic status backgrounds. But effects of socioeconomic status changed very little after controlling for health behaviors.

Conclusions: Our study strongly suggest socioeconomic status background has an impact on change in child weight status, Especially preschool children, rural children. But give little support to the idea that control weight through healthy behaviors.

Keywords: Socioeconomic status, Children, BMI z-score, Mixed model



Track 6: Life Course Health

O-27

Effect of Progressive Muscle Relaxation Training and Nursing Information Support on Anxiety of Elderly Multiparas

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Abstract

Background/Objectives: Anxiety in elderly multiparas may cause mother and child's complications, such as postpartum depression, preterm delivery and milk volume reduction. The purpose of this article was to investigate the anxiety level and influencing factors, and to evaluate the effect of progressive muscle relaxation training (PMRT) and nursing information support on anxiety, blood pressure (BP), pulse rate and Fetal heart monitors (Non-Stress test, NST) of elderly multiparas.

Methods: A quasi-experimental study was conducted in 90 elderly multiparas, divided randomly into intervention group or control group, at 28~30 weeks of gestation. The control group accepted routine nursing care, while the intervention group accepted additionally 8-weeks PMRT combined with nursing information support. The general information questionnaire, the Pregnancy-specific Anxiety Questionnaire (PAQ), and the State-Anxiety Inventory (S-AI) were to assess the individual characteristics and anxiety level. BP, pulse rate and NST were also recorded.

Results: (1) In the control group there was no significant difference between the pre-test and post-test PAQ scores, but the post-test S-AI was significantly higher than the baseline ($P < 0.05$). In the intervention group the scores of PAQ and S-AI were statistically lower than the baseline scores and those of the control group ($P < 0.05$); (2) The post-test pulse rate and systolic blood pressure other than diastolic blood pressure in the intervention group were significantly lower than those of the control group. (3) The NST of the intervention group was higher than that of the control group without statistical significance ($P > 0.05$).

Conclusions: PMRT combined with nursing information support was effective in decreasing pregnancy specific anxiety and state anxiety, reducing systolic BP and pulse rate.

Keywords: Progressive muscle relaxation training, Nursing information support elderly multiparas, Anxiety



Track 6: Life Course Health

O-28

Life Expectations, Reasons for School Dropouts and Health Related Problems among Adolescents and Youth not on Education, Employment or Training (NEET) in Anuradhapura District

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Abstract

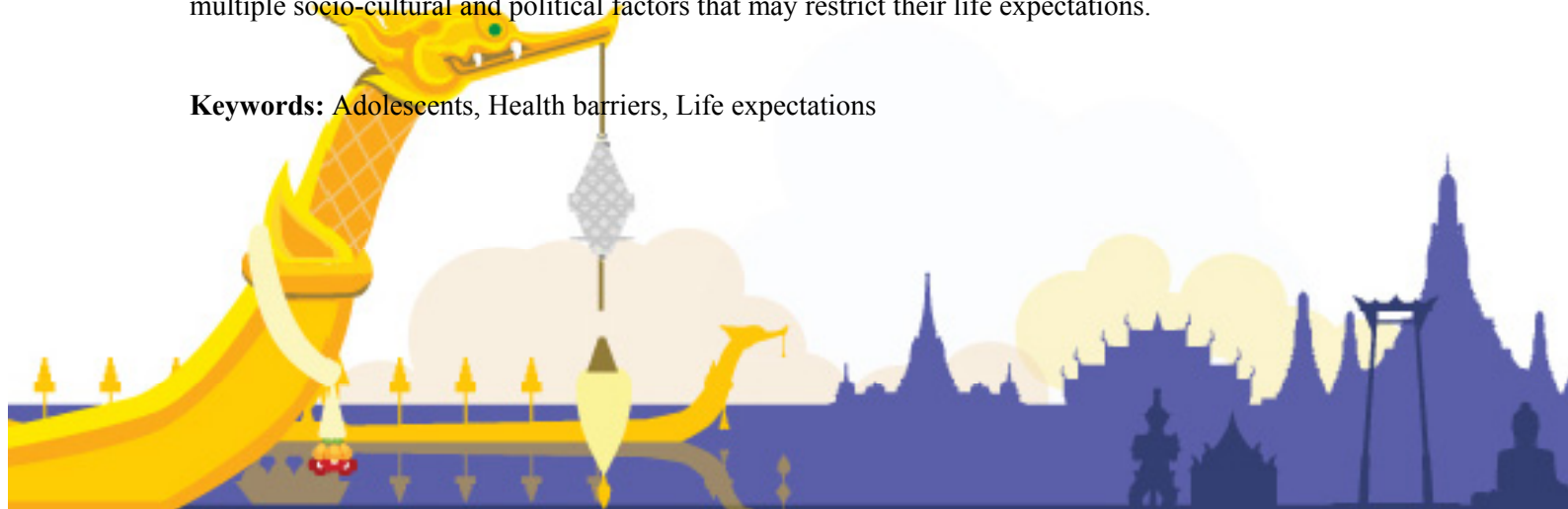
Background/Objectives: Adolescents and youth Not on Education, Employment or Training (NEET) are difficult to reach and remain a challenge to the productivity and health of a country. Therefore, our objective is to explore and describe life expectations, reasons for school dropout, health barriers, psychological status and selected life skills of adolescents and youth NEET in Anuradhapura district.

Methods: We conducted a mixed method study. Phase 1 (qualitative): focus group discussions (fifteen) and in-depth interviews (six) were conducted on adolescents and youth NEET, teachers, parents, public health midwives, Medical Officers of Health and community dwellers, in four different communities of Anuradhapura. Thematic analysis was conducted. Phase 2: a descriptive cross-sectional study was carried out among adolescents and youth NEET in NPC MOH area. We assessed sociodemographic factors and life expectations (based on phase 1), mental health (General Health Questionnaire 12) and selected life skills.

Results: Phase 1: life expectations of Adolescents and youth NEET were restricted. Majority of females had no expectations. The main themes for school dropouts emerged in qualitative exploration were discouraged by family members, personal decision, financial problems, family issues and problems in the education system. Alcohol and substance abuse (starting at 13-14 years), self-harm, reproductive health issues and psycho-social problems were the main health related barriers. Majority of adolescents did not perceive health problems as “a problem”. Social norms and trends, ethnic problems, use of technology and financial influences enhanced health problems and life expectations. Of the 197 adolescents and youth in descriptive study, the mean age group was 20-22 years and 63.5% studied up to ordinary level. Of the parent’s response on school leaving 35.3% were either happy or didn’t care. Prevalence of psychological distress was 7% and was significantly higher among females ($p < 0.05$). Prevalence of reported drug usage was 22.3%. The least perceived life skill was “communication” (33%).

Conclusion: Lack of Insight on own social and health problems among NEET adolescents and youth is a barrier for health promotion. Health and wellbeing of adolescent and youth NEET are threatened by multiple socio-cultural and political factors that may restrict their life expectations.

Keywords: Adolescents, Health barriers, Life expectations



Track 6: Life Course Health

O-29

Social Network Diversity and Active Aging among the Japanese Elderly Persons, A Survey in 2019

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Abstract

Background: Social ties are important for wellbeing. In Japan, one of the longest life-expectancy in the world, it is interesting to assess the relation between diversity of social network and to what extent aging persons are active.

Objectives: To describe the type of social networks belonging to Japanese elderly persons and to assess how social network relates to active aging

Methods: This study was a community-based cross-sectional survey. A sample of 243 community residents, aged ≥ 70 years, were recruited from Oita, the southern part, Kobe and Osaka, the western part, Tokyo, the eastern part, and Sapporo the northern part of Japan, as an attempt to maximize representativeness. The participants' social network diversity was assessed by applying Cohen's social network index (SNI), trans-culturally translated and piloted Japanese version. Active aging was measured using single item question which was also used in international cohorts. Simply participants were asked to rate how active you were in the last week physically, mentally and socially to rate zero to ten. Descriptive analyses revealed the distribution of SNI, while the relationship between the SNI and active aging scale was examined by ordinal logistic regression analysis controlling possible covariates such as age and gender.

Results: Mean age was 74.3 ± 6.7 years. Female accounted 54%. Children, relatives and friends were reported as the most frequent contacts of participants among twelve types of social contacts. 70% still have their spouse alive. Among the 243 participants, only 8.2% were at risk of social isolation due to having a "limited" social network (SNI 0–3), whereas 9.84% had "medium" social network (SNI 4–5), and 81.97% had a "diverse" social network (SNI ≥ 6). Median active aging score was 6. Multivariate analysis revealed a significant positive association between social network diversity and active aging level: Medium SNI group had adjusted odds ratio 5.37, 95% confidence interval (CI) 1.70-16.92 and diverse SNI group aOR (10.66, CI 4.08-27.85).

Conclusions: Japanese elderly persons' social network may result from the longevity among their peers and family members. Growing older, being connected, they can enjoy active aging. It is important to sustain such a social character.

Keywords: Friends, Network, Aging, Japan



Track 6: Life Course Health

O-30

Factors Associated with the Continuum of Care for Maternal, Newborn and Child Health Care Services in the Gambia

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Abstract

Background/Objectives: The continuum of care (CoC) for maternal, newborn and child health (MNCH) care services has recognized as a means to reduce the burden of maternal, neonatal and child deaths. This study aims to identify factors associated with continuity of MNCH care services in the Gambia.

Methods: The 2013 Demographic and Health Survey (DHS) from the Gambia was used to assess mothers' completion levels of eleven preventive MNCH care services use. The final analytic sample included 1,432 women who had a child at 12-23 months old at the time of the survey. The modified composite coverage index (CCI) was calculated to express CoC completion. Multiple linear regression analysis was used to identify factors associated with the modified CCI. The independent variables were categorized into four characteristics including individual and family; community; socio-economic status; and baby's characteristics.

Results: Six factors were significantly associated with modified CCI score. Among them, living in an urban area ($b=0.036$, $p=0.004$), husbands' higher educational attainment ($b=0.049$, $p<0.001$), and watching television at least once ($b=0.042$, $p<0.001$) were positively associated with mothers' completion of MNCH care services. Bigger burden on distance to health facility ($b=-0.047$, $p<0.001$), more under-5 children at home ($b=-0.008$, $p<0.001$), and husband being a farmer ($b=-0.041$, $p<0.001$) were negatively associated with continuity of MNCH care services.

Conclusions: Efforts to future programs should focus on highlighting the concept of CoC in the Gambia, especially in rural areas, to a woman who has a burden on distance to health facilities, and also to husbands since they play an important role in completing the MNCH care services.

Keywords: Continuum of care, Maternal, newborn and child health, The Gambia



Track 7: Occupational and Environmental Health

O-31

Leptospirosis among Urban Service Workers in Sabah, Malaysia Borneo 2017

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Abstract

Background/Objectives :Urban service workers are likely to contract leptospirosis due to job descriptions that deals with water supply, drains and drainage, sewers, garbage collection, and road sweeping .The incidence is still underestimated and probably due to misdiagnosis and lack of surveillance data.To determine the prevalence and risk factors of positive leptospirae among the urban service workers .

Methods: A cross sectional study among 133 workers in Kota Kinabalu City Sabah from Feb-Mar 2017 . Data on personal information, occupational exposures and environmental factors was carried out using modified validated questionnaires .Microscopic agglutination test (MAT) (and Polymerase Chain Reaction (PCR) (were used to determine the prevalence of positive leptospirae.

Results: The mean age of respondents was 43.7 (SD 9.6) (and 75.2 % were male .The overall positive leptospirae was 27.8] % [95%CI :20.6 -36.4] with mean duration of employment of 15.4 (SD 11.4) years .Urban sweeper and garbage collector contributes the highest proportion among the positive leptospirae respondents with 40.5 % and 24.3 % respectively .Workers whose age less than 50 years old OR 0.46,]95%CI :0.21 -0.99[and had working less than 15 years OR 0.33]95%CI :0.15 -0.72 [had protective effect towards positive leptospirae .

Conclusions :High positive leptospirae infection prevalence among healthy urban service workers is likely from their risky working activities .There were no association between environmental factors with positive leptospirae. Periodic medical examination and occupational health measures needed to protect from developing advanced leptospirosis disease.

Keywords :Leptospirosis, Workers, Occupational determinants





Track 7: Occupational and Environmental Health

O-32

Recognition and Prevention of Overwork-related Cerebrovascular and Cardiovascular Disease in Taiwan

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Abstract

Background/Objectives: Overwork-related cerebrovascular and cardiovascular disease (CCVD) is an emerging public health issue in Taiwanese societies due to its long working hours. National policies play an important role to reduce working hours and prevent overwork-related CCVD. In 2010, Taiwan revised its occupational recognition criteria by adopting the number of long-term accumulated working hours as a key criterion for recognizing a CCVD as related to overwork. We investigated the effects of the revised criteria on the number of CCVD cases and the mediation effect through reduced working hours.

Methods: We collected data on the number of overwork-related CCVD cases, average monthly working hours, and covariates for each industry sector from 2006 to 2017. We estimated the combined effect of national policies and working conditions on overwork-related CCVD for each industry sector. Next, we conducted a causal mediation analysis to investigate the mechanism of the effect of new criteria on CCVD mediated by working hours. Finally, we measured the extent of preventable overwork-related CCVD for each industry sector as a result of introducing new criteria.

Results: In Taiwan, overwork-related CCVD 79% of all deaths due to occupational diseases in 2017, although it accounted for 13% of all cases of occupational diseases. Our estimation showed that the overall effect of implementing new criteria was associated with a 2.5-fold increase in the rate of overwork-related CCVD. Supposed that after introducing the new criteria, overwork-related CCVD increased by eight cases—resulted from a decrease of two CCVD cases due to reduced working hours (mediation effect) and an increase of ten cases related to the overall effect of the criteria change and other covariates excluding working hours (alternative effect).

Conclusions: Clear criteria for recognizing overwork-related CCVD can help occupational physicians and industrial hygienists assess the workers' working characteristics more objectively. Introducing new criteria that recognized the role of prolonged working hours on the increase in overwork-related CCVD risk might raise awareness and prompt reductions in working hours, which also help to reduce overwork-related CCVD. Our findings suggest that working hours are an important mediator of the effect of policy on the rate of overwork-related CCVD.

Keywords: Health policy, Working hours, Karoshi death, Cardiovascular diseases, Occupational disease, Recognition of occupational disease



Track 7: Occupational and Environmental Health

O-33

Residential Radon and Histological Types of Lung Cancer :A Meta-analysis of Case-control Studies

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Abstract

Background/Objectives : Although radon has been identified as the second leading cause of lung cancer, the strength of association with different histologic types is not well understood .The aim of this meta-analysis was to assess the effect of residential radon on the risk of lung cancer and histologic types .

Methods: We searched the Cochrane Library, Embase, PubMed, Web of Science, and Chinese National Knowledge Infrastructure (CNKI) databases published up to Nov 13, 2018 .The pooled odds ratio (OR) and 95 %confidence intervals (CI) were calculated using fixed and random effect models .Subgroup and dose-response analyses were also conducted .This study was registered with PROSPERO, number CRD42019127761.

Results: A total of 28 studies including 13748 lung cancer cases and 23112 controls were used for this meta-analysis .The pooled OR indicated that the highest residential radon exposure was significantly associated with an increased risk of lung cancer (OR =1.48, 95 %CI =1.26-1.73) .Furthermore, all histologic types of lung cancer were associated with residential radon .The association with small-cell lung carcinoma (OR =2.03, 95 %CI =1.52-2.71) was strongest, followed by adenocarcinoma (OR = 1.58, 95 %CI =1.31-1.91), other histological types (OR =1.54, 95 %CI = 1.11-2.15) and squamous-cell carcinoma (OR =1.43, 95 %CI =1.18-1.74) .With increasing radon levels per 100 Bq/m³, the risk of lung cancer, small-cell lung carcinoma and adenocarcinoma increased by 11%, 19 %and 13%, respectively .

Conclusions: This meta-analysis provides new evidence for a potential relationship between residential radon and all histologic types of lung cancer .

Keywords: Residential radon, Lung cancer, Histology, Meta-analysis, Case-control study



Track 7: Occupational and Environmental Health

O-34

Leukemia and Petrochemical Exposure: A Meta-analysis

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Abstract

Background/Objectives: Although there were several studies about the relationship between residential proximity close to petrochemical industry complexes (PIC) and risks of leukemia incidence, some studies revealed that there were no significant difference. Furthermore, there was one systematic review identifying the associations between leukemia incidence and exposure to PIC in worker. Therefore, we aimed to apply meta-analysis to investigate the association between people with residential vicinity close to PIC and incidence of leukemia.

Methods: The steps of literature search and review were followed by PRISMA guideline. We identified publication by search from databases then screening of duplicate publication, and identified eligible publication by title and abstract, original articles and full text. We excluded some articles which were not relevant to our objective. Random-effects model was applied in meta-analysis to summarize pooled effect estimates and subgroup analysis. Small publication bias was estimated by using funnel plots, Egger's, and Begg's test.

Results: Overall, residents living close to PIC have a higher risk for developing incidence of leukemia was 2-fold ($p < 0.05$), as compared to residents living far from PIC. The funnel plot is symmetric and small publication bias was not found in our study ($p > 0.05$). Among 16 comparison groups, we stratified subgroup-analysis for determining pooled effect estimates, we found children living surrounding PIC had an increased risk of leukemia 3-fold ($p < 0.05$). In addition, benzene exposure from PIC has a high risk association to children's health proximity close to PIC 2-fold ($p < 0.05$). Additional finding, we found the effect of increased risk of leukemia in young adults living nearby PIC ($p < 0.05$).

Conclusions: Our results showed that residents who live close to PIC were associated with an increased risk of leukemia, which children and young adults are common groups for leukemia incidence. Benzene exposure is also an important factor that related to increased risk of leukemia for children. So, future research could estimate leukemia in children population attributable to benzene exposure from PIC by geographic region or gender. This measurement determined the percent of leukemia could possibly be prevented if benzene exposure were reduced or removed from the residential area.

Keywords: Leukemia, Petrochemical industrial, Meta-analysis



Track 7: Occupational and Environmental Health

O-35

Temporal Variation of the Association between Particulate Matter and Hospital Admission for Cardiovascular Disease in Bangkok, Thailand

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Abstract

Background/Objectives: The association between short-term exposure to PM₁₀ and hospital admissions has been widely investigated. However, the temporal variation in PM₁₀ exposure associated with the risk of hospital admissions is limited especially in developing country where long-term monitoring data for PM₁₀ were not available. This study aimed to investigate the temporal relationship between PM₁₀ and hospital admission for cardiovascular disease in Bangkok over 9 years from 2006 to 2014.

Methods: Daily PM₁₀ and daily number of hospital admission was analyzed using overdispersed Poisson regression controlling for long-term trend and other potential confounders. The association between PM₁₀ and hospital admission was investigated for overall period from 2006 to 2014 and for three different periods to examine the overall effect estimate for whole study period and to assess the variation of effect estimate over the different periods.

Results: Annual average PM₁₀ concentration decreased from 43.5 µg/m³ in 2006 to 41.8 µg/m³ in 2014. During the whole study period, a 10 µg/m³ increase in PM₁₀ concentration at current day and previous 3 days (lag03) corresponded to 0.92% (95% CI: 0.46, 1.38) increase of cardiovascular hospital admission. Although PM₁₀ concentration was decreased overtime, the association between PM₁₀ and cardiovascular hospital admission increased overtime (*p*-value = <0.05) where a 10 µg/m³ increase in PM₁₀ at lag 03 was associated with a 0.50% (95% CI: -0.35, 1.35), 0.87% (95% CI: -0.01, 1.75), and 1.03% (95% CI: 0.41, 1.65) increase in hospital admission for cardiovascular disease during 2006-2008, 2009-2011, 2012-2014, respectively.

Conclusions: The temporally increasing trend of the association between PM₁₀ and cardiovascular hospital admission was observed, Therefore, PM₁₀ control measure need to be implemented continuously for reducing health risk attributable to PM₁₀.

Keywords: PM₁₀, Cardiovascular disease, Hospital admission, Temporal variation





Track 7: Occupational and Environmental Health

O-52

Built Environment and Its Influences on Walking Habits in Seoul, Korea

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Abstract

Background/Objectives: Built environment has direct or indirect effects on human health. In this context, Seoul has become a member of Alliance for Healthy Cities in 2004 as a first city of Korea. However, the Korean adults who walks for exercise decreased by 6.0% from 51.4% in 2008 to 45.4% in 2017. This study began with the question of what should be done to increase the rate of people who walked for exercise. The purpose of this study is to investigate the built environmental factors affecting walking habits for urban dwellers and to propose policies for health promotion.

Methods: Among the data from the Korean Community Health Survey, which is the nationwide community-based cross-sectional survey conducted by 253 community health centers in South Korea, were used. More than 180,000 subjects recruited in the capital city Seoul from 2011 to 2017. Then we merged administrative and Geographic Information System data such as parks, public transportations, road density, length of road, etc. based on KCHS. Through spatial regression analysis, the effects of the living environment on the residents' walking habits were examined.

Results: The rate of walking practice was high for people who live near the subway stations and parks within 1 km of the residence. However, within a distance of 500 m, people who live at higher intensity of intersections had a low walking practice rate.

Conclusions: It is confirmed that improving the accessibility of parks and public transportation, and establishing a pedestrian-friendly environment are effective in improving the walking practice rate of urban dwellers

Keywords: Built environment, Walking habits, Healthy city, Spatial analysis



Track 8: Health for All and Health in All Policies

O-36

Do Lower Medication Costs Increase the Incentive for Smokers' Quit Attempts after Relapse?

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Abstract

Background: Smokers usually experience relapses before quitting permanently. In 2012, Taiwan's government inaugurated the Second Generation Cessation Services Payment Scheme (SGCSPS), increasing smoking cessation medications subsidies.

Objectives: To examine SGCSPS's effect on the utilization of smoking cessation services among smokers who relapsed after their first quit attempt.

Methods: We identified 8,570 adult smokers who relapsed after their first quit attempt where they took smoking cessation medication during June 2009 to November 2014, 4,356 were before-SGCSPS and 4,214 were after-SGCSPS. Patients were classified into two medication groups: high-priced medication (varenicline) and low-priced medication (NRT or bupropion). Multivariate logistic regression models were used to examine the SGCSPS's effects on increasing the likelihood of second quit attempts during 1.5 years after relapse, and Cox proportional hazard models were used to examine the SGCSPS's effects on time to the second quit attempt after relapse. We also examined whether the policy effects differed across medication groups.

Results: After SGCSPS, 12.3% of the after-SGCSPS cases had their second quit attempts via medication, which was higher than the prevalence of the before-SGCSPS cases (9.6%). SGCSPS's implementation was positively associated with an increase in second quit attempts (AOR =1.27, 95% CI=1.08-1.49). The Cox proportional hazard model showed that the SGCSPS was positively associated with a shorter time period between quit attempts (AHR=1.42, 95% CI= 1.25-1.62). Both models showed insignificant interaction effects between SGCSPS and medication-priced groups.

Conclusions: The implementation of the Second Generation Smoking Cessation Services was effective in increasing second quit attempts among unsuccessful quitters.

Keywords: Quit attempts, Smoking cessation, Reimbursement of cessation services





Track 8: Health for All and Health in All Policies

O-37

Childhood Immunization in Post-conflict, Hard-to-reach Areas by Collaboration between Ethnic Health Organizations and Government Providers in Kayin State, Myanmar

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Abstract

Background/Objectives: Though SDG aims include the achievement of universal health coverage and the end of preventable deaths of newborns and children under 5 years old, access to health services remains challenging in post-conflict areas in Myanmar due to long-term political insecurity and lack of infrastructure. Government services, including vaccination campaigns, are limited due to low levels of community trust in government providers, security issues due to ongoing conflict, and difficult transportation, and compounded by low health literacy on immunization of community members. Thus, local community health workers were trained to serve as vaccinators according to national guidelines for the expanded program of immunization (EPI) and under the supervision of doctors and other senior health staff from the Karen Department of Health and Welfare (KDHW), Community Partners International (NGO), and midwives from the government sector. This study assesses immunization coverage in hard-to-reach, post-conflict areas in Kayin State and explores implementation process in convergence approach between government sector, non-government organization (CPI) and ethnic health organization (KDHW).

Methods: Descriptive analysis of program immunization data from January to December 2018 was conducted.

Results: In 2018, KDHW did “crash” (dry season) immunization for 4 months and routine immunization for 6 months in 139 villages in 3 townships (Kyarinseikkyi, Myawaddy, Kawkareik) in Kayin State, for which all required vaccines were provided by government. Data were available for 2543 people, including 442 pregnant women and 2101 children. Among targeted 630 pregnant women, 38 % received the TT-2 vaccine for neonatal tetanus. Among a targeted 820 children under 12 months old, 48 % received the PCV-3 vaccine for pneumococcal pneumonia, 59 % received the BCG vaccine for tuberculosis meningitis, and 60 % received the Japanese Encephalitis vaccine. Among a targeted 2517 children under 5 years old, 41 % received the Penta-3 vaccine for diphtheria, tetanus, pertussis, Hepatitis-B and Haemophilus-Influenzae-Type-b, 40 % received the OPV-3 vaccine for polio, and 48 % received the MR-2 vaccine for measles and rubella.

Conclusions: Although more support and community participation are still needed to improve immunization coverage, collaboration of Ethnic Health Organization play major role to make immunization services accessible for all children in Myanmar and achieve SDG in reality.

Keywords: EPI, Post-conflict, SDG, Myanmar



Track 8: Health for All and Health in All Policies

O-38

Patterns of Access to Maternal, Newborn, and Child Health Services by Parents' Employment Status and Health Insurance Eligibility in Cambodia: A Cross-sectional Study

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Abstract

Background/Objectives: More women become working in the formal sector in developing economies, led by labor-intensive manufacturing industries. As primary income earners in households, such women are willing to continue working during pregnancy and after childbirth. Full-time employment could prevent from access to maternal and child health services and, at the same time, accelerate access if their health insurance covers health expenditure. However, such contradicted factors have not been investigated. This study was conducted to compare the level of access to maternal and child health services by parents' employment pattern and eligibility in health insurance.

Methods: A cross-sectional study was conducted in Kandal Province, Cambodia, in March 2017. Under two-stage sampling, 640 women with a child aged between one and four were selected. The women received a face-to-face interview on receiving services that public health insurance covered, such as antenatal care (ANC; four times or more) and postnatal care (PNC; three times or more), and that did not cover, such as childhood diarrhea and fever treatment at a health facility. Chi-squared test and Poisson regression with robust variance were used in the analysis.

Results: ANC coverage was 81.3%, PNC coverage was 24.7%, fever treatment coverage was 72.3%, and fever treatment coverage was 76.7%. No substantial differences in the coverage by parents' employment pattern. Among parents of a mother working outside and father working in or around a household (n=120), ANC coverage differed by health insurance eligibility (93.1% vs. 73.6%; p=0.027). Likewise, among them, PNC coverage differed by health insurance eligibility (44.8% vs. 16.5%; p=0.002). However, among them, diarrhea and fever treatment coverage were not significantly different by health insurance eligibility. If eligible in public health insurance, parents of a mother working outside and husband working in or around a household were more likely to receive sufficient ANC (risk ratio: 1.18, 95% CI: 1.02, 1.38) and PNC (risk ratio: 2.75, 95% CI: 1.47, 5.16).

Conclusions: Regarding maternal health services that were covered by public health insurance, public health insurance enhanced access to services in Cambodia. Public health insurance scheme should be developed by including currently non-eligible population and non-covered services.

Keywords: Maternal, newborn, and child health, Universal health coverage, Female empowerment, Cambodia



Track 8: Health for All and Health in All Policies

O-39

Towards Understanding Socioeconomic Inequalities in Unmet Health Care Needs in Korea

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Abstract

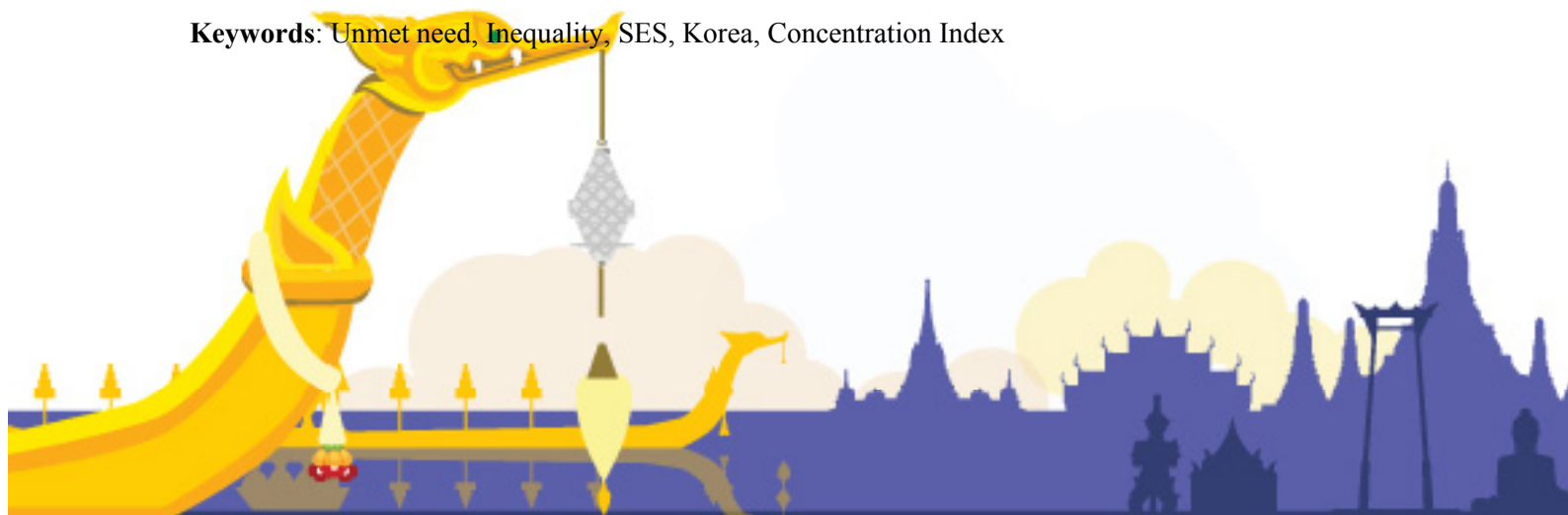
Background/Objectives: Timely access to health care is of great concern to the general public, who anticipate no barriers to essential health services regardless of individual's socioeconomic status. However, a growing body of literature highlights that individuals with lower socioeconomic status (SES), particularly lower income and educational levels, have more difficulties accessing basic health care services irrespective of health status. Despite the achievement of universal health coverage through the National Health Insurance (NHI) in Korea, an inverse relationship between SES and unmet health care need is reported. This study aimed to assess socioeconomic inequalities in unmet health care needs among Korean adults over the past 10 years, and to identify major contributors to the existing inequalities in unmet health care need.

Methods: To examine inequalities in unmet health care need, the Concentration Index (CI) was used. After the CI was calculated, a decomposition method was applied to identify major contributors of socio-demographic factors to the observed inequalities between 2005 and 2013-2015 using data from Korea National Health and Nutrition Examination Survey (KNHANES). For these analyses, the outcome variable was individual's self-reported experience of unmet health care need within the past 12 months. As a main indicator of SES, annual household income was used for the CI analyses. For the decomposition models, socio-demographic factors were selected based on Andersen's Health Behavior Model.

Results: The CIs for unmet health care needs consistently shows negative value, showing individuals with lower income tend to experience more unmet health care need, but the magnitude of the CIs has decreased from -0.236 in 2005 and -0.153 in 2013-2015 over the past 10 years. The decomposition of the CIs revealed lower income and educational level as major contributors to the existing inequalities in unmet need in Korea.

Conclusions: While the magnitude of the inequalities in unmet health care need has shrunk over the last decade, socioeconomic inequalities in unmet need under the current National Health Insurance system exist. A decrease in unmet need-related inequality can be a consequence of ongoing changes in services changes and user fees that ultimately reduce economic barriers to necessary health services. To alleviate the existing inequalities in unmet need in Korea, expanding services coverage and improving accessibility to essential care at the community level needs to be considered as policy options.

Keywords: Unmet need, Inequality, SES, Korea, Concentration Index



Track 8: Health for All and Health in All Policies

O-40

Trend in Mortality of Viral Hepatitis Associated with Economic and Healthcare Policy Development in China: An Age-cohort-period Characteristic Analysis

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Abstract

Background/Objectives: This study aimed to distinguish the age, period, and cohort effects on the mortality of viral hepatitis in China using age-period-cohort method, as well as to explore the quantitative relationship between the economic development and viral hepatitis.

Methods: Viral hepatitis mortality rates (1991–2015) of urban and rural residents were derived from the *China Health Statistical Yearbook*. The trends were analyzed with age-period-cohort (APC) model and age-cohort-period characteristic (ACPC) model based on constrained regression method.

Results: Based on APC analysis, viral hepatitis mortality increased exponentially with age. The risk of death for both urban and rural residents first decreased and then increased with period. Overall, later birth cohorts experienced lower viral hepatitis mortality risk. ACPC model indicated that with the per capita disposable income increasing by 1.00%, the viral hepatitis mortality would increase by 0.337% for urban residents, but the mortality would decrease by 0.704% for rural residents. In addition, once the hepatitis b vaccine was included in the national immunization plan, the mortality from viral hepatitis of urban residents was reduced by 2.009%, while the risk for rural residents reduced by 8.622%.

Conclusions: The rise of period effects after 2005 hints the re-emergence of viral hepatitis mortality risk. There is a significant correlation between economic and viral hepatitis mortality. As economic increasing, China's public health is faced with new challenges and measures should be taken to control the viral hepatitis, such as attaching great importance to elderly, continuing to develop the rural economy.

Keywords: Viral hepatitis mortality, Economy, Healthcare policy, ACPC model, Urban-rural inequality





Track 8: Health for All and Health in All Policies

O-41

Review of Equity in Access, Quality and Health System of Maternal Mortality towards Effective Universal Health Coverage in Indonesia

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Abstract

Background/Objectives: Women are particularly disadvantaged concerning access to basic services, including to formal social security due to unequal female participation in the labor, while 79% of female workers are unpaid and informal workers. Nevertheless, women are more vulnerable to risks related to their life cycle and their role in the family. Health illiteracy, less authority in decision making, low access, uptakes, and outcome of women's health, is reflected by persistent high maternal mortality rate (MMR). The paper review equity in access, quality, and health system condition related to maternal health to investigate its determinant factors to boost outcomes and reduce inequity of maternal services and outcomes.

Methods: Multivariate analysis and qualitative descriptive analysis are used to show that identifying determinant factors and strengthening the health system to achieving the UHC targets. Combining estimates from multiple surveys and administrative data are used to map the inequity of health system and outcomes at the district level.

Results and conclusions: Even though more than 41% of the total population received the government subsidy for social health insurance, 20% of families must borrow to pay for their normal delivery costs, mostly for non-medical costs. Despite reducing catastrophic expenditures, affordability is not the only barrier to utilization. Low quality of services is the cause of stagnant outcomes and maldistribution of supply-side soaring the inequality among and intra regions. The spatial mapping of health systems and outcomes at each sub-national level, which requires different strategies, interventions, and investments for effective impact in reducing MMR.

Keywords: Equity, Health system, UHC



Track 9: Health in Marginalized Population

O-42

Understanding Lived Experiences of At-risk Teenage Boys in Taiwan through Photovoice

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Abstract

Background/Objectives: At-risk adolescents often have many unmet health needs and have higher prevalence of negative health outcomes. This study aims to address the lack of research regarding at-risk boys in Taiwan by: 1) identifying common themes about their lived experiences and health needs, 2) generating compelling evidence to better advocate for them, and 3) empowering participants by helping them share their needs and experiences with stakeholders.

Methods: Photovoice is a qualitative research method in which participants use photography and narratives to communicate their perspectives. Thirteen boys from a Taiwan out-of-home placement facility for adolescent boys with backgrounds in foster care or the juvenile court system participated in this yearlong study. Following in-depth training, participants took photos relating to the research question. Then, via both individual and group meetings, the most powerful photos were chosen, and narratives were added. Key themes were identified. The photos best reflecting the group's messages were compiled into an exhibit targeting local stakeholders.

Results: The five themes identified by participants included 1) the lack of and need for companionship, 2) complex relationships with family, 3) the fear of but also benefit of the law, 4) the desire to belong in and be accepted by society, and 5) the impact of activities as a means of encouragement and character development. Post-study surveys showed participant empowerment, including increased self-confidence, self-worth, acceptance of their pasts, problem-solving skills, hope for the future, understanding of the relationship between health and behavior, resilience, and positivity.

Conclusions: Research must keep the perspectives of these youth at the center to make the most well-informed policy decisions. We propose: 1) school programming to guide these youth, 2) mentors as positive, understanding role models, 3) activities for short-term stress relief and those for long-term character development, 4) support these youth to develop positive sources of identity, and 5) judge less, listen more, and give them another chance. With many stressors, removing the youth from the unhealthy environment may be a temporary solution. However, the needs of at-risk youth and the sources of their stress are generally systemic ones that require extensive investment to create real change.

Keywords: At-risk youth, Community-based, Participatory research



Track 9: Health in Marginalized Population

O-43

Physical and Mental Health of Live-in Female Foreign Domestic Workers: A Quantitative Survey in Hong Kong

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Abstract

Background/Objectives: There has been a rising trend of labor migration globally. Given their alien status within the legal framework of the host countries, foreign domestic workers (FDWs) are especially vulnerable to poor employment conditions which may affect their health status, yet there is still a lack of quantitative evidence in this population hitherto. We hypothesized that the general physical and mental health status of the FDWs are differentially influenced by the employment conditions under which the FDWs work, specifically by working (and living) conditions and material circumstances.

Methods: This was a cross-sectional survey conducted by face-to-face interviews using a multi-stage cluster random sampling method to examine the association of employment conditions with physical and mental health among 2,017 live-in female FDWs in Hong Kong, a setting with a high concentration of FDWs. The sampling method took advantage of the fact that many FDWs were more easily accessible during their day-offs. Inclusion criteria were female Filipinos or Indonesians who were currently employed and working as FDWs in Hong Kong.

Results: We observed poorer physical and mental health statuses among the FDWs when compared with the Hong Kong general population, as well as a high prevalence of long working hours, earning less than the statutory minimal wage, ever not receiving wage, and verbal and physical abuse experience among the FDWs. Our findings also suggest that various characteristics of employment conditions (labor burden, financial circumstances, and negative work-related experience) and various socio-demographic factors are risk factors for worse physical and mental health.

Conclusions: This is the first survey using a large sample of FDWs to quantify their general physical and mental health status. This has important implications in designing interventions and policies in improving the physical and mental well-being of this vulnerable migrant population. It also gives support for conducting review of the current laws which might have helped give rise to the suboptimal working (and living) conditions of the FDWs, and for enforcing tighter regulations to ensure that their rights are not deprived under the protection of the laws. Hong Kong can be considered a microcosm of the global trend of FDWs.

Keywords: Foreign domestic workers, Migrant workers, Female, Employment conditions



Track 9: Health in Marginalized Population

O-44

Relationship of HIV Prevention and Treatment Services Utilization, Risky Behaviors and HIV Risk among Drug Users in the Border Areas of Yunnan, China: A Latent Class Analysis

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Abstract

Background/Objectives: To explore the latent class of HIV infection-related behaviors among drug users (DUs) and its relationship with HIV infection, and therefore provide decision basis for making targeted intervention measures.

Methods: The study conducted among DUs was a part of an AIDS prevention and control project in Kaiyuan City, China from May to June 2017. Data including demographic information, HIV-related behaviors, and HIV testing result was collected. Latent Class Analysis (LCA) for nine items (four HIV prevention and treatment services utilization and five risky behaviors items) was used to identify and classify patterns of HIV-related behaviors. Univariate analysis and Multiple logistic regression were performed to analyze the relationships between patterns of HIV-related behaviors and HIV infection.

Results: According to the LCA, A three-class model was selected: 1) medium use and low risky behaviors (25.50%), 2) low use and medium risky behaviors (19.50%), and 3) high use and high risky behaviors (55%). HIV infection rates of DUs were 9.90% (5/51) for Class 1, 28.20% (11/39) for Class 2 and 57.30% (63/110) for Class 3, respectively. Male DUs were 10.89 (95% CI= 1.21~98.35) times more likely to infect HIV as compared to female respondents. DUs with hazardous drinking had a higher rate of HIV infection (OR= 2.38; 95% CI= 1.07~ 5.26) than that of non-hazardous drinking participants. Compared with the “medium use and low risky behaviors of HIV infection” class, “high use and high risky behaviors of HIV infection” class had 4.46 (95% CI= 1.41~ 14.21) times higher to infect HIV.

Conclusions: HIV-related behaviors of DUs were divided into three latent classes. DUs with high HIV prevention and treatment service utilization and high risky behaviors were faced with the highest risk of HIV infection. Current HIV prevention and treatment service among DUs didn't effectively change their risky behaviors. It is important to further explore the influence factors of HIV related behaviors patterns and effective behavioral prevention measures targeting at the population.

Keywords: Drug users, Behaviors patterns, HIV infection, Latent class analysis





Track 9: Health in Marginalized Population

O-45

Women with Physical Disabilities in Northern Vietnam: Impacts of Pregnancy on their Life

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Abstract

Background/Objectives: There is a dearth of research around the experiences of pregnancy and childbirth for women with physical disabilities (WWPD) in low-and middle-income countries where 80% of people with disabilities live. This research aims to contribute in addressing this gap by exploring the experiences of pregnancy and childbirth of WWPD in Vietnam, using an interpretive phenomenological approach. The focus of this abstract will be on the impacts of pregnancy on WWPD's life.

Methods: In-depth interviews were conducted with WWPD who had given birth in the past three years in two Northern provinces in Vietnam. Twenty-nine WWPD participated in a first interview and 27 participated in a follow-up interview. A thematic approach was used for data analysis.

Results: Study findings highlight that many WWPD lived with the anxiety about the transmission of disability throughout their pregnancy. They were led to believe this due to the socio-cultural construction of disability, which was enforced by perceptions and comments from the community. Participants reported several disability-related symptoms during their pregnancy, including extreme pain especially related to their impaired body parts, constipation, heightened risk of falling, and unfit to their usual mobility aid. Their body changes due to pregnancy meant that physical transfers and mobility around their home and surrounding environment became more difficult. Pregnancy also impacted on their income as many WWPD were employed in jobs which relied on some form of manual labour.

Conclusions: Significant impacts of pregnancy on WWPD's lives were reported. A careful pre-pregnancy planning of healthcare, psychology, finance, family support, and house design would be useful in managing these impacts. Counselling services on the actual risk of disability transmission should be made available and accessible for WWPD to reduce their anxiety, as well as more community awareness around disability.

Keywords: Women with physical disabilities, Pregnancy, Impacts, Vietnam.



Track 9: Health in Marginalized Population

O-46

Health Care-seeking Behavior during Delivery among Women Having Children under Five Years of Age in Rural Areas of Kachin State, Myanmar

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Abstract

Background/Objectives: Myanmar has high maternal mortality among South-East Asian countries along with low care-seeking behavior during delivery, which present obstacles to reaching the targets of Sustainable Development Goal 3. It is critical to identify the facilitating factors and barriers for the women, when deciding to seek delivery services. This study aimed to identify factors affecting delivery care-seeking behavior among women having a child or children under five years of age in rural areas of Kachin State, Myanmar.

Methods: A community-based cross-sectional study using quantitative data collection methods was conducted in 24 villages in Waingmaw and Injangyang Townships in Kachin State, Myanmar. The sample consisted of 410 women age 15-49 years old who had a child or children under age five years. Face-to-face interviews were conducted by using a structured questionnaire during April 4-May 3, 2019. Simple and multiple logistic regression were used to examine associated factors and predictive of delivery care-seeking behavior.

Results: The study found that 48.3% of respondents had high care-seeking behavior during delivery, 47.6% of women were delivered by a skilled birth attendant, 38.5% were attended at a health facility but 33.9% faced difficulties during delivery: mostly prolonged labour and exhaustion. By using multiple logistic regression, Kachin Christian women were more than two times less likely to have delivery-seeking behavior (AOR=2.667,95%CI=1.111-6.400) than other religions. Participants who had social support from their families were two times more likely to have delivery-seeking behavior (AOR=2.332,95%CI=1.528-3.560) than those who had not. Women who could afford the medical service fee were nearly two times more likely to have delivery-seeking behavior (AOR=1.711,95%CI=1.036-2.825) than those who could not. Women who were not attended to a hospital and had less health information from a provider were two times less likely to have delivery-seeking behavior (AOR=2.423,95%CI=1.404-4.183) (AOR=2.091,95%CI=1.211-3.608) than women who received those services, respectively.

Conclusions: The results show that affordable service fee, type of health facilities, information from a care provider and family support were the main constraints related to delivery care-seeking behavior. Interventions, such as community-based health education and service provision programs about delivery, including funding support for emergency referral, should be a focus for programs serving Kachin Christian women in rural areas.

Keywords: Delivery, Seeking behavior, Rural areas, Myanmar



Track 10: Health and Social Innovation and Health Technology

O-47

Sports Monitoring with Flying Drones (Moving Aerial Cameras) Maybe Cost Efficient if Injuries are Prevented

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Abstract

Background/Objectives: Estimates from Yeo in the late 1990s as cited in the manuscript by Berry and colleagues on cervical spinal cord injury in rugby union and league, estimate the cost of care for a person with paraplegia is \$1 million, rising to a staggering \$5 million for a tetraplegia casualty. In addition to this is the fact that often insurance cover provided for casualties is insufficient. An Australian access economics report [2009] estimated the lifetime cost of care is 5.0 million for an incident paraplegia case and 9.5 million for a quadriplegia case, and costs/year are approximately \$90,000 per spinal cord injury paraplegia case. Hilton in 2018 published a manuscript on 'moving aerial cameras at sporting venues and whether they have the potential to revolutionize injury surveillance monitoring'. These devices have the capacity to produce expert exposure for purposes of recording, investigation, tracking and monitoring of sporting injuries.

Methods: According to Wikipedia, the number of professional rugby union and league playing fields within Australia is estimated to be [RU; 20 and RL; 26 (NRL club venues and occasional venues)]. Hire cost from drone worxs is \$650/hour to monitor a sporting event across 46 clubs x 52 weeks one hour /week = \$1,554,800. Based on a manuscript by Hilton, reviewing rugby union and league Australian spinal cord injury datasets, there are more incident cases of spinal cord injury in union compared to league. The Australian Institute of Health and Welfare document titled; Australian sports injury hospitalizations 2011–12 report just under 800 head and neck injuries requiring hospitalization related to rugby-related sports. More specifically this included 35 neck fractures and 348 head fractures. The total cost equates to multiplying the number of cases x cost of care/case.

Results: Drone worxs cost divided by healthcare costs/case/year [\$90,000] equates to 17 so if these injuries are prevented then cost equivalence is reached in broad general terminology figurately speaking, after which cost benefits accrue.

Conclusions: Drones are not overly expensive compared to spinal cord injury costs. The occasional presence of aerial cameras at sporting venues may also deter repeated foul play.

Keywords: Spinal cord injuries, Drones



Track 10: Health and Social Innovation and Health Technology

O-48

Validity of Anthropometric and Percentage Body Fat Values Estimated from a Novel Computer-based Body Image Assessment Program

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Abstract

Background/Objectives: Young Japanese females are reported to have distorted body image that may be associated with developments of physical and psychological health problems. In order to evaluate body image of young Japanese females, a novel computer-based program “J-Physique Evaluator (JPE)” has been developed. JPE is designed to create three-dimensional (3D) physique models with anthropometric and percentage body fat (%BF) values. However, these estimated values has not been validated with actual measured results. An objective of the current study was to evaluate validity of anthropometric and %BF values estimated from JPE.

Methods: Two data sets (dataset 1: n = 75; dataset 2: n = 51, total: n = 126) of young Japanese females with anthropometry and body composition values were used in the current study. Anthropometry and body composition assessments in both datasets were conducted using the ISAK protocol and dual energy x-ray absorptiometry (DXA). The data were entered into JPE under three scenarios: 1) actual anthropometric values of participants are known, 2) only stature and waist values are known, and 3) relied on self-reported values. Estimated anthropometric and %BF values from JPE were compared with the measured values.

Results: Datasets have comparable age, stature and body mass but different in sum of eight skinfolds and %BF ($p < 0.01$). Among estimated anthropometric values, body lengths were significantly different from the measured results ($p < 0.01$). However, no significant differences were observed from weight, body mass index (BMI) and hip circumference. In addition, while estimated %BF was from the dataset 1 was significantly ($p < 0.01$ or $p < 0.05$) different from DXA results, no significant difference was observed in the dataset 2. From the limits of agreements, JPE showed variability of about $\pm 5\%$ if actual values were entered and the variability increased to about $\pm 10\%$ if measured values of selected sites or self-reported values were used.

Conclusions: The newly developed JPE is capable of providing 3D physique models of comparable weight and BMI of the participants. A validity of estimated %BF from JPE may depend in adiposity of the individual as well as whether to enter the measured values or self-reported values.

Keywords: Body image, Program, Anthropometry, Japanese



Track 10: Health and Social Innovation and Health Technology

O-49

Performance of Rapid Diagnostic Tests for Malaria Diagnosis in Children: A Systematic Review

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Abstract

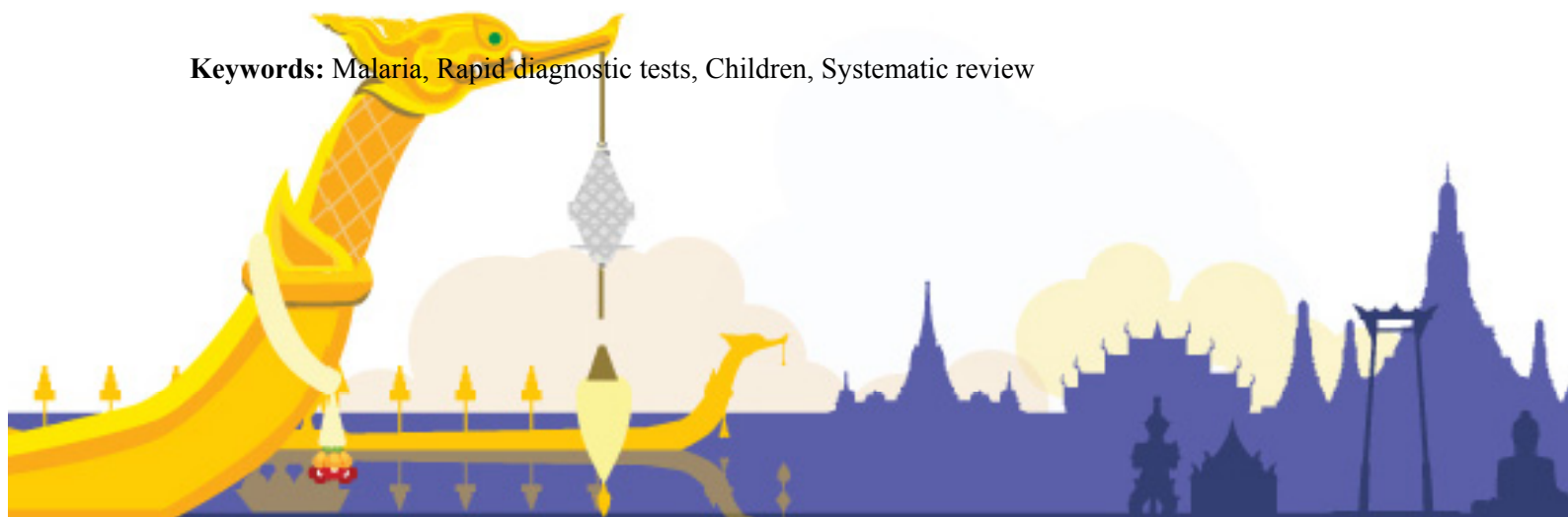
Background/Objectives: Children aged under 5-year-old accounted for 61% of all malaria deaths around the world in 2017. In order to reach SDG 3.2 and 3.3, the quicker differential diagnosis between malaria and non-malaria fever is vital for lessening their death and severe cases. Rapid Diagnostic Tests (RDTs) is a strip to detect Plasmodium-specific antigens in a drop of blood and could be helpful in resource-limited areas for malaria diagnosis. Thus, the aim of our study is to assess the diagnostic accuracy of RDTs for malaria in children against microscopy or PCR.

Methods: Pubmed, Web of Science, EMBASE, Cochrane Library, the China National Knowledge Infrastructure, Wanfang Data, and Sinomed databases were systematically searched in August 2018 to identify relevant studies evaluating the performance of RDTs in children. Studies comparing RDTs with microscopy or PCR were eligible and their data were extracted. Quality of studies was evaluated using the revised Quality Assessment of Diagnostic Accuracy Studies Tool. Meta-analysis was used for data synthesis.

Results: 38 articles were included. For pre-treatment diagnosis, the pooled sensitivity and specificity of RDTs were 94% (95%CI:91-97%) and 95%(95%CI:91-97%). Subgroup analysis showed that RDTs conducted in high malaria transmission areas had higher sensitivity but lower specificity than those performed in low to moderate transmission areas. And both sensitivity and specificity estimated by prospective cohort studies appeared higher compared to cross-sectional studies. For post-treatment diagnosis, the specificity of HRP-2 based RDTs increased with days of follow-up. And at early stages after initial treatment, the specificity of Pf-LDH based RDTs was higher than HRP-2 based.

Conclusions: For pre-treatment diagnosis, RDTs had relatively high sensitivity and specificity in children malaria detection. As they also have the advantages of rapid detection and easy to use, it's recommended that the wider usage of RDTs should be promoted in both public and private health sectors for better case management of childhood malaria.

Keywords: Malaria, Rapid diagnostic tests, Children, Systematic review



Track 10: Health and Social Innovation and Health Technology

O-50

Better Services through Better Systems: A Case Study on Strengthening the Pharmacy Inventory Management System in Conflict-affected Ethnic Areas of Myanmar

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Abstract

Background/Objectives: One of the world's longest civil wars between the Government of Myanmar and Karen ethnic minorities has displaced and marginalized many communities, and limited their access to quality healthcare services. The Karen Department of Health and Welfare (KDHW), which is affiliated with the Karen National Liberation Army, has provided primary healthcare services in ethnic areas where government services do not reach. In May 2017, KDHW opened Taw Nor Hospital to cover approximately 35,000 people from 49 villages. To achieve universal health coverage, providers like KDHW must have effective and efficient allocation of resources and utilization. Expenditures on medicines, supplies and equipment make up 40-60% of all hospital expenditures (Camp et al., 2014), but can be optimized by pharmacy management (PMx) systems that include regular monitoring of stock balances, expiry status, forecasting for procurement, and reorder levels. This assessment aimed to present preliminary findings and lessons learned from the implementation of a PMx system at Taw Nor Hospital.

Methods: In May 2017, qualitative in-depth interviews with medical superintendents and medical officers were used to explore existing PMx capacity, bottlenecks and required interventions. Respondents identified and prioritized five interventions: 1) basic training for pharmacy management to respective staff, 2) development and installation of PMx software, 3) training to use the software, and 4) performance monitoring. Stepwise interventions were undertaken from June 2018 to December 2019. The progress of pharmacy management performance was assessed using a monitoring checklist for stock balance monitoring, expiry status check, transaction errors rate, and disposal practices.

Results: Preliminary findings show that there were some improvements in pharmacy inventory management performance. Both pharmacy staff and supervisor practiced monthly stock balance and expiry monitoring, forecasting and planning for purchasing required medicines, and performing quarterly physical stock checks. However, 60% of transaction errors remained, primarily due to lack of timely data entry into the PMx database and difficulty to correct errors within the database.

Conclusions: The pharmacy management information system improved efficiency in managing inventory, enabled timely informed decision-making, and improved access to medicines for ethnic rural communities in the hospital's coverage area.

Keywords: eHealth, LMIS, Systems strengthening



Track 10: Health and Social Innovation and Health Technology

O-51

Behavior Problems among Grade Eight School Children in Jaffna District, Sri Lanka; Prevalence Correlates and the Effectiveness of a Yoga Based Intervention Package

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Abstract

Background/Objectives: To determine the prevalence, correlates of behaviour problems of Grade 8 school children, and to evaluate the effectiveness of a yoga-based intervention package in the schools to address these behavioural problems.

Methods: Parents and teacher report of strength and difficulty questionnaire was validated for Jaffna students and cut off points determined to differentiate behaviourally normal and abnormal children using psychiatric clinic and community samples (abnormal children n=40, normal children n= 88). A cross sectional study carried out to determine the prevalence of abnormal behaviour and its correlates using multi stage cluster sampling population proportionate to size in Jaffna district (n= 1328). A desk review conducted with relevant expertise to finalize the yoga based intervention package. A non-randomized control trial carried out in 4 educational zones of Jaffna district for 6 months using a yoga based intervention package with a pre and post quantitative assessment and a post qualitative assessment from the intervention group.

Results: Behaviourally abnormal students assessed by parents, teachers and students were 10.1% (C. I= 8.5- 11.8), 32.1% (C.I= 29.6- 43.6) and 26.5% (C.I= 24.2- 28.9) respectively by Jaffna cut off points. Total difficulty score and all the subscale scores between pre and post assessment, reduced significantly in intervention group and worsened in the control group (p<0.001 for both groups). Focus group discussion indicated the benefits of this intervention.

Conclusions: This yoga based intervention package was simple and the effectiveness now proved scientifically therefore can be introduced in all the schools in Sri Lanka for the better quality of life of the adolescents.

Keywords: Behavioural problems, Difficulty scores, Yoga based intervention





51st Asia-Pacific Academic
Consortium for Public
Health (APACPH)
Conference

SDGs in Reality

Poster Presentation Abstracts

*November 21-22, 2019
Amari Watergate, Bangkok, Thailand*





November 21, 2019

Venue: Banglampoo Room, Floor 6

Time: 13.00 – 13.30 hrs

Zone 1: Emerging and Re-emerging Diseases

P-1	Tuberculosis determinant at rural area household in Indonesia <i>Artha Prabawa, Sudijanto Kamsa</i>
P-2	The prevention of novel influenza a virus infection <i>Chuan-Hui Chang, Mei-Hua Wang, Kuan-Chieh Huang, Yu-Fen Hsu, Ran-Chou Chen</i>
P-3	Knowledge and attitudes of young, obese adults on obesity, obesity related problems and weight reduction – a cross sectional study <i>Gayani Gamage, Sudharshani Wasalathanthri, Ranil Jayawardena, Priyadarshika Hettiarachchi</i>
P-4	WASH-related determinants of diarrhea among under-five children in Malawi <i>Juyoung Moon, Kyunghee Kim, Jae Wook Choi</i>
P-5	Patient's perspective of satisfaction when antiretroviral therapy was task-shifted in northern Thailand <i>Tsutomu Kitajima, Saiyud Moolphate, Waranyu Jumngparasatporn, Virat Klinbuayaem, Tawisin Chaichana, Manusin Kongka, Rungprakai Injong, Yaowaluk Siriwarothai, Aranya Srikamsao, Utumporn Kampirapanya, Myo Nyein Aung, Hiroshi Okamura, Mariko Sano, Shin Kawai</i>
P-6	Clustering of acute diarrhoea among children of under five years old in sabah, Malaysia <i>Syed Sharizman Syed Abdul Rahim, Shamsul Azhar Shah, Mohammad Saffree Jeffree, Zahir Izuan Azhar, Mohd Rohaizat Hassan, Nazarudin Safian</i>
P-7	In Vitro evaluation of marine sediment-derived actinobacteria against two dominantly circulating <i>Leptospira</i> serovars in the Philippines <i>Rosario Clarissa Marie M. Lota, Rafael Adriano P. Nalupta, Mariya Klodyn D. Patron, John Derrick F. Sagum, Jann Loriell S. Solidium, Edna M. Sabido, Doralyn S. Dalisay, Sharon Yvette Angelina M. Villanueva</i>
P-8	Surveillance of leptospirosis among animals in Iloilo province, Philippines <i>Evalyn A. Roxas, Nina G. Gloriani, Philip Ian V. Padilla, Micaella C. Dato, Sharon Yvette Angelina M. Villanueva</i>



Zone 1: Emerging and Re-emerging Diseases

P-1

Tuberculosis Determinant at Rural Area Household in Indonesia

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Abstract

Background/objectives: The aim of study was to find determinants of lung TB at rural area household in Indonesia that can be used for TB program in Indonesia. Type of study was quantitative study which used Basic Health Research 2013 (*Litbangkes*, 2013) as secondary data.

Methods: This study applied cross-sectional design with case control approach. This study classified areas according to classification of rural area household done by Basic Health Research based on criteria of Indonesian Central Bureau of Statistics. Multivariate analysis was needed to find model that could be used to make conclusion entirely based on results of Logistic Regression.

Results: In results of Logistic regression analysis in rural areas, variables were body mass index, residential density, the use of healthcare services, access to healthcare services, diabetes mellitus, economic status and age. Similarities between lung TB determinants at rural areas in many place in Indonesia indicate the same problems faced by rural people in overcoming and eradicating lung TB.

Conclusions: The difference between lung TB determinants in rural areas household with many category in socioeconomic, education, job and many indicators shows the need of continuity study in determinant of TB particularly on determinants that have negative relations should be assessed deeper in relation to validity of data used in the study as well as facts that occur among people and their environment. Planning TB programme by the government in Indonesia should pay attention to and consider differences between household in rural areas.

Keywords: Tuberculosis, Rural area, Household, Determinant



Zone 1: Emerging and Re-emerging Diseases

P-2

The Prevention of Novel Influenza A Virus Infection

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Abstract

Background/Objectives: Convenient transportation and climate change make pathogens may spread in a very short time. Influenza has become the most global pandemic potential disease due to its large variability, strong contagiousness and high disease severity. When most people do not have antibodies against the new variant virus, the flu may cause a pandemic. Therefore, New Taipei City government implements five major strategies of prevention of novel influenza A virus infection to combat the threat of disease.

Methods: The five strategies are epidemic surveillance, medical preparation, material management, cross-office response, and risk communication.

Results: 1) Epidemic surveillance: Monitor disease cases, virus variability and returnees from epidemic countries. When the outbreak occurs, the epidemic investigation and infection control will be initiated. There were 3 suspected cases in 2018, and health tracking was done for 4990 people returning from the epidemic areas. 2) Medical preparation: The 10 designate isolation hospitals are equipped with negative pressure isolation rooms, and 55 training sessions were conducted. 3) Material management: Establish a safety stockpile of materials for communicable disease control and inspect spot checks. 4) Cross-office response: Conduct drill with 10 offices. 5) Risk communication: Multiple channels to enhance people's knowledge.

Conclusions: The novel influenza A virus infection is limited to animals transmitted to humans, but since the large variability, there is a risk of cluster infections in the community. Through five major strategies, a horizontal and vertical response mechanism is established to prevent the outbreak accidents.

Keywords: Novel influenza A virus infection, Five major strategies, Cross-office response



Zone 1: Emerging and Re-emerging Diseases

P-3

Knowledge and Attitudes of Young, Obese Adults on Obesity, Obesity Related Problems and weight reduction – A Cross Sectional Study

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Abstract

Background/Objectives: Obesity is an emerging problem resulting in health consequences. Early weight reduction reduces obesity related complications in later life. This study explores obesity related knowledge and attitudes of young obese adults.

Methods: A cross sectional study was conducted among 261 obese (BMI $\geq 25\text{kgm}^{-2}$) adults aged 18-35 years in a nutrition clinic of a teaching hospital in Sri Lanka. Data was collected by a validated interviewer administered questionnaire and analyzed by SPSS(23).

Results: Only 49% of participants viewed obesity as a disease but more than 90% knew that obesity increases the risk of cardiovascular disease, diabetes, hypertension and hypercholesterolemia. Mean knowledge score was 19.73 (scale; 0-26) with 59.4% obtaining scores above the mean. However, 3.8%, 5.7% and 26.8% chose weight loss medications, weight loss belts and green tea as the most effective weight reduction method. Majority of participants believed that obesity can develop at any age (96.9%), gives low appearance self-esteem (89.7%), cause early disability (96.6%), psychological (96.6%) and physical problems (91.2%). Participants demonstrated an overall positive attitude towards obesity related problems and weight reduction (median=19, scale; 0-20) with 47.5% scoring above the median. Statistically significant associations were seen between overall attitude score and gender and employment status ($p<0.001$) with higher mean ranks for females and unemployed.

Conclusion: The knowledge of participants regarding obesity and weight reduction was satisfactory although not optimum. The overall attitudes towards obesity associated problems were positive. Increase in awareness is justified to provide a better understanding of problem of obesity and weight reduction.

Keywords: Knowledge, Attitudes, Obesity and weight reduction, Young adults



Zone 1: Emerging and Re-emerging Diseases

P-4

WASH-Related Determinants of Diarrhea Among Under-Five Children in Malawi

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Abstract

Background/Objectives: Sustainable access to WASH (water, sanitation and hygiene) is basic human right as UN designated in 2010. WHO and UNICEF established WASH strategy to enhance the accessibility. WASH related studies say that improved WASH decrease the prevalence of children's diarrhea. This study aims to clarify WASH-related determinants of diarrhea among under-five children.

Methods: The raw data of household and children from DHS round 7 was merged to study the relationship of children's diarrhea and the household characteristics related to WASH. The definition of improved water and sanitation was followed by the WHO's definition.

Results: The percentage of respondents who had diarrhea in the last 2 weeks was 22.0%. Among the children with diarrhea, the percentage of time to get on to the water source was respectively 14.9%, 39.0%, 44.4% for 'on the premises', 'less than 30 minutes', and '30 minutes or longer'. 3.4%, 84.6% and 11.9% of the cases with diarrhea had toilet facility in own dwelling, own yard/plot, and elsewhere. In the Chi square tests, children in the households that does not share toilet with other households had 1.294 times higher odds not to have diarrhea within 2 weeks ($p < 0.001$).

Conclusions: Considering the association of WASH and diarrheal disease among under-five children, intervention to improve environmental circumstances by collaborating WASH and diarrhea needs to be followed. The limitation of this study is limited questions for WASH-related indicators. Therefore, further study needs to be followed including qualitative analysis with household members to find out multilateral reasons.

Keywords: WASH, Diarrhea, DHS, Malawi



Zone 1: Emerging and Re-emerging Diseases

P-5

Patient's Perspective of Satisfaction When Antiretroviral Therapy Was Task-shifted in Northern Thailand

Tsutomu Kitajima^{a,*}, Saiyud Moolphate^b, Waranyu Jumnongparasatporn^c, Virat Klinbuayaem^d, Tawisin Chaichana^e, Manusin Kongka^d, Rungprakai Injong^d, Yaowaluk Siriwarothai^d, Aranya Srikamsao^d, Utumporn Kampirapanya^f, Myo Nyein Aung^g, Hiroshi Okamura^a, Mariko Sano^h, Shin Kawaiⁱ

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Abstract

Background/Objectives: The Ministry of Public Health, Thailand announced a policy of task-shifting the care of patients receiving antiretroviral therapy (ART patients) from hospitals to health centers (HC) in 2014, but the number of health facilities implementing the policy is still small. A community hospital in northern Thailand started shifting ART patients who were clinically stable and agreed to be moved to a local health center. However, researchers found that ART patients at HC (pre-HC group, n=66) were less satisfied than those being treated in the hospital (pre-HP group, n=132). To improve ART services at HC, the JICA Grassroots Project, "Strengthening community-based health services for people living with HIV in northern Thailand" was used to train nurses at HC. The project held 3-day training programs in May and August 2018. In this paper, the assessment of patient satisfaction 3 months after the training program is discussed.

Methods: The study was conducted in Sanpatong District, Chiang Mai Province. In December 2018, 85 patients receiving ART at HC (post-HC group) and 179 at the hospital (post-HP group) were interviewed with a structured questionnaire including Short-Form Patient Satisfaction Questionnaire to measure their satisfaction by 7 domains. A comparison of scores for each domain was made using Mann-Whitney U test.

Results: The Post-HC group had significantly higher scores in "general satisfaction", "technical quality", "communication", "time spent with provider" than the pre-HC group, and higher scores in all except "technical quality" than the pre-HP group. However, the post-HP group had significantly higher scores in all except "financial aspects" and "accessibility and convenience" in which the post-HC ranked higher.

Conclusions: The study indicated that satisfaction of ART patients at HC has improved. It may be plausible that the training program had a positive impact on services at HC. Procedures for shifting ART service to HC in Sanpatong District can be a model for other districts. Further studies are necessary to investigate what additional training would be needed to improve services at HC and how to persuade and prepare more patients at HP to receive ART at HC.

Keywords: HIV, Antiretroviral therapy, Task-shifting, Thailand

P-6

Clustering of Acute Diarrhoea among Children of Under Five Years Old in Sabah, Malaysia

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Abstract

Background/Objectives: Diarrhoea is a major public health problem with an estimated 1.8 million death each year and the second leading cause of death in children. The aim of this study was to determine the factors associated with acute diarrhoea among children under 5 years old in Sabah.

Methods: This was a case-control study involving 584 samples in four districts in Sabah. The case-control data was analysed with SPSS 20.0. Spatial data was analysed using ArcGIS 10.0 and CrimeStat IV

Results: The associated factors of acute diarrhoea among under 5 years old were child's age, single parents, Peribumi Sabah mother, unemployed mother, less than RM2,000 monthly household income, no garbage collection, adjacent open garbage, average rainfall of 151mm or more and less than 1 year of breastfeeding. Four clusters were identified, and the factors associated with cluster of cases of acute diarrhoea among under 5 years old were Peribumi Sabah father, other water source, water interruption, adjacent open sewage and eating outside. Analysis of environmental features revealed a difference, especially regarding rivers and coastlines, between cases and controls.

Conclusions: The study has exhibited crucial usage of GIS in disease surveillance and disease pattern visualization for the benefit of public health authorities.

Keywords: Diarrhoea, Children, Cluster, Spatial analysis, GIS

Zone 1: Emerging and Re-emerging Diseases

P-7

***In Vitro* Evaluation of Marine Sediment-Derived Actinobacteria against Two Dominantly Circulating *Leptospira* Serovars in the Philippines**

**Rosario Clarissa Marie M. Lota^a, Rafael Adriano P. Nalupta^a,
Mariya Klodyn D. Patron^a, John Derrick F. Sagum^a, Jann Loriell S. Solidium^a, Edna M. Sabido^b, Doralyn S. Dalisay^b, Sharon Yvette Angelina M. Villanueva^{a,*}**

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Abstract

Background/Objectives: The world is currently beset with problems brought about by climate change, including leptospirosis. There is currently a need to discover novel therapeutic agents for leptospirosis as there are few to no antibiotics that are effective towards its treatment. This study aimed to determine the anti-leptospiral activity of 17 marine sediment-derived extracts of Actinobacteria, organisms reported to have antimicrobial properties, on 2 dominantly circulating *Leptospira* serovars in the Philippines.

Methods: The minimum inhibitory concentration (MIC) of each extract was determined using the broth microdilution technique. Two-fold serial dilutions of the extracts (500-3.9 µg/mL) using DMSO was done and were mixed with equal volumes of 1×10^8 leptospires/mL (*L. interrogans* serovars Manilae strain K64 and Losbanos strain K37). MIC was determined as the lowest concentration of extract that did not produce color change, and caused non-motility/non-growth of the leptospires as confirmed by darkfield microscopy. The minimum bactericidal concentration (MBC) was determined as the lowest concentration of extract that killed the leptospires, based on darkfield microscopy.

Results: Results showed that the 17 extracts inhibited the growth of leptospires at MIC of ≤ 3.9 µg/mL and no leptospires grew at MBC of ≤ 3.9 µg/mL. Upon examination under the darkfield microscope, majority of the extracts completely degraded the leptospires while 3 (USA 002 and USA 004 for strain K64, and USA 013 for strain K37) killed the bacteria without disintegrating the spirochetes, suggesting different modes of action.

Conclusions: These findings showed that all the Actinobacteria extracts caused the lysis of leptospires even at the lowest concentration. Results of this study may be helpful in exploring the use of Actinobacteria as alternative sources of treatment for leptospirosis and may serve as a jump off point in doing further studies on these extracts, particularly their mechanisms of actions.

Keywords: *Leptospira*, Actinobacteria, Minimum inhibitory concentration, Minimum bactericidal concentration, Anti-leptospiral activity



Zone 1: Emerging and Re-emerging Diseases

P-8

Surveillance of Leptospirosis among Animals in Iloilo Province, Philippines

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Abstract

Background/Objectives: Iloilo province is known to be highly endemic for leptospirosis. Due to its public health and economic impact, surveillance of this zoonosis is very important. This study determined the prevalence of leptospirosis among rats, dogs, cattles, water buffaloes, swine, and goats from September 2016 to June 2017 in areas reported to have the highest number of human leptospirosis cases from 2008 to 2014. These were Iloilo City and the municipalities of Cabatuan, Sta. Barbara, Alimodian, and Dumangas.

Methods: Sera were tested for anti-*Leptospira* antibodies using the microscopic agglutination test (MAT), wherein a titer of $\geq 1:20$ and $\geq 1:80$ were considered as significant titers for rodents and domestic animals, respectively. Culture isolation of leptospires was also done on rat kidneys and urine samples of the rest of the animals and were subjected to *flaB* polymerase chain reaction (*flaB* PCR).

Results: Seroprevalance based on MAT results were as follows: (a) rodents = 66% (33/50); (b) dogs = 12.8% (5/39); (c) water buffaloes = 40.5% (17/42); (d) cattles = 28.8% (15/52); (e) goats = 10% (1/10), and (f) pigs = 0% (0/13). Antibodies were against serovars Canicola, Patoc, Pomona, Manilae, etc. Three of the 51 rat kidneys (6%) but none from the rest of the animals were culture-positive. However, 3 (2 from dogs and 1 from goat) urine samples and the 3 isolates from rats were *flaB* PCR-positive (1.82%).

Conclusions: The antibodies detected and the isolation of leptospires suggest the significance of the animals in the leptospirosis transmission cycle in selected sites in Iloilo province. These animals can possibly shed disease-causing leptospires even if they were asymptomatic and apparently healthy. Data from this study can be used to develop diagnostic kits and possible vaccine appropriate to the Philippines.

Key words: Leptospirosis, Animal surveillance, Prevalence, Microscopic agglutination test



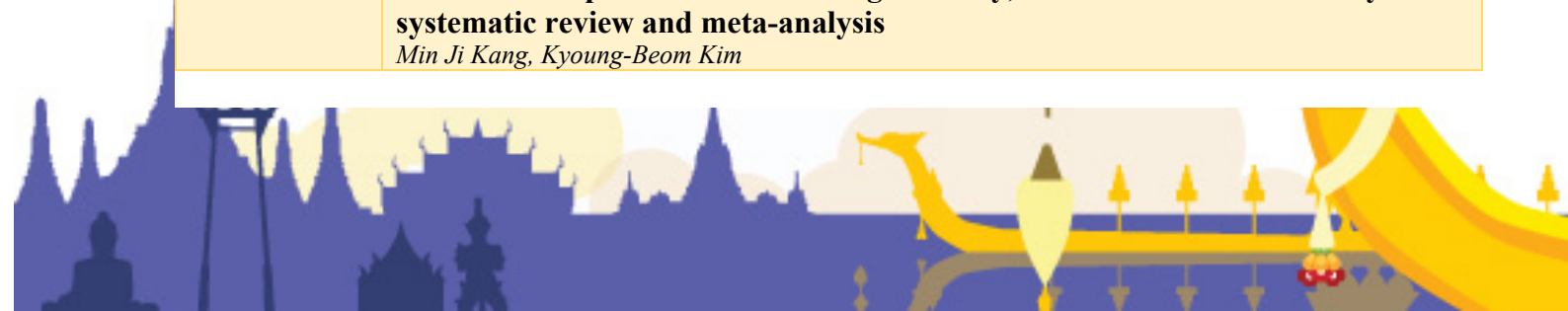
November 21, 2019

Venue: Banglampoo Room, Floor 6

Time: 13.00 – 13.30 hrs

Zone 2: Health Promotion/Health Literacy/Healthy City

P-9	Maternal and child health on the perspective of Bajo tribe community, Pomalaa southeast Sulawesi <i>Fatmah Afrianty Gobel, Andi Muhammad Multazam, Andi Asrina, Ella Andayanie</i>
P-10	Awareness on HIV/AIDS and associated factors among young factory workers in peri-urban Yangon, Myanmar <i>Myat Sandi Min, Natnaree Aimyong, Arpaporn Powwattana</i>
P-11	Factors associated with health-related quality of life among systemic lupus erythematosus (SLE) patients in Thailand <i>Nop Ratanasiripong, Paul Ratanasiripong</i>
P-12	Comparison of determinants of unmet need for family planning among married fecund women between urban and rural area of Netmauk township, Magway region of Myanmar <i>Aung Hpone Myint, Sariyamon Tiraphat, Jiraporn Chompikul</i>
P-13	Conveying the message that it is not cool nor healthy to smoke like audrey hepburn via the creation of a novel film and poster image <i>Deborah Hilton</i>
P-14	Young Saudi women beliefs about physical activity following the release of vision 2030 <i>Basmah Alharbi, Philip Baker, Toby Pavey</i>
P-15	Evaluation of medical and nursing students on persuasiveness of health guidance from smoking, obese, or non-exercising medical staff to patients <i>Kairi Arimura, Aya Takenaka, Yasuko Takeuchi, Masako Yamaguchi</i>
P-16	Characteristics of prediabetes outpatient at Dr. Dody Sarjoto Hospital district of Maros South Sulawesi, Indonesia <i>Junedi Sitorus, Nurhaedar Jafar, Ridwan Amiruddin, Sukri Palutturi, Veni Hadju</i>
P-17	Creating health promoting hospitals in Indonesia: A systematic review <i>Sukri Palutturi, Irwandy, Hamzah</i>
P-18	Applying the who inspire framework to the protection of pregnant women and unborn children: A case of Vietnam <i>Huyen Phuc Do, Bach Xuan Tran, Thang Van Vo, Philip RA Baker, Michael P Dunne</i>
P-19	The relationship of gender with insomnia among teenagers in Taiwan <i>Yi-An Chou, Chiu-Ying Chen</i>
P-20	The effects of message framing, campaign theme in anti-smoking advertisements on behavioral intention among adolescents: Attitude toward ad as mediator, gender as Moderator <i>Wen-Hui Yang, Yun-Hsuan Li</i>
P-21	Evaluate the effeteness of intervention of hepatitis c in Tainan <i>Jui-Chieh Wu, Chia-Jen, Teng, Shu-Chuan Chen, Yi Chen</i>
P-22	Factors associated with post-stroke suicidal death: A nationwide population-based longitudinal cohort study in Korea <i>Kyoung-Beom Kim, Min Ji Kang</i>
P-23	The effects of pressure ulcer on length of stay, medical cost and mortality: A systematic review and meta-analysis <i>Min Ji Kang, Kyoung-Beom Kim</i>





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Zone 2: Health Promotion/Health Literacy/Healthy City

P-24	Factors associated with full immunization coverage in children aged 12-23 months in the Philippines: A multilevel logistic regression analysis <i>Se-Hee Park, Eszter Palócz, Jisoo Kim, Ahreum Choi, Sun-Young Kim</i>
P-25	Correlation between alcohol drinking frequency and evaluation of nutrient or food group intake by brief-type self-administered diet history questionnaire <i>Takehiko Kaneko, Atsumi Miyagawa, Yoshiko Takahashi, Naoko Inamura, Asumi Wano, Reiko Takanashi, Msayuki Goto, Fumie Okada, Tadashi Furuhashi</i>
P-26	Exercise frequency and awareness of its effect in nursing students in a university <i>Minaho Ogata, Chisa Ohara, Yasuko Takeuchi, Masako Yamaguchi</i>
P-27	The participate of volunteer's cycling drive to visiting home health care (REAMP model) Aotong sub-district, Wangwiset district, Trang province, Thailand <i>Wisitpholn Thepmaneerat, Tawat Saikue, Arnee Mai sook</i>
P-28	Cervical cancer prevention awareness among junior high school students in Quezon city, Philippines <i>Queenie Ridulme, Rachel Anne Joyce Sales, Grace Riego de Dios</i>
P-29	Knowledge on reproductive health among junior high school students in Quezon city, Philippines <i>Grace Riego de Dios, Queenie Ridulme, Rita Ramos</i>
P-30	The results of the motivation change behavior program in risk of chronic disease group of Ban Naipong tambon Health Promoting Hospital, Trang province <i>Wisitpholn Thepmaneerat, Tawat Saikue, Arnee Mai sook</i>
P-31	The case study of families program's change behavior management of diabetes mellitus type 2 patients uncontrolled the measure of fasting blood sugar level <i>Wisitpholn Thepmaneerat, Tawat Saikue, Arnee Mai sook</i>
P-32	The study of 2E1F motivation program to change behavior of risk over body mass index group of Ban Naipong Tambon Health Promoting Hospital, Trang province, Thailand <i>Wisitpholn Thepmaneerat, Tawat Saikue, Arnee Mai sook</i>
P-33	Association of physical activity, obesity and socio-economic and demographic factors on the competency of life skills, among grade 10 students in Jaffna Educational Zone <i>Rajendra Surenthirakumaran, Geetanjali Sathiadas, Relankey Manivasagan, Vethuja Jeyakumar, Ghobika Raveendran</i>
P-34	The relationship between pain and leisure activities with or without company among middle-aged and older people in Taiwan <i>Pei-Hsin Chen, Yu-Hung Chang</i>
P-35	An applied motivation program for food consumption and obesity control among adolescent with overweight in Chonburi province <i>Juthathip Posuwan, Titiya Sukcharoena, Ponnipa Kwido, Peerawat Naweerattanawittaya, Phupiras Tipwongthong</i>

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Zone 2: Health Promotion/Health Literacy/Healthy City

P-36	This poster was withdrawn.
P-37	Attitudes towards and beliefs about cancer and colorectal cancer (CRC) screening in Malaysia: A population-based survey <i>Darishiani Paramasivam, Désirée Schliemann, Michael Donnelly, Maznah Dahlui, Nor Saleha binti Ibrahim Tamin, Saunthari Somasundaram, Tin Tin Su</i>
P-38	Premarital sexual behavior of pregnancy risk in adolescents: Qualitative case study in Pulogadung District Health Center, East Jakarta <i>Prihayati, Hermawan Saputra, Ridwan Amiruddin</i>
P-39	The contribution of women empowerment in improving maternal health <i>Devi Syarief, Healthy Hidayanty, Ridwan Amiruddin, Dian Furwasyih</i>
P-40	Health care workers' perception on prevention of overweight and obesity among under 5 years old children in Fiji <i>Masoud Mohammadnezhad, Sharan Ram</i>
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P-9

Maternal and Child Health on the Perspective of Bajo Tribe Community, Pomalaa Southeast Sulawesi

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Abstract

Background/Objectives: Every community has a different way in dealing with pregnancy and childbirth. One of the influential factors is the socio-cultural factors adopted by the local community. Bajonese tribe have various traditions and taboos during pregnancy and childbirth that has been carried out for generations. This contributes to the health status of mothers and children in their communities. This study aims to obtain in-depth information on cultural aspects related to regnancy and childbirth in the Bajonese tribe, Pomalaa, Southeast Sulawesi.

Methods: This type of research is Research and Development (R & D) with an ethnographic approach. Fifteen informants were interviewed consisting 6 ordinary informants, 4 key informants and 5 supporting informants. Data collection methods were observation, in-depth interviews and documentation.

Results: The results showed that during pregnancy and childbirth, Bajo community are still dominated by local cultural influences that have been carried out for generations where they have to perform various traditional rituals during pregnancy and childbirth. Various myths, taboos, and beliefs that are embraced by the community, are based on various customs/ cultural explanations and arguments, which if violated are believed that it can complicate pregnancy and childbirth, cause disability, even death for mothers and the child.

Conclusions: The study concludes that cultural factors plays an important role during pregnancy and childbirth in Bajo community, where they believe that various traditional rituals they perform will bring safety and ease during the process of pregnancy and childbirth.

Keywords: Bajo Tribe, Culture, Pregnancy, Childbirth



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P-10

Awareness on HIV/AIDS and associated factors among Young Factory Workers in Peri-urban Yangon, Myanmar

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Abstract:

Background/Objectives: SDG aim to improve the right of people to get access to information, make health promotion services available to everyone and end the epidemics of AIDS. However, challenges still persists among some marginalized group in Myanmar like young factory workers and this study will access their level of HIV/AIDS awareness and explore associated factors of their awareness level.

Methods: Mixed methods cross-sectional study was done in East Dagon Industrial Zone, Yangon, Myanmar, in 2016. Among 65 factories, 6 factories agreed to participate in this study. 165 young factory workers were selected by simple random sampling method from each factory and face-to-face interview was done by well-trained interviewers for data collection. Content analysis of In-depth Interview with 5 female and 5 male factory workers was done.

Results: Respondents were between 18-24 years old, among which 61.8% were female, 37.6% were above 20 years, 78.8% were single, 96.4% did not finish high-school, 80% can read and write well and 77% were migrants. Among 165 respondents, 44% has poor level of HIV awareness, 44% accessibility to information, 78% received poor social support from family/siblings/relatives, 65% received poor social support from friends, 84% received poor social support from lovers/partners, 72% received poor social support from healthcare professional and 56% received poor social support from media. HIV/AIDS awareness level has statistically significant association with accessibility to information, social support from healthcare professional and media according to Pearson Chi-square and significant association still persist with social support from media ($p=0.014$) and accessibility to information ($p=0.008$) with multiple regression. No association was detected between general characteristics of respondents and awareness level. Interviews with factory workers described their desire to get health education through media which entertain them since they have limited leisure hours and lack of information sources near their industrial zone.

Conclusions: Similar studies proved association between HIV awareness and HIV/AIDS sexual risks. Thus, correcting such deficiencies by using proper strategies to improve social support from media and accessibility to information in their surrounding may decrease risk of acquiring HIV among young factory workers which is important for achievement of HIV related SDG in reality.

Keywords: HIV/AIDS, Factory workers, Myanmar



Zone 2: Health Promotion/Health Literacy/Healthy City

P-11

Factors Associated with Health-Related Quality of Life among Systemic Lupus Erythematosus (SLE) Patients in Thailand

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Abstract

Background/Objectives: Systemic Lupus Erythematosus (SLE) symptoms negatively impact the patients' lives in various aspects including physical functions, daily activities, and quality of life. Psychologically, SLE patients often experience depression and/or anxiety due to the change of hormone levels and lifestyles. In Thailand, there is very limited research explaining the specific needs and quality of life among the SLE patients. This is the first study addressing the quality of life of SLE patients in Thailand using a disease-specific measurement tool.

Methods: This cross-sectional study examined the factors related to the quality of life among SLE patients in Thailand. The online survey was completed by 344 SLE patients. The survey comprised of demographic data, medical history, Lupus Quality of Life (LupusQoL) Scale, and Depression, Anxiety, Stress Scale (DASS).

Results: Most participants were female (96.9%). The study found that all eight domains of LupusQoL were impaired with physical health (76.8) being the least affected and intimate relationship (20.6) the most. The LupusQoL was significantly related to the education level, income, number of symptoms, last hospitalization, self-esteem, stress, anxiety, and depression. The significant predictors of the quality of life included the number of symptoms, last hospitalization, and stress, anxiety, and depression. These predictors could predict the quality of life of SLE patients by 50%.

Conclusions: To improve the quality of life for Lupus patients, health promotion is necessary. Health care providers should focus on helping the patients manage the symptoms and lower the chance of re-admission by providing self-care education. Also, a holistic care, using multidisciplinary approach may be needed in order to help the patients handle the disease psychologically.

Keywords: LupusQoL, SLE, Mental Health, Thailand



Zone 2: Health Promotion/Health Literacy/Healthy City

P-12

Comparison of Determinants of Unmet Need for Family Planning among Married Fecund Women between Urban and Rural Area of Netmawk Township, Magway Region of Myanmar

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Abstract

Background: Family planning plays an important role in improving maternal and child health by means of adequate spacing of childbirths and preventing unintended pregnancies. In most of the least developed countries, the unmet need for family planning is the major cause of unwanted pregnancies followed by unsafe abortions and also closely spaced pregnancies. Reducing unmet need is crucial in fighting against the high levels induced abortions, maternal and neonatal morbidity and mortality.

Objectives: To compare the prevalence and explore the factors associated with unmet need for family planning among married fecund women between urban and rural area of the study region.

Methods: A community based cross-sectional analytic study was conducted from August 2017 to August 2018 in five wards and five villages of Natmawk township, Magway region of Myanmar. A total of 420 married reproductive aged women were enrolled by using two-stage stratified sampling method. The data were collected by face to face interviewing the respondents with the structured questionnaires.

Results: Prevalence of unmet need for family planning in the study area was 18.1 which included 7.9% in urban area and 10.2% in rural area. In urban area, older women more than 35 years of age [AOR=3.68, CI (1.19-11.40)], poor attitude towards family planning [AOR=4.04, CI (1.76-9.26)] and low social support [AOR=3.01, CI (0.82-11.10)] were significantly associated with unmet need for family planning. In rural real, older women more than 35 years of age [AOR=4.20, CI (1.63-10.82)], low total income of the family [AOR=3.69, CI (1.05-12.96)] and poor knowledge about family planning [AOR=8.53, CI (1.04-69.98)] were significantly associated with unmet need for family planning.

Conclusions: The prevalence of unmet need for family planning in the study area was still high. Although the older age group was a significant factor in both rural and urban area, poor attitude and low social support were the main significant factors in the urban and poor knowledge, low family income were the major factors in the rural area to be considered when planning interventions to reduce the level of unmet need for family planning in Myanmar.

Keywords: Unmet need, Family planning, Myanmar



Zone 2: Health Promotion/Health Literacy/Healthy City

P-13

Conveying the Message that It is not Cool nor Healthy to Smoke Like Audrey Hepburn via the Creation of a Novel Film and Poster Image

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Abstract

Background/Objectives: According to the Australian Institute of Health and Welfare smoking is the single most important preventable cause of ill health and death in Australia. In 2015 the Institute reported smoking rates among general community non-Indigenous people as 1 in 5 (16–19%), and half (43–52%) within Indigenous Australians. Inequalities are important, as adults living in the most disadvantaged areas were 2.7 times as likely to smoke daily as those living in the least disadvantaged areas (21.3% compared with 7.8%).

Methods: The art toppling tobacco competition website [<http://arttopplingtobacco.com.au/>] in 2016 requested film submissions so the author dressed in an Audrey Hepburn costume being the Breakfast at Tiffany's theme. While smoking a long cigarette, her companion at the table describes this as foul, disgusting, deadly, cancerous and hazardous, also throwing the cigarette repeatedly into the trash while the film actress ignores her. The message conveyed by the acquaintance about the lethal effects of smoking is clear and hits home to viewers. Unfortunately, the competition website closed in 2017 before winners were announced for personal extenuating circumstances. Irrespective of this, this film entry is ideal for cafes, meeting rooms or venues in particular where younger people congregate. It can also be modified to be utilised in poster format or leaflet design.

Results: Health promotion messages via film with catchy slogans or brief text accompaniment have hit home messages. A variety of technology platforms for implementation of electronic versions of the image are possible [TVs, social media websites or email lists]. Alternatively, printed paper versions [flyers or posters] are an alternative option.

Conclusions: The film entry is suitable to be used in cafes, meeting rooms or venues and can target people of various ages, socio-economic status or educational levels. Alternatively, a poster image can be displayed on boards. Social smokers whom often gather at these types of meeting places may relate well to these messages that are being conveyed in a novel way. Older smokers whom also have a poor understanding of the health implications may also relate well to the movie icon Audrey Hepburn whom was famous in their generational era.

Keywords: Health promotion, Smoking cessation, Tobacco



Zone 2: Health Promotion/Health Literacy/Healthy City

P-14

Young Saudi Women Beliefs About Physical Activity Following the Release of Vision 2030

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Abstract

Background/Objectives: Worldwide, the trend of physical inactivity continues to increase, and the prevalence is higher amongst females aged 18 years and older. The second highest prevalence is reported in Saudi females with 68.7%.

The Vision 2030 ‘Saudi Arabia’s National Transformation Plan’ (2016) identified the introduction of new opportunities for Saudi women to be physically active. However, there are long-term restrictions and roles enforced through legal and societal measures, which make achievement difficult. Such restrictions inform social beliefs and perceptions towards an active lifestyle for women. Using the Theory of Planned Behaviour, this elicitation study aimed to explore the salient beliefs that influence physical activity (PA) behaviour of young Saudi women aged 18-35 years, based on global physical activity guidelines in order to inform future intervention content.

Methods: 25 young Saudi women were interviewed to identify the behavioural, normative and control beliefs that underpin their PA behaviour. Content analysis was used to identify the salient beliefs and to rank-order the beliefs using an adaption of Burnard’s (1991) model to construct themes subjective to behavioural, normative and control beliefs.

Results: Thirty-five salient beliefs were identified as dominant factors in the decision to engage in PA. These included behavioural beliefs (about physical/psychological wellbeing and social opportunities themes) normative beliefs (about family, community, and international and local media influencers’ expectations) and control beliefs (about personal, social, natural and built environment enablers and constraints themes).

Conclusions: A number of dominant beliefs are identified. Further studies are required to examine the extent to which the identified beliefs influence young women’s engagement in PA, so that health promoters can target these specific beliefs. Overall, the findings provide several considerations for specific targets to improve future PA intervention approaches among young Saudi women.



Zone 2: Health Promotion/Health Literacy/Healthy City

P-15

Evaluation of Medical and Nursing Students on Persuasiveness of Health Guidance from Smoking, Obese, or Non-Exercising Medical Staff to Patients

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Abstract

Background/Objectives: In the United States, patients have low confidence in smoking or obese physicians. This is presumed to be less persuasive of health guidance to patients from such physicians. The low awareness of smoking or obesity has the possibility to lead smoking or obese medical staff. To prevent such events, medical and nursing students need to be more aware of smoking and obesity. This study aimed to clarify the evaluation of medical and nursing students on persuasiveness of health guidance from smoking, obese, or non-exercising medical staff to patients.

Methods: The subjects were 424 medical students and 329 nursing students in the 1st to 4th grade of A university. The survey was anonymous. The question items were: "Is the smoking cessation instruction from a smoking medical staff persuasive?," "Is the obesity instruction from an obese medical staff persuasive?," and "Is the exercise guidance from non-exercise medical staff persuasive?" There were five answers: "Definitely think so (Definitely)," "Somewhat think so (Somewhat)," "I cannot say either way," "do not quite think so," "do not think so at all". Mann-Whitney U test was used to compare the distribution.

Results: Responses were obtained from 272 medical students (response rate 64.2%) and 309 nursing students (response rate 93.9%). As to smoking cessation instruction, 17 (6.3%) of medical students answered "Definitely," and 21 (7.7%) did "Somewhat." In the nursing students, 6 (1.9%) answered "Definitely," and 11 (3.6%) did "Somewhat." Medical students who evaluated the persuasiveness were significantly more. Regarding obesity instruction, 15 (5.5%) of medical students answered "Definitely," and 26 (9.6%) did "Somewhat." In the nursing students, 6 (1.9%) answered "Definitely," and 11 (3.6%) did "Somewhat." There was also significant difference. In case of exercise guidance, 20 (7.4%) of medical students answered "Definitely," and 47 (17.3%) did "Somewhat." In the nursing students, 6 (2%) answered "Definitely," and 24 (7.8%) did "Somewhat," showing significant difference.

Conclusions: The more medical students evaluated the persuasiveness of health guidance from smoking, obese, or non-exercising medical staff. It is inferred that medical students are less aware of such factors. Medical students need to raise their awareness about them.

Keywords: Instruction, Smoking, Obese, Non-Exercise



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P-16

Characteristics of Prediabetes Outpatient at Dr Dody Sarjoto Hospital District of Maros South Sulawesi Indonesia

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Abstract

Background/Objectives: Prediabetes is a state where glucose level is higher than normal but does not satisfy the criteria for diabetes mellitus. The International Diabetes Federation (IDF) has estimated that 6.7% of the adult population has prediabetes in the world and in 2040, it will reach 7.8% of the prediabetes population. The aim of this study is to determine the characteristics of outpatient prediabetes in the internal polyclinic of Dody Sarjoto Hospital 2018-2019.

Methods: Analytical research design through cross sectional approach was used. The population of this research is the outpatient in the internal polyclinic of Dody Sarjoto Hospital. Data was collected from patients' medical record status, with the total samples are 143 take using purposive sampling technique and analyzed using Chi Square and Fisher's Exact.

Results: The highest proportion of prediabetes was prediabetes combination (Impaired fasting glucose and Impaired glucosa tolerance of two hours post prandial) (41.3%), The highest age is 40-50 years old (58.7%), female sex (73.4%), senior high school education (58.7%), %, overweight (89.5%), Hypertension 1 degree blood pressure (37.8%), family history of DM (81.1%), and the patients have the history of not smoking (74.8%). Chi Square and Fisher's Exact statistics found that there was a significant assosiation between prediabetes and body mass index with p value: 0.04, blood pressure with p value: 0.00, and the history of not smoking with p: 0.02. There was no significant assosiasion found at the age with p value: 0.10, gender with p: 0.15, education with p: 0.98, occupation with p: 0.17, and family history of DM with p: 0.84.

Conclusions: The highest prediabetes outpatient characteristics in the polyclinic of Dody Sarjoto Hospital were prediabetes combination (Impaired fasting glucose and Impaired glucosa tolerance of two hours post prandial) obtained a significant assosiation between Prediabetes with body mass index and blood pressure.

Keywords: Prediabetes, Impaired fasting glucose, Diabetes mellitus



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P-17

Creating Health Promoting Hospitals in Indonesia: A Systematic Review

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Abstract

Background/objectives: Hospitals are often synonymous with patient-doctor relationships, medicine and beds. Promoting hospitals as a healthy environment and workplace is very possible to create healthy customers but often overlooked. This paper aims to explain the importance of health promoting hospitals and to develop relevant standards or indicators to create health promoting hospitals in Indonesia.

Methods: This research used a systematic literature review. Various references were gathered from online databases including ProQuest, books, reports, journals in the last 5 years. 20,682 documents using English were identified and 13,011 documents were from the scholarly journals, and 900 articles related to public health. The articles will be screened again according to the needs of the research objectives. Some relevant Indonesian articles were added. The keywords used are health promoting hospital (s).

Results: This study explained that the importance of health promoting hospitals includes, for example, hospitals are in workplace settings, health facilities that are in community settings; hospitals can play a role in making healthy and health-promoting; hospitals should be a healing environment for patients; hospital should be a healthy workplace for staff; and hospitals contribute to health resources in the community. This research identified some standards or indicators for health promoting hospitals including management policy, patient assessment, patient information and intervention, promoting a healthy workplace, continuity and cooperation. To realize a healthy hospital, it is necessary to assess the health of the community, to address inequalities in health, to build health public policy, to create supportive environments of health, strengthen community action, to develop personal skills for health, and to re-orient health services.

Conclusions: This systematic review suggests that promoting healthy hospitals in various countries can be adapted to hospitals in Indonesia according to the local needs and conditions.

Keywords: Healthy hospitals, Systematic review, Indonesia



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P-18

Applying the WHO INSPIRE Framework to The Protection of Pregnant Women and Unborn Children: A Case of Vietnam

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Abstract

Background/Objectives: The INSPIRE framework, developed by WHO 2018, has offered seven strategies for ending violence against children, based on the best evidence-supported for child protection. The present study has been one of the first attempts to apply this framework in understanding the nature and adversity of violence against pregnant women and unborn babies in Vietnam.

Methods: From Oct 2018 to May 2019, a mixed method was applied including analyses of a data generated from qualitative semi-structured interviews with 20 key informants, a quantitative survey with 137 pregnant women in Hue city, Vietnam. The qualitative interviews were audio recorded, transcribed, verified and interpreted using content analysis while qualitative data was analysed and performed mapping based on the score of 10 for seven components of INSPIRE framework (0-No problem and 10-Severe problem).

Results: The mother's survey found that roughly 19% of the participants reported they were victims of some form of psychological violence; 8% experienced some form of physical violence, and 3% suffered some form of sexual violence during pregnancy. The INSPIRE instruments cover seven key strategies including, for instance, (i) multi-sector/service collaboration, (ii) norms, (iii) safe environment, (iv) income strengthening, (v) social/ partner supports, (iv) service and response, and (vii) life skills and education. Key informant INSPIRE scores ranged from 2.65 (multi-sector collaboration) to 3.39/10 (social/ partner supports) and expert scores, from 2.4 (multi-sector/service collaboration) to 3.8/10 (service and response for victims of violence). Key challenges and gaps for prevention of IPV identified in almost seven components of INSPIRE framework included limited number of staff and resources, lack of training for health and police personnel, limited multi-sectorial cooperation, cultural values that support violence, lack of supportive policy for village collaborators to reach families with multiple vulnerabilities and insufficient support and mental services for victims of violence.

Conclusions: The seven strategies of INSPIRE framework is a feasible and helpful approach to demonstrate and capture triangulation data and interdisciplinary interventions in delivering effective services and responses for mother and child protection against violence in Vietnam.

Keywords: WHO INSPIRE framework, Prenatal intimate partner violence, Pregnant women, Prenatal common mental disorders, Vietnam



Zone 2: Health Promotion/Health Literacy/Healthy City

P-19

The Relationship of Gender with Insomnia among Teenagers in Taiwan

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Abstract

Background/Objectives: In Taiwan, teenagers are at risk for having insomnia because of the pressure from schoolwork load. Persistent insomnia is associated with increased suicide risk and girls are found more likely to committing suicide. Therefore, it is of importance to examine whether girls are at a higher risk for insomnia than boys.

Methods: This study used surveyed data to examine the relationship of gender with insomnia in teenagers in Taiwan. The data source was from the data of Taiwan Youth Health Survey (TYHS), which was a nation-wide survey administered once two years for junior and for senior high school students. The survey period was from 2006 to 2016 and the size of the representative sample for each survey was around 6000. The insomnia was assessed by the question of “whether ever had a difficulty in falling asleep”. We used SAS 9.4 software to conduct statistical analyses.

Results: Our results showed that there was a significant difference in the rate of insomnia between genders ($P=0.042 < 0.05$), and the rate in girls (14.4%) was higher than that in boys (8.64%).

Conclusions: We found a difference in the prevalence of insomnia between boys and girls. And compared to boys, girls were confirmed to have a higher rate of having insomnia, suggesting that health workers and teachers in campuses should pay more attentions on girls by not only focusing on reducing schoolwork pressure but also providing professional counseling based on their needs for preventing them from suffering insomnia.

Keywords: Teenagers, Insomnia, Gender, Professional counseling



Zone 2: Health Promotion/Health Literacy/Healthy City

P-20

The Effects of Message Framing, Campaign Theme in Anti-Smoking Advertisements on Behavioral Intention among Adolescents: Attitude Toward Ad as Mediator, Gender as Moderator

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Abstract

Background/Objectives: This study aims to design the anti-smoking advertisements targeting adolescents, examining its persuasive effectiveness and the mediating role of Attitude toward ad; gender as a Moderator, enhancing the willingness of adolescents to anti-smoke, eventually reducing the overall smoking rate of society.

Methods: The study was conducted with a 2x2 factorial advertising design. The manipulated factors were message framing (gain and loss framing) and campaign themes (health impact and social norm). Age from 16-18 years old, a high school located in central Taiwan was sampled by convenient sampling. Total four types of printed anti-smoking graphic-design advertisements were randomly assigned to each respondent in a classroom. The participants conducted a questionnaire after viewing the advertisement to investigate the Attitude toward ad and Intention to anti-smoke. Total 450 questionnaires were issued and evaluated for descriptive statistics, repeated analysis of variance and hierarchical regression by using SPSS 25.0 statistical analysis software.

Results: The results show that loss-framing message along with health impact theme anti-smoking advertising design have the best advertising effect among adolescents. Loss-framing message is more effective than gain-framing message. The themes between social norm and health impact have no significant difference. Intention of anti-smoking by adolescents is mediated by Attitude toward ad. And the result suggest that male have lower willingness of anti-smoking than female despite their Attitude toward ad.

Conclusions: Since the adolescents are more persuaded by the loss-framing message, advertising design for health policy advocacy and social marketing should be enhanced base on loss-framing message. Due to the Attitude toward ad play an important role on raising the intention of adolescents to anti-smoke, advertising design should be tailor-made to meet the needs and interests of them. Also, gender differences should be considered during the conducting of social or policy marketing to maximize the effectiveness of the persuasion.

Keywords: Campaign theme, Message framing, Attitude toward ad, Anti-smoking intention





Zone 2: Health Promotion/Health Literacy/Healthy City

P-21

Evaluate the Effectiveness of Intervention of Hepatitis C in Tainan

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Abstract

Background/Objectives: Liver disease is one of the "national diseases" in Taiwan, especially in Yunlin, Chiayi and Tainan, liver cancer standardized mortality rate in Tainan (25.2 / per 100,000 people) is higher than the national (21.6 / per 100,000 people). In 2017, 816 people is dead from liver cancer, accounting for 9.71% in national liver cancer deaths.

Methods: The difficulties of hepatitis C prevention and treatment in Tainan City might be attributed to poor health literacy of hepatitis C, and hard to seek medical attention. To overcome the difficulties, we coordinated 25 hospitals to establish treatment clinic of Hepatitis C, and through a single window, decrease the complexity of seeking medical attention to patients. For Partial Township, the three Out-Patient Clinic of Hepatitis C were establish from the media hospitals, the patients could obtain drugs.

Results: The Central Health Insurance Agency had relieved the restriction of liver fibrosis medicine since 2019. From January 1 to April 26, the number of treated cases in Tainan City reached 4,234, more than Yunlin and Chiayi.

Conclusions: In the future, we will continue to screen and treatment, and the collection of health data to improvement of public health policies to achieve the goal of eradicating hepatitis C.

Keywords: Hepatitis C, Out-Patient Clinic, Tainan



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P-22

Factors Associated with Post-Stroke Suicidal Death: A Nationwide Population-Based Longitudinal Cohort Study in Korea

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Abstract

Background/Objectives: Since stroke and suicide are one of the major public health burdens globally, studies analyzing the association between suicide among stroke patients are important from the aspect of potential risk assessment and prevention of suicide. This study aims to examine the association between stroke and risk of subsequent suicidal death.

Methods: A retrospective cohort study conducted an analysis based on data of one million people from the National Health Insurance database. To identifying all cases of suicidal death after incidence of stroke, all incidence cases of stroke were followed up until 10 years. The cohort-based mortality was reported as an events per 100,000 person-years. The age-sex specific standardized mortality ratio in comparison of suicidal death rate in general population also measured. Age-sex specific hazard of suicidal death among stroke patient were described through Nelson-Aalen's cumulative hazard function and log-rank test was performed to identify the difference in significance. Finally, multivariable Cox proportional hazards models were used to estimate the risk of suicidal death by each risk factors. Hazard ratio and 95% confidence intervals were reported after adjusting for age at stroke occurrence, sex, comorbidities, post-stroke depression, and other sociodemographic factors.

Results: From 10 million South Korean people, a total of 16,847 stroke patients were identified between 2002-2013. Total and mean follow-up years for study population were 66,980 and 3.98 years, respectively. The suicidal death rates for stroke patients were 115 per 100,000 person-years. Age-sex adjusted standard mortality ratio was 2.08. A hazard of suicidal death was significantly differed by sex ($\chi^2=14.01$, $p<0.001$) and socioeconomic status ($\chi^2=12.31$, $p=0.031$). Being male (HR=2.674, $p<0.001$, 95% CI=1.610-4.440) and incremental of Charlson comorbidity score by 1 point (HR=1.352, $p=0.045$, 95% CI=1.007-1.814) were significantly increased risk of suicidal death among stroke patient. However, length of hospitalization was significantly decreased suicidal death among stroke patient (HR=0.332, $p=0.003$, 95% CI=0.160-0.689).

Conclusions: Risk of suicidal death among stroke patient was higher than general population and differed by age and sex. This study provides evidence that there were susceptible to modification in risk factors by each age and sex group.

Keywords: Stroke, Suicide, Depression, Mortality



Zone 2: Health Promotion/Health Literacy/Healthy City

P-23

The Effects of Pressure Ulcer on Length of Stay, Medical Cost and Mortality: A Systematic Review and Meta-Analysis

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Abstract

Background/Objectives: The purpose of this study is to synthesize statistical results by combining systematic review and meta-analysis on the study of length of stay, medical cost, and mortality.

Methods: Using the databases (Medline, Embase, Cochrane Library), we searched studies published through April 26th, 2018 without any restriction on year and language. As a result of reviewing the title, abstract, and full text of the study, we excluded the studies that were judged to be irrelevant to the research topic. Meta-analysis was performed using the RevMan 5.3 program for the 22 selected studies.

Results: Meta-analysis was performed on 16 out of 18 studies comparing the length of stay between the pressure ulcer group and the no pressure ulcer group. In all of the 16 studies, the length of stay in the pressure ulcer group was about 10 days longer than no pressure ulcer group. The mean difference was 7.60 and the 95% confidence interval was statistically significant ($P < 0.01$), with a lower limit of 5.98 and an upper limit of 9.23. Comparing the medical cost of the pressure ulcer group and no pressure ulcer group, the J Dreyfus study showed that \$ 8,505 (total costs) was spent on pressure ulcer group compared to the no pressure ulcer group. In the K Stroupe study, \$ 77,587 (total costs) were spent in the pressure ulcer group compared to the no pressure ulcer group. Meta-analysis was performed on four studies comparing the mortality of the pressure ulcer group and the no pressure ulcer group. The mean difference was 2.17 and the 95% confidence interval was 1.30 for the lower limit and 3.62 for the upper limit ($P < 0.05$). The I² statistic was assessed as 96% heterogeneous by the follow-up period for each study.

Conclusions: Length of stay, medical cost and mortality in the pressure ulcer group have increased compared to the no pressure ulcer group.

Keywords: Pressure ulcer, Length of stay, Medical cost, Mortality



Zone 2: Health Promotion/Health Literacy/Healthy City

P-24

Factors Associated with Full Immunization Coverage in Children Aged 12-23 Months in the Philippines: A Multilevel Logistic Regression Analysis

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Abstract

Background/Objectives: In the Philippines, even though the vaccines recommended by Expanded Program on Immunization (EPI) are provided free of charge in public health facilities, the immunization coverage among children aged 12-23 months has not reached the WHO target of 90% between year 1990 and 2017. The objective of this study is to identify individual- and community-level factors associated with childhood immunization in the Philippines.

Methods: This study used data from the 2017 Philippines National Demographic and Health Survey (NDHS) with 1,986 children aged 12-23 months nested within 87 provinces. Multilevel logistic regression analysis was conducted to investigate whether the individual and community level factors influence the childhood immunization status. Full immunization was defined as received all basic vaccines recommended by Philippines EPI. Provincial Multidimensional Poverty Index (MPI) was calculated and used as a community-level factor to consider regional disparities in poverty.

Results: Approximately 62% of the children aged 12-23 months were fully vaccinated in the Philippines with disproportionate coverage across provinces. The MPI among provinces varied from 0% to 11.3%. Our analysis identified that individual factors significantly associated with childhood immunization status were birth order, maternal education, distance to health facility, frequency of watching television, antenatal visit and place of delivery. Provincial MPI was revealed to have a negative association with full immunization (OR=0.89, 95% CI=0.83-0.95).

Conclusions: Interventions considering both individual factors affecting maternal care and community-level poverty should be developed in order to improve childhood immunization status in the Philippines.

Keywords: Philippines, Childhood immunization, Multilevel analysis



Zone 2: Health Promotion/Health Literacy/Healthy City

P-25

Correlation between Alcohol Drinking Frequency and Evaluation of Nutrient or Food Group Intake by Brief-Type Self-Administered Diet History Questionnaire

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Abstract

Background/Objectives: Several studies have reported that high-dose alcohol consumption raises total and cardiovascular mortality, and increases development of coronary and peripheral artery disease, stroke, arterial hypertension, and diabetes mellitus. Though toxic effect of high-dose alcohol in relation to cardiovascular disease is recognized, the composition of nutrient intake also contributes to the disease. The relevance of these two factors has not been investigated in detail.

Methods: This study was conducted with 266 men in their 20's and 30's in Matsudo City as the subject. Their dietary intakes were estimated by brief self-administered diet-history questionnaire (BDHQ), and drinking habits were investigated by questionnaire.

Results: The men in the high drinking frequency group tended to show a low percentage of obese people. Nutrition intake, such as protein, total fat, total carbohydrate, Vitamin B1, Vitamin C, calcium, phosphorus, total dietary fiber, and sucrose, were significantly lower in the group with higher drinking frequency ($p < 0.05$).

Conclusions: We investigated the alcohol consumption frequency of men in their 20s and 30s in Matsudo City. Men with high alcohol consumption had significantly less nutrient intake. Especially drinking habits more than 4 times a week is not recommended for health maintenance.

Keywords: Drinking habits, Nutrition intake



Zone 2: Health Promotion/Health Literacy/Healthy City

P-26

Exercise Frequency and Awareness of Its Effect in Nursing Students in a University

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Abstract

Background/Objectives: Exercise has the good effects not only for physical health but also for mental health. Since nurses need to be conscious of health effects and to instruct patients or people living in the community how to exercise properly, it is necessary to obtain such awareness from student days like medical students. The purpose of this study was to clarify the exercise frequency and awareness of its effects in nursing students in a university.

Methods: Anonymous questionnaire was delivered to 329 nursing students in a medical university (Nursing group). As the control, 424 medical students in the same university were also recruited (Medical group). The question items were exercise frequency and 15 items of awareness of its effects. The answer items for exercise frequency were “three or more days in a week,” “about one day in a week,” “once or twice a month,” “several times a year,” “do not exercise.” Those for awareness of exercise effects were “agree strongly,” “agree,” “not so agree,” “disagree.” In each item, one answer was selected. Cross-tabulation was used to compare the distribution.

Results: The questionnaire sheet were collected from 309 (93.9%) of Nursing group and 272 (64.2%) of Medical group. The male-female ratio of Nursing group was 24 (7.8%) males and 285 (92.2%) females. Medical group consisted of 173 (63.6%) males and 99 (36.3%) females. In Nurse group, 181 (58.6%) exercised at least once a week. This ratio was significant lower than that in Medical group (221; 81.3%), but higher compared with that in the same age Japanese group (20.2%). In Nursing group, 212 (68.6%) belonged to the club of the University, of which 149 (70.2%) belong to the athletic one. In Medical group, 217 (79%) belonged to the club, of which 188 (86.8%) belong to the athletic one. This ratio was significant lower in Nursing group. In Nurse group, “Improvements in body shape and weight” are significantly higher than in medical group. “Realization of dreams and longings” and “Improvement of mental power” were significantly lower.

Conclusions: Nursing group performed less frequently sports and had the different awareness of exercise effects.

Keywords: Exercise, Frequency, Awareness, Effects, Nursing



Zone 2: Health Promotion/Health Literacy/Healthy City

P-27

The Participate of Volunteer's Cycling Drive to Visiting Home Health Care (REAMP Model) Aotong Sub-District, Wangwiset District, Trang Province, Thailand

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Abstract

Background/Objectives: The visiting home health care as access issues in the rehabilitation of patient or provider public health a few really to their house. The cycling shall be of a mind have shared their neighbors with visiting home health care bed ridden patients. To develop a prototype model of home visiting care of long-term aging and evaluation of customer satisfaction.

Methods: The evaluation forms satisfaction with the district to develop a prototype of 120 people conducted research in the area of Aotong, Wangwiset, Trang province between January and July 2017 were analyzed qualitative data from focus groups and depth interview by questionnaires and observations using content analysis of district assessment standard model of health care, long-term aging. Assessments conducted pleased with attendance Interviews conducted when the content of health volunteers using descriptive statistics with frequency and percentage.

Results: Cyclists from their community gathered self-funding and private donations to purchase items. The satisfaction of the elderly to the district master. The most of 77.57 % and the satisfaction was good level and they want to have the continued high level of 98.86%.

Conclusions: This can be used as a source of knowledge be applied in other areas where conditions of access Patients were gotten beneficiaries of social welfare by highest (Recipient) to encouraged to real life fight against disease (Encouragement), the more self-care. (Awareness) the strengthening of good patient care (Empowerment) motivating exercising of self care. (Motivation) and participation from neighborhood in the community (Participant). Creative activities to benefit the public health community deal with volunteers from community of them self.

Keywords: Volunteer's cycling, Visiting care



Zone 2: Health Promotion/Health Literacy/Healthy City

P-28

Cervical Cancer Prevention Awareness among Junior High School Students in Quezon City, Philippines

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Abstract

Background/Objectives: According to the World Health Organization (2016), millions of women are living with cervical cancer worldwide. Based on the annual report of the Philippine Cancer Society (2010), cervical cancer is the 7th in the list of cancers that cause death in the Philippines. Because of this, the investigators decided to conduct this research to know if there is still a lack of information on cervical cancer prevention especially to adolescents. The objectives of this research were to identify the level of knowledge on cervical cancer prevention among high school students. This descriptive correlational study also aimed to determine the significant relationship of age, sex, and religion with the level of knowledge on cervical cancer prevention among the participants.

Methods: The researchers utilized the Cervical Cancer Knowledge Prevention-64 (CCKP-64) Questionnaire for data gathering, this tool was used to determine the level of knowledge about cervical cancer, its primary and secondary prevention and to identify sources of information about the disease among female students. This research was able to gather 440 students from three different high schools in Quezon City to answer the CCKP-64 Questionnaire.

Results: Results showed that majority of the participants (69.5%) have already heard of cervical cancer, 49% of the participants believed that it was caused by an infection and 74.8% believed that this disease could affect them in the future. It also shows that there is a significant relationship between the participants' age and their knowledge on cervical cancer especially on questions about how the disease can be acquired and on primary and secondary prevention. Age has also numerous connections with the risk factors such as early sexual initiation, history of STD, miscarriages and abortion.

Conclusions: It can be concluded that there is still a lack of information on cervical cancer prevention despite the fact that it is taught in schools. There is still a lot of misconception about cervical cancer and awareness should be further improved by health and education sectors in the country. Collaborations between the health sector and educational committee are strongly advised to address the knowledge deficit.

Keywords: Cervical Cancer, Awareness, Prevention



Zone 2: Health Promotion/Health Literacy/Healthy City

P-29

Knowledge on Reproductive Health among Junior High School Students in Quezon City, Philippines

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Abstract

Background/Objectives: Reproductive health has been thrust into the spotlight in the Philippines due to the passing of the Reproductive Health bill into law, also known as the Republic Act 10354, or the Responsible Parenthood and Reproductive Health Act of 2012 (Official Gazette of the Philippines, 2012). The goal of the said law pursues the definition given by the World Health Organization, empowering the citizens in handling their own reproductive health. Thus, the researchers would like to investigate if students have an adequate amount of knowledge to handle their own reproductive health. The objectives of this research were to identify the level of knowledge on reproductive health among high school students. This descriptive correlational study also aimed to determine the significant relationship of age, sex, and religion with the level of knowledge on reproductive health among the participants.

Methods: The researchers utilized the Illustrative Questionnaire Survey-Interview of Young People for data gathering. This research was able to gather 440 students from three different high schools in Quezon City to answer Illustrative Questionnaire for Survey-Interviews of Young People.

Results: The results showed significant relationships between variables and knowledge on reproductive health: The variable with the highest link with the knowledge on RH is gender. Associations were noted between religion and questions about sex and contraceptives while age is significantly related to questions about sexual intercourse and other methods of birth control. Results also showed that majority of the participants have no knowledge about contraception or contraceptives and there is still a lack of information on sexually transmitted disease even though the participants have a little background on its concept.

Conclusions: The researchers discovered that there is indeed knowledge deficit regarding reproductive health. It was noted that despite the fact that even reproductive health is included in the curriculum of the Department of Health, awareness on vital topics like contraception still needs further improvement.

Keywords: Reproductive health, Awareness, Knowledge



Zone 2: Health Promotion/Health Literacy/Healthy City

P-30

The Results of the Motivation Change Behavior Program in Risk of Chronic Disease Group of Ban Naipong Tambon Health Promoting Hospital, Trang Province

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Abstract

Background/Objectives: The criteria for overweight or obesity group were one of the risk factors of illnesses and chronic diseases such as diabetes, high blood cholesterol, hypertension and other chronic disease until to think create the interesting health management program to inhibit chronic disease to determine the effect of the results of the program to enhance motivation to change their behavior voluntarily chronic disease risk in program. (2E1F)

Methods: The behavior recruited by sampling a voluntary 13 people join program. The samples were the enhance motivation to change program behavior in voluntarily risk group of chronic disease, which is a sign a consent agreement to participate in the 3-week. we controlled by providing daily food intake diary on diary main guideline (2E1F: Exercise ,eating diet food and follow up) by purposely. The focus group like the most about gender be female, age and must not smoking and not drinking alcohol. The instrument used to perform the experiment is survey data retention behavior modification, exercise and diet. The instruments collected personal information to record note who some overweight were analyzed using mean, percentage, standard deviation statistical tests by t-test.

Results: The results of their exercise to decrease the overweight to activities that regular exercise is. Jogging and walking. The average the weight decreased was 2.46 kgs. after the program has been managed manually lower than before the program on statistically significant ($P < 0.05$) level

Conclusions: The knowledge is the important to attack practice from training three times as an extra motivation weight decreases without risk of chronic disease to empower exercise be promotion weight loss 1 kilogram per 30 baht and finishing exercise get 1 point per 10 baht be the coupon to reduce the cargo in civil community shops and they can to inspiration to empowerment community people.

Keywords: Motivation, Change behaviour program



Zone 2: Health Promotion/Health Literacy/Healthy City

P-31

The Case Study of Families Program's Change Behavior Management of Diabetes Mellitus Type 2 Patients Uncontrolled the Measure of Fasting Blood Sugar Level

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Abstract

Background/Objectives: The controlling blood sugar levels within that are difficult change to normal level in diabetes mellitus type 2 patients, especially in the controlling together with nutrition and their health promotion then it must be special care to prevent complications of occur disease. To compare health behaviors (diet, exercise and stress management), nutritional status (body mass index, waist circumference) and to check fasting blood sugar levels of diabetes mellitus type 2 patients before and after the program.

Methods: This research is an experimental research. We study and observe participation of healthy nutritional habits of patient s' families apply in the mold model of involvement in grandmother s' family her name is Riam then take the program to her was part of the family using RAMA model for 2-week stage R:(Raising awareness), A:(Aiming at. targeted health), M:(Mobilizing change and innovation), A:(Assuring synergy and sustainability). It has been home serving at home and get the documentation nutrition study and perform collection data during the period 1 October to 30 November 2018

Results: The nutrition 's study of Mrs. Riam she is 82-year-old grandmother with diabetes mellitus have been a DM patient for 22 years who have just uncontrolled sugar level for 5 years. After tracking down the blood sugar average reduction of 135 mg/%. case study to change behavior for 2 weeks with the health behaviors diet, exercise and stress management, nutritional status body mass index, waist circumference than before with impulse on statistical significance ($p < .001$).

Conclusions: This study can be used as a guideline for change behavior health and be innovative of family to prevent the risk of member in her family, reinforce healthy behaviors appropriate a member in family who has diabetes can't control blood sugar levels to stronger follow up continuous and surveillance of dose nutrition.

Keywords: Family, Uncontrol, DM, Nutritional



Zone 2: Health Promotion/Health Literacy/Healthy City

P-32

The Study of 2E1F Motivation Program to Change Behavior of Risk Over Body Mass Index Group of Ban Naipong Tambon Health Promoting Hospital, Trang Province, Thailand

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Abstract

Background/Objectives: Being overweight or obese is listed as a risk factor for people with chronic diseases such as diabetes and hypertension, etc. A health intervention program, the 2E1F motivation program was designed. The purposes are to study the results of the 2E1F motivation program for the participants with a high BMI that had not only decreased their BMI but their risks to chronic diseases; and their satisfaction with this program.

Methods: This study is a descriptive and quasi-experimental research. The samples included 13 people, chosen by purposive sampling, who had a BMI of more than 25 and were non-smoking and non-drinkers of alcohol. The participants signed a consent agreement form to participate in the program for three weeks. The tools used for the program were a daily diary to record their exercise and the food they ate, the 2E1F guideline book and the questionnaire of satisfaction which has a set of 8 lists of questions. Descriptive data were analyzed using mean, standard deviation, percent and Statistical and Analytical pair simple t-test.

Results: This project was an intensive course. There were 2E activities (exercising everyday and eating nutritious diets) to provide knowledge and to create attitudes which could lead to practice and staff would follow-up to check on the participants at least three times during the course (1F). The average BMI of the sample group with a high BMI before and after their participation in the program was (29.24 ± 1.57) and (25.85 ± 1.22) . Their satisfaction to join the program was at a good level, $(\bar{X}=3.78, SD= 0.12)$.

Conclusions: The participants in the program can control their weight by exercising everyday and eating a healthy diet so that they change their behavior until their BMI was lowered. If they will have done decreases their body weight, they change 1 kg per 30 baht become the coupon to discount cargo in convenient store. They were very satisfied with 2E1F program and were an inspiration with their family and neighbors.

Keywords: 2E1F Motivation program, Change behavior, BMI



Zone 2: Health Promotion/Health Literacy/Healthy City

P-33

Association of Physical Activity, Obesity and Socio-economic and Demographic Factors on The Competency of Life Skills, among Grade 10 Students in Jaffna Educational Zone.

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Abstract

Background/ Objectives: Based on the study on the assessment of life skills among the 1315 year old school going adolescents in a district of Sri Lanka shows that the level of application of life skills is poor in 33%. General objective is to assess the association of physical activity, obesity and socio-economic and demographic factors on the competency of life skills, among Grade 10 students in Jaffna Educational Zone.

Methods: It was an institutional based descriptive cross-sectional study. Study setting was the schools in Jaffna Educational Zone. The study was carried out from May 2018 to June 2019. The study population was Grade 10 students attending schools in Jaffna Educational Zone and the sample size was 748. Stratified Cluster sampling technique was used for this study. Self-administrated questionnaire was used for data collection. Raw data were analyzed and processed with the help of SPSS.

Results: Among the 748 participants 52.8% (n=395) were female participants. Most of the participants were following Hinduism (84.5%). Around 45% of the Participants' parents had an educational qualification above ordinary level. Mean scoring of all the ten life skills were above 60%. Considering the ten life skills participants got highest mean scoring for Empathy (75.24%). Level of life skills among females (37.5%) was higher than males. Level of life skills was higher in participants following Hinduism (36.7%) than those following Christianity. Among the participants more than 75% of them are studying in type I AB School. Among the participants 77.7% were less active and more than 50% of them were less active in all the components of physical activity. In this study, 4.4% of the participants are obese (females - 5.8% and males - 2.8%).

Conclusions: It was observed that the level of life skills of the studied population is quite satisfactory and the pattern of physical activity is unsatisfactory. Significant association of sex, religion, educational qualification of parents and types of schools were observed with the level of life skills.

Keywords: Life skills, Physical activity, Obesity



Zone 2: Health Promotion/Health Literacy/Healthy City

P-34

The Relationship between Pain and Leisure Activities with or without Company among Middle-aged and Older People in Taiwan

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Abstract

Background/Objectives: Previous research have shown the effect of leisure activities on health. This study aims to explore the relationship between leisure activities, alone or with companions, and pain among middle-aged and older people.

Methods: We used data of 3,727 participants aged 58 and above from a nation-wide survey to examine whether leisure activities, doing alone or in company of others, were associated with self-rated pain (no pain/mild/moderate to severe). Participation in seven leisure activities including watching TV, listening to music/radio, reading, gardening, strolling, cycling and outdoor activities were assessed by monthly frequencies. Multinomial logistic regressions were employed in multivariable analysis with adjustment for demographic covariates. To avoid the reversal causal relationship in which not doing leisure activities might result from pain-related disability, participants with any limitation in activities of daily living were excluded, which left 3,043 participants in final analysis.

Results: Results showed that reading alone was associated with a reduced risk of moderate to severe pain (adjusted odds ratio, AOR=0.75, 95 confidence interval, 95% CI=0.58 to 0.98) as well as doing outdoor activities alone (AOR=0.20, 95% CI=0.08 to 0.51); decreased risks of moderate to severe pain were found in those doing activities with companions including listening to music (AOR=0.71, 95% CI=0.51 to 0.98), reading (AOR=0.57, 95% CI=0.35 to 0.91), strolling (AOR=0.57, 95% CI=0.43 to 0.76) and outdoor activities (AOR=0.29, 95% CI=0.19 to 0.45). Outdoor activity with companions was negatively associated with mild pain.

Conclusions: Some leisure activities, alone and/or with companions, might reduce moderate and severe pain.

Keywords: Leisure activities, Pain, Company



Zone 2: Health Promotion/Health Literacy/Healthy City

P-35

An Applied Motivation Program for Food Consumption and Obesity Control among Adolescent with Overweight in Chonburi Province

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Abstract

Background/Objectives: Overweight in adolescence is considered an important risk factor of major non-communicable diseases in life, including diabetes mellitus, heart and cardiovascular disease. This quasi-experimental research was aimed to study the effects of the applied motivation program for food consumption and obesity control among adolescent with overweight in Chonburi Province.

Methods: Sixty students with average age 11.17 ± 0.79 years old and body mass index 26.68 ± 4.64 kg/m² were randomized from two schools in Chonburi Province, and divided into the experimental and the comparison groups. The experimental group was received of the health education activities for 6 sessions, 60 minutes per sessions, and the comparison group was received the standard health education in their school. All participants were collected information by using questionnaires. The descriptive statistics, Paired sample t-test and Independent t-test were used for data analysis.

Results: After 6 weeks of the intervention period, The results showed that overweight students in experimental group gained significantly higher level of knowledge about dietary and exercise behaviors, the perceived severity, the perceived susceptibility, the perceived response efficacy, and perceived self-efficacy in obesity prevention than before the experimental period, and additionally significantly higher than the comparison group (p-value<0.001).

Conclusions: The results of this study suggest that the applied motivation programs for food consumption and obesity control can improve the knowledge and food behavioral skills in adolescent with overweight, which promote to health behaviors and prevent to long-term morbidity and mortality.

Keywords: Motivation program, Food consumption, Overweight



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P-36

This poster was withdrawn.





Zone 2: Health Promotion/Health Literacy/Healthy City

P-37

Attitudes towards and Beliefs about Cancer and Colorectal Cancer (CRC) Screening in Malaysia: A Population-based Survey

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Abstract

Background/Objectives: Among Malaysians, Colorectal cancer (CRC) is the most common cancer among males and the second most common cancer among females. Many cancer patients are diagnosed at late stages, which is partly due to negative beliefs and attitudes towards CRC and screening. We explored the beliefs and attitudes towards CRC and screening among males and females from Gombak district, Malaysia.

Methods: A cross-sectional household survey was conducted in Rawang (Gombak district, Selangor) between January and March 2018. The Department of Statistics Malaysia randomly selected 4000 households from a list of all households in Rawang. Trained data collectors visited households and recruited residents aged 40 years & above who fits the inclusion criteria, to participate in the face-to-face survey. A closed-ended questionnaire was used to gather socio-demographic information and attitudes towards and belief about cancer were assessed with the validated ABC questionnaire (Attitudes and Beliefs about Cancer) questionnaire.

Results: A total of 953 participants completed the survey. The findings suggest that negative beliefs towards cancer and CRC screening are still high among Gombak residence, e.g. 59.5% of participants agreed that "most cancer treatment is worse than the cancer itself". Furthermore, the result indicate that significantly more females strongly agreed/agreed that "some people think that a diagnosis of cancer is a death sentence" compared to males (47.6% vs 41.6% vs $p < 0.05$). Besides that, significantly more female participants strongly agreed/agreed that "going to the doctor as quickly as possible after noticing a symptom of cancer could increase the chances of surviving" compared to male participants (91.6% vs 87.5%; $p < 0.05$). There was no significant difference in CRC screening beliefs between genders. Moreover, significantly more female participants strongly agreed/agreed that "I would be too embarrassed" and "I would be worried about what the doctor might find" compared to male participants (14.4% vs 6.4%; $p < 0.05$; 32.8% vs 20.5%; $p < 0.05$).

Conclusions: Overall, the proportion of males and females from Gombak district that hold negative beliefs about CRC and screening is high. Education about the benefits of CRC screening and early detection of CRC may be important as a first step to change the negative beliefs about CRC and screening among Malaysians.

Keywords: Colorectal cancer, Cancer awareness, Attitudes, Belief, Malaysia, Screening

Zone 2: Health Promotion/Health Literacy/Healthy City

P-38

Premarital Sexual Behavior of Pregnancy Risk in Adolescents: Qualitative Case Study in Pulogadung District Health Center, East Jakarta

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Abstract

Background/Objectives: Adolescence has various sexual needs and is a crisis period which causes sexual activity deviations. This study aims to describe the sexual risk behavior of pregnancy in adolescents. The research problem is the deviant sexual behavior and lack of information from family and environment.

Methods: A qualitative approach study was performed on 22 informants, including 4 pregnant teenagers as the key informants and 18 people as triangulation informants, those are midwives, parents, religious leaders, community leaders, and the peers of the pregnant teenagers.

Results: The study reveals that adolescents disagree with extramarital sex and they have sufficient knowledge. Most of them do not have risky behaviors such as smoking, as well as consuming alcohol and drugs. Communication of adolescents with the parents is less open and harmonious and they are affected by the environment of promiscuity and lack of access to information obtained from appropriate sources.

Conclusions: Promiscuity, lack of attention and family information are the most important aspects of premarital sexual behavior in adolescents. The step that needs to be done is an effort to increase adolescents and parents' awareness of the effects of premarital sexual behavior.

Keywords: Premarital sex behavior, Qualitative study



Zone 2: Health Promotion/Health Literacy/Healthy City

P-39

The Contribution of Women Empowerment in Improving Maternal Health

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Abstract

Background/Objectives: The subordinate status of women is the key to social determinants of poor maternal sexual and reproductive health. Many factors cause women to fail to access health services. Therefore, a comprehensive approach that includes women empowerment is necessary to improve maternal health. The purpose of this review is to discuss how women empowerment can affect the quality of maternal health.

Methods: The study was designed using a literature review approach. The literature search was conducted manually and systematically (online journal database, such as Scopus, PubMed, Cochran, BMC, Lancet, One Search and DOAJ), as well as other sources coming from related research project reports. The keywords used were women empowerment and maternal health. The technical analysis used in this review was article synthesis. Forty articles from the last 10 years (2009-2019) were synthesized. The units analyzed were women empowerment and its relation to maternal health, as well as the factors influencing it.

Results: Most of the results of the review indicate that the role of women in improving maternal health from various manuscripts shows a significant correlation. The empowered women are capable of understanding their value to the community better, therefore they can demand their right to access to health services, state their needs, and take appropriate decision-making actions for their health. Thus, the prevention of delay-factor in deciding to seek care and achieve emergency services can be avoided. Additionally, some factors are identified as affecting women to fail to access health services.

Conclusions: Increasing women empowerment requires more concrete efforts. The interventions carried out should be performed on women as the direct target of the women empowerment program. The political, economic, social, and cultural actions also necessary to support the efforts to empower women.

Keywords: Women empowerment, Maternal health



Zone 2: Health Promotion/Health Literacy/Healthy City

P-40

Qualitative Enquiry is Essential to Indigenous Health Promotion Response for Obesity Epidemic in Fiji Islands

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Abstract

Background/Objectives: Obesity is a complex, multifactorial non communicable diseases involving environmental, social, cultural, genetic, physiological, metabolic, behavioural and psychological components. In recent decades, the burden of obesity has increased rapidly in developing South Pacific islands, and has exceeded the prevalence seen in developed countries. Obesity is more than just an individual problem; it is a community problem, driving up health care costs and reducing productivity. Hence, communities play an important role in lifting the health of their members by promoting healthy lifestyle changes ng to the factors affecting obesity in Fiji. The research objective were to understand the factors which influence current food practices, physical activity levels, and behaviours contributing to obesity in a specific rural Indigioues Fijian community.

Methods: The study was a community based participatory approach which engaged with a rural Indigineous Fijian Community. The research strategies included community consultation, a health survey, interviews, dissemination of findings to the community and feedback from the community. Data was analysed using the Analysis Grid for Environment Linked to Obesity (ANGELO) framework.

Results: Interview analyses revealed food intake and physical activity were associated with sociocultural, economic, political and physical environmental factors that influenced obesity. Participants revealed that previous health promotion programs were not culturally designed to meet the cultural values, beliefs and traditional ways in the community. The findings indicated that health care providers and policymakers need to be involved with the community culture, and to recognise and appreciate community culture and traditional ways to promote equitable participation in decision making.

Conclusions: Recommendations from this research include calls for new social policy that supports active participation of the local community, that incorporates community goals, cultural wellbeing and fairness, and results in culturally competent approaches to health promotion.

Keywords: Obesity, Community participation, Fiji, Rural



Zone 2: Health Promotion/Health Literacy/Healthy City

P-41

Health Care Workers' Perception on Prevention of Overweight and Obesity among Under 5 Years Old Children in Fiji

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Abstract

Background/Objectives: Overweight and obesity are growing concern amongst children < 5 years of age. There is lack of data amongst childhood obesity in Fiji and there is lack of research in this area. Due to important role of health care workers (HCWs) in preventing obesity this study aimed to explore HCWs perception regarding overweight and obesity for children under 5 years old in Fiji.

Methods: This qualitative study applied purposive sampling. Six in-depth focus group discussions (FGDs) were conducted at three health facilities in Suva, Fiji, 2018. A semi-structured open ended questionnaire was used to collect data. Data were audio recorded, transcribed verbatim and analyzed using content analysis approach to identify the themes.

Results: Overall, the study shows that HCWs noted increases incidence of childhood overweight and obesity cases. It also shows that the culture of bigger body size is equated as healthy and happy babies with clear ethnic variation with *iTaukei* including others as opposed to Indo-Fijians. HCWs were aware if the sensitivities surrounding the adverse health status of child thus being careful about when discussing with parents. Several barriers were identified in tackling overweight and obesity. These included lack of parental knowledge, sensitivities surrounding the issue, lack of time, most importantly lack of capacity amongst the HCWs to address the issue. HCWs suggested registering children in a register to ensure overweight and obese children are followed up and HCWs provided guidelines on overweight and obesity by the health ministry.

Conclusions: The study findings suggest that childhood obesity is a growing problem and HCWs need to be adequately capacitated to address the issue in the same way as underweight amongst children less than 5 years old.

Keywords: Childhood obesity, Overweight, Qualitative study, Fiji



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Zone 3: Non-communicable Diseases and Risk Factors

P-42

Workplace Health Promotion for Cardiovascular Risk Factors in Low and Middle Income Countries: A Scoping Review

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Abstract

Background: The WHO recognises workplace as a priority setting for health promotion of cardiovascular disease (CVD). Interventions using workplace health promotion (WHP) result in about a 25% reduction in sick leave, health plan costs, and workers' compensation and disability insurance costs. Even though 75% of CVD related deaths occur in low-and middle-income countries (LMIC), it remains unclear how WHPs are being adopted for CVD risk factors in these countries.

Objectives: To characterize interventions of WHP in LMICs.

Methods: A rigorous method for scoping reviews, detailed by the Joanna Briggs Institute, was followed. Seven electronic databases were searched for peer-reviewed articles. We considered both randomized and non-randomized interventions that incorporated proximal, intermediate, and distal health outcomes, and conducted frequency and content analysis. The results were summarised using tables and diagrams, accompanied by narrative summaries, and a geographical map.

Results: We identified 43 interventions, nine being RCTs. Malaysia and India had the greatest number of interventions. Participants were employees of universities (20.9%), government (9.3%), and banks (6.9%). The median intervention duration was 12 months. The most common topics were physical activity and diet, while the most frequently used approaches were education and training. Eight interventions incorporated infrastructural or organizational change, but only six of the interventions were underpinned by at least one theoretical framework. Distal outcomes on disease incidence and quality of life were reported in five studies.

Conclusions: This scoping review provides the first evidence of the types of intervention being undertaken for CVD risk prevention in workplace settings in LMICs. We identified very few interventions and even fewer were underpinned by theory. This is a missed opportunity to tackle CVDs in LMICs. The global public health community can support future research by targeting funding and increasing the awareness of large organizations in LMICs to the potential benefits of providing WHP.

Keywords: Workplace health promotion, Cardiovascular risk factor, LMIC, Bangladesh



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Ambient Temperature and Humidity with Low Back Pain: Multilevel Analysis of Japanese Older People

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Abstract

Background/Objectives: Professional health care providers often hear people with low back pain say bad weather worsens their symptoms, and several studies examined the associations between weather conditions and musculoskeletal pains. However, the results have been inconsistent. Here, we conducted a study to elucidate the association of musculoskeletal pains with temperature and humidity, using large-scale data from the Japanese older population.

Methods: We analyzed data from a nationally representative, repeated-measured, cross-sectional study from three consecutive waves conducted in 2010, 2013, and 2016 across 47 Japanese subnational level areas (prefectures). Older people aged 65 years and older ($n = 476,862$) were eligible for the study. Self-reporting low back pain was used as a dependent variable. Prefecture-level weather conditions—average ambient temperature and average relative humidity—were separately analyzed as independent variables. Multilevel logistic model was used to examine the associations, adjusted for age, sex, number of people living together, educational attainment, and whether engaged in an income-earning job.

Results: The average temperature and humidity ranged 9.2–24.1 degrees (Celsius) and 59–78%, respectively. The prevalence of low back pain stratified by year of investigation was 19.3% in 2010 and 2013, and 18.2% in 2016. After adjusting for all covariates, the main effect of ambient temperature and humidity were not statistically significant: the odds ratios (95% credible intervals) were 0.99 (0.98–1.01) and 0.997 (0.99–1.002), respectively.

Conclusions: No associations between weather conditions and low back pain were observed among Japanese older people.

Keywords: Weather conditions, Bayesian approach



Zone 3: Non-communicable Diseases and Risk Factors

P-44

Food-based Dietary Guidelines Awareness and Eating Practices of Employees in an Open University in the Philippines

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Abstract

A recent report from the World Health Organization (WHO) revealed that one out of three Filipinos dies prematurely before reaching the age of 70 due to the “fatal four” Non-communicable Diseases (NCDs)—cardiovascular disease, diabetes mellitus, cancer, and chronic respiratory disease (The Manila Times, 2018). According to WHO (2018), physical inactivity and unhealthy diet are considered as major risk factors in the development of these diseases. As the University of the Philippines Open University (UPOU) adopts a sedentary work lifestyle with most of the employees spending long hours at the office sitting in front of a computer screen, the university must be able to promote health and wellness in the workplace, particularly healthy eating. Most of the health programs or activities being implemented in UPOU do not focus on food and nutrition, thus, this study aimed to determine UPOU employees’ awareness of the Food-based Dietary Guidelines (FBDGs) and adherence to the 2012 Nutritional Guidelines for Filipinos (NGF) to provide insights for the development of nutrition interventions in the university. All employees accomplished an online adopted survey from February to April 2019 which included questions on awareness of the four FBDGs–2012 NGF; *Kumainments* (simplified version of NGF); *Pinggang Pinoy* (a plate-like pictorial model); and the Daily Nutritional Guide Pyramid (DNGP)—and eating practices relative to the 2012 NGF. Data were analyzed using descriptive statistics such as frequency counts and percentages and measures of central tendency (median, mode). Recommendations to promote healthy eating practices among UPOU employees and ensure a healthy and sustainable workforce were also presented.

Keywords: Awareness, FBDGs, Eating practices, Open university



Zone 3: Non-communicable Diseases and Risk Factors

P-45

Association between General Characteristics, Knowledge and Patient Activation of Type 2 Diabetes Patients in Myanmar

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Abstract

Background/Objectives: Diabetes mellitus is one of the most serious public health problems in developed and developing countries. One of the reasons for the poor outcome in diabetic individuals is the lack of involvement and awareness about the complications of the disease. Objectives of the study was to determine the level of the diabetes knowledge and patient activation and identify demographic, clinical and psychosocial factors involved in patient activation.

Methods: A cross sectional study was conducted among the type 2 diabetes patients attending the diabetes specialist clinic in Yangon, Myanmar. Total 250 participants gave written consent and they were included. Patient Activation Measure (PAM 13) and Diabetes Knowledge Test (DKT 2) questionnaire were used to determine the level of diabetes knowledge and patient activation through one to one interview.

Results: The mean patient activation was 60.6 ± 13.6 . Majority of the patients (47.6%) had average diabetes knowledge and mean DKT score was 14.6 ± 4.6 . Male participants had higher activation than female participants (OR=3.04, 95%CI=1.23-7.54, $p=0.016$). Participants who does not smoke and drink had higher patient activation (OR=4.25, 95%CI=1.48-12.18, $p=0.007$) and (OR=5.42, 95%CI=1.66-17.67, $p=0.005$). Higher diabetes knowledge was significantly associated with high activation level (OR=16.57, 95%CI=5.91-46.4, $p<0.001$).

Conclusions: Among people with type 2 diabetes, patient activation level was especially related to disease specific knowledge and some socio-demographic characteristics were not influence on patient activation level. Based on the results, many diabetes patients with old ages, need support in both knowledge and activation in Myanmar.

Keywords: Diabetes knowledge, Patient activation, Self-management



Zone 3: Non-communicable Diseases and Risk Factors

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Sociocultural Pressure on Disordered Eating among Adolescents in Malaysia

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Abstract

Background/Objectives: The present study was designed to assess the prevalence of disordered eating and the sociocultural influence on a large school-based population in Malaysia.

Methods: In a cross-sectional study data were collected from 601 students, aged between 13 to 16 years old from national secondary schools in Selangor, Malaysia. Eating Attitude Test (EAT-26) along with the Perceived Sociocultural Pressure Scale (PSPS) a self-report questionnaire which measures the prevalence of disordered eating and the later measuring the pressure to be thin by family, friends, dating partners and the media were used. Logistic regression analysis was used to determine the effect of PSPS domains on disordered eating among these adolescents to disordered eating.

Results: The prevalence of disordered eating was 19.8% (95% CI 16.5, 23.5). More females 20.8% (95% CI 16.6, 25.8) and adolescents who were overweight 26.5% (95% CI 18.3, 36.7) had disordered eating. The common type of disordered eating practices were binge eating 4.10% (95% CI 2.70, 6.00), and excessive exercising, 6.50% (95% CI 4.70, 9.00). Perceived sociocultural pressure (PSP) from Family & Friends (OR=1.60 95% CI: 1.16, 2.21), PSP Media (OR=1.53 95% CI: 1.20, 1.94) and Weight Teasing (OR=1.39 95% CI: 1.01, 1.90) were found to be significant predictors of disordered eating among these adolescents.

Conclusions: This study provides support for the importance in targeting adolescent in prevention programs for disordered eating. Pressures to be thin exerted through family and social environment have shown to influence the risk in developing disordered eating.

Keywords: Disordered eating, Sociocultural pressure, Adolescents



Zone 3: Non-communicable Diseases and Risk Factors

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E-cigarette Use and Support for Regulation among University Students in the Asia-Pacific

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Abstract

Background/Objectives: The Asia-Pacific region is home to 30% of the world's smokers. In the quickly-changing tobacco landscape, regulatory approaches to reduce negative health impacts from e-cigarettes are required.

Methods: An online survey was sent to the 45 member universities of the Association of Pacific Rim Universities which asked students about knowledge, attitudes, and use of regarding tobacco products, and support for tobacco control policies. We examined differences among students based on strength of tobacco control policies and status of e-cigarette regulation in their economies.

Results: A total of 1,953 students in 13 economies participated. While about 83% of students had heard of e-cigarettes, only 14.1% had tried e-cigarettes while 34.6% had tried combustible cigarettes. About 33% of students in high tobacco control economies had *ever* tried e-cigarettes, as compared to 11.3% in middle and 9% in low tobacco control categories. Students in economies with e-cigarette bans were the *least* likely to have tried e-cigarettes (8.1%) as compared to those in regulated (17.2%) and unregulated (13.5%) categories. Among e-cigarette users, a sizable proportion believed e-cigarettes were less harmful than combustible cigarettes to themselves (45.1%), and to people around them (46.2%) and 24.1% used e-cigarettes to help them quit traditional smoking. Overall, only 42.5% of students had seen any health campaigns against e-cigarettes, as compared to 87.9% for combustible cigarettes. However, the vast majority of students supported smoke-free campuses (79.3%), campus ban e-cigarettes (67.2%), and government regulation of e-cigarettes (71.7%). The highest levels of support for smoke-free campuses came from students in economies with the weakest tobacco control policies (88.6%), and no e-cigarette regulations (80.4%).

Conclusions: Universities can be called upon to take action against increasing rates of tobacco use on their campuses by implementing smoke-free campus policies, implementing bans on advertising and sales of tobacco products on university campuses, as well as providing cessation programs for students.



Zone 3: Non-communicable Diseases and Risk Factors

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The Establishment and Eight-year Outcomes of Training Models for Diabetes Educators in Solomon Islands

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Abstract

Background: Non-communicable diseases (NCDs) are the leading causes of death in Solomon Islands (SLB). Statistics show that diabetes-related medical expenses account for 20% annual medical costs, suggesting the prevalence of insufficient physical activities, overweight, diabetic complications, and the poverty of knowledge and medical care for diabetes control.

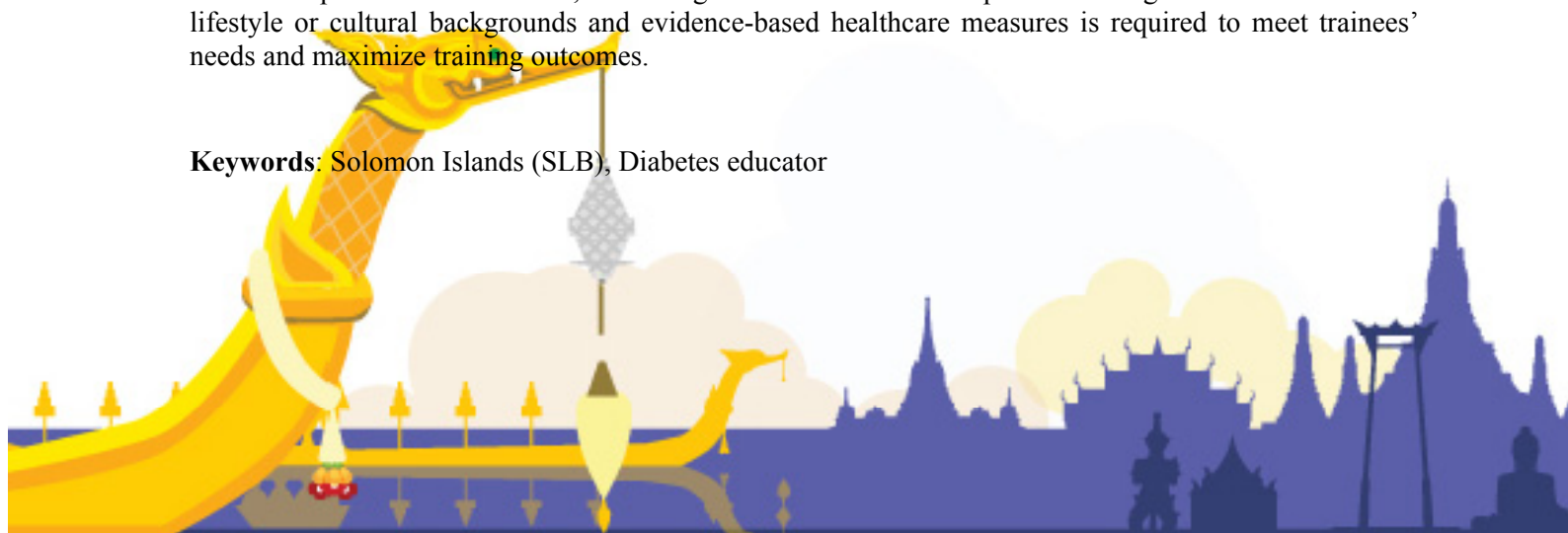
Objectives: This study investigated the establishment and 8-year outcomes of training models for diabetic educators in SLB supported by Project “Taiwan ICDF Medical Mission to Solomon Islands” during 2009~2016.

Methods: Modified training models and printed materials in different languages were adopted to address limited medical resources, different lifestyles and environmental challenges. Trainee self-administered Likert 5-point scales, including questionnaire on knowledge, course satisfaction and lecturer evaluation surveys, were applied as assessment instruments before and after training. SPSS 20.0 software was used for descriptive and inferential statistical analyses.

Results: Total of 198 healthcare professionals from 9 provinces in SLB participated in this study. After training, local educators’ knowledge about diabetes control was significantly improved (pre- to post-training mean scores=42.55±15.45 to 61.00±16.80 points, $p<0.05$), and they agreed or strongly agreed to the course contents (4.40±0.27~4.88±0.13 points). All trainees were willing to join similar workshops in the future. Besides, the trainees often to always concurred with the lecturer’s teaching performance (4.26±0.29~4.57±0.10 points).

Conclusions: The customized training models, materials and approaches are well-recognized by local healthcare professionals in SLB, indicating that an effort to incorporate training models in both local lifestyle or cultural backgrounds and evidence-based healthcare measures is required to meet trainees’ needs and maximize training outcomes.

Keywords: Solomon Islands (SLB), Diabetes educator



Zone 3: Non-communicable Diseases and Risk Factors

P-49

Early Detection of Cervical Cancer in Palu Municipality, Indonesia

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Abstract

Background/Objectives: Cervical cancer is one of the main health problems in women in developing countries including Indonesia. The participation of Woman in the early detection of cervical cancer as an effort to prevent disease was still low. This study aims to determine the factors associated with early detection of cervical cancer with the IVA method in Health Center.

Methods: The study design was cross-sectional. The study sample was that married aged 30-50 years in Singgani Health Center numbered 300 respondents. Sampling was using proportional cluster random sampling. Data were analysis using chi-square test and multivariate analysis using logistic regression and alpha 5%.

Results: The study showed that woman who had carried out early detection of cervical cancer using the IVA method was still low (18%). The results of the analysis show that significant factors are knowledge (p-value 0.027), availability of information (p-value 0.000), husband support (p-value 0.090), perceived threat (p value 0.023) and perceived barriers (p - value 0.001). While the variables that are not significant are education (p-value 0,616), employment (p-value 0,921), attitude (p-value 0,696) and perception of benefits (p-value 1,000). The most dominant factor was the availability of information (OR 35,970; 95% CI: 10,603-122,028).

Conclusions: This study showed that woman who were exposed to information about cervical cancer and IVA examination had a 35.970 times greater chance of early detection of cervical cancer compared to WUS who were not exposed to information after being controlled by perceived obstacles, perceived threats and husband's support variables. Suggestion, it is necessary to increase efforts to disseminate information through various media to increase WUS's understanding of cervical cancer and IVA examination.

Keywords: Cervical cancer, Early detection, IVA method



Zone 3: Non-communicable Diseases and Risk Factors

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Development of the Japanese Version of the Yale Food Addiction Scale 2.0

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Abstract

Background/Objectives: Food addiction (FA) is caused by certain types of foods (e.g., highly processed foods with refined carbohydrates and added fat), triggering addictive-like eating behaviors (e.g., loss of control, withdrawal, and cravings) and potentially leading to overweight/obesity and other clinical impairment/distress, we developed and validated the Japanese-translated version of the Yale Food Addiction Scale 2.0 (J-YFAS 2.0), the most commonly used measure to assess FA.

Methods: Back translation method was employed for the translation. The subjects included 731 undergraduate students. For structural validity, whether the J-YFAS 2.0 had a one-factor structure was examined with confirmatory factor analysis (CFA). Convergent validity was tested by the associations of FA with body mass index (BMI), uncontrolled and emotional eating, frequent desire to overeat, frequent snacking, and mood and anxiety disorders. Discriminant validity was tested by the association between FA and cognitive restraint in eating. Chi-square test, t-test, analysis of variance, and Spearman's rank correlation were used. Reliability was tested by the internal consistency of the 11 diagnostic criteria.

Results: Prevalence of mild, moderate, and severe FA was 1.1%, 1.2%, and 1.0%, respectively. CFA indicated the root-mean-square error of approximation, comparative fit index, Tucker-Lewis index, and standardized root-mean-square residual of 0.065, 0.904, 0.880, and 0.048, respectively. High uncontrolled eating and emotional eating, mood and anxiety disorders, frequent desire to overeat, and frequent snacking were associated with the FA presence ($p < 0.01$). These factors demonstrated significant correlations with the FA symptom count ($p < 0.01$). The highest attained BMI was associated with the FA symptom count ($p = 0.026$). Cognitive restraint in eating was associated with the FA presence and symptom count ($p < 0.05$), but not with the FA severity. Kuder–Richardson α was 0.78.

Conclusions: Our FA prevalence was similar to that reported from Italy and Spain. The J-YFAS 2.0 had a one-factor structure and adequate validity and reliability totally. The associations of FA with BMI and cognitive restraint in eating were less prominent than those found in the U.S. and European countries.

Keywords: Food addiction, YFAS 2.0, Japan



Zone 3: Non-communicable Diseases and Risk Factors

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Satisfaction with Cancer Care among Patients Treated in a Tertiary Care Hospital in Southern Sri Lanka

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Abstract

Background/Objective: As life threatening condition patients with cancer experience many adverse consequences related to long term hospitalization. Patient's views and expectations about hospital environment have been linked to health of patients with cancer. This study aimed to investigate cancer patients' satisfaction about the hospital environment in a tertiary facility hospital in Southern Sri Lanka.

Methods: This descriptive cross-sectional study consisted of 400 heterogeneous cancer patients at the Oncology ward, Teaching Hospital, Galle. Data were collected using an interviewer-administered questionnaire, bed head tickets, and the validated Sinhala version of European Organization for Research and Treatment of Cancer-In Patient Satisfaction (EORTC IN-PATSAT) questionnaire. In EORTC IN-PATSAT; higher scores indicate higher satisfaction levels. Ethics Review Committee, Faculty of Medicine, University of Ruhuna approved the study protocol.

Results: The mean age was 56 years (SD =11.92). Mean score (\pm SD) of overall hospital in-patient satisfaction was 60.22 (\pm 6.13). Satisfaction with Doctors' care was in higher level (71.10 \pm 10.72), but satisfaction with Nurses' care (62.50 \pm 12.17), other services (55.84 \pm 6.75) and general caring 51.45 \pm 8.15) were in moderate level. Self-reported physical impairments (p <0.001), male gender (p <0.001) and longer the time since diagnosis (p =0.06) were seems to be factors that enhance dissatisfaction of the hospital environment.

Conclusions: Cancer patients have received the highest satisfaction from doctors' care. Strategies need to be developed to improve patients' satisfaction in other areas of hospital environment. Hospital services need to be addressed effectively and competently to improve quality care of hospital in-patient environment and that would facilitate early recovery of the patients.

Keywords: Satisfaction, Cancer, Associated factors, Sri Lanka



Zone 3: Non-communicable Diseases and Risk Factors

P-52

Relationship between Violence Victimization and Mental Health by Mother's Education Level and Perceived Family Income among Adolescents: A 2018 Korean National Representative Survey

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Abstract

Background/Objectives: Health is often associated with socioeconomic factors, which can lead to inequities. Both the mother's education and family income are important predictors of the physical environment and learning experience at home among adolescents. This study tried to further understand how the link between violence victimization and mental health differed depending on maternal education level and perceived family income in adolescents, respectively.

Methods: A chi-square test and logistic regression analysis were used to assess the relationship between violence victimization, maternal education level, perceived family income and mental health. Interactions between these relationships were examined using multiplicative interaction terms.

Results: Violence victimization was a serious risk factor for mental health in all socioeconomic categories. In boys, the group with low maternal education levels had higher odds of experiencing mental health issues such as depression (OR=4.63, CI=[3.25-6.57]), suicidal ideation (OR=4.21, CI=[2.87-6.17]), and perceived stress (OR=1.71, CI=[1.20-2.43]) from violence victimization when compared with the group with high maternal education levels.

Conclusions: We could observed that maternal education levels and perceived family income interact on the relationship between violence victimization and mental health for all adolescents. The maternal education levels should be considered in relationship between violence victimization and mental health issues such as depression, suicidal ideation, and perceived stress.

Keywords: Violence victimization, Maternal education level, Perceived family income, Mental health



Zone 3: Non-communicable Diseases and Risk Factors

P-53

Live Survival for Patients Diabetes Mellitus with Gangrene in Makassar, Indonesia

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Abstract

Background/Objectives: Diabetic neuropathy is associated with Diabetes Mellitus (DM type 2) causes nerve damage that mostly nerves in legs. It will increase the risk of trauma and injury. The number of patients DM type 2 with gangrene is still high in the globe, including in Indonesia. Objective this study is analysis live survival of DM type 2 with gangrene.

Methods: The study was an observational with retrospective cohort design in Wahidin Sudirohusodo and Hasanuddin University Hospital Makassar. The respondents were 180 out and in patient taken from 2015-2018 with the exhaustive sampling. Data analysis was chi-square and multivariate; a cox proportional hazard with alpha 5%.

Result: This study shows that age is significant towards the live survival with p value 0,04 (log-rank < 0,05 p = 0,04), the diabetes mellitus duration of suffering (log-rank < 0,05 p = 0,009), and the clinical stadium (log-rank < 0,05 p = 0,006), on the contrary, the non-significant variable is the gender and tobacco consumption with p value (log-rank < 0,05 p = 0,353), and (log-rank < 0,05 p = 0,094). While, multivariate analysis shows that the clinical stadium is most dominant towards the live survival of DM type 2 with gangrene (p < 0,003; HR = 1,881 with 95% CI 1,607- 3,092).

Conclusions: In conclusion, the clinical stadium is the most significant for the life survival on the DM type 2 with gangrene. For this reason, it is recommended to increase awareness for their health status and healthy life behavior.

Keywords: Live, Survival, DM, Stadium



Zone 3: Non-communicable Diseases and Risk Factors

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Food Intake Situation of Middle and Older Age Japanese Expatriates Living in Philippines and Thailand

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Abstract

Background/Objectives: This study aimed to clarify the food intake situation of middle and older Japanese expatriates living in Cebu, Philippines, and Chiang Mai, Thailand, and to obtain findings to consider the health support for long-term Japanese expatriates residing abroad.

Methods: The target population consisted of all members of a Japanese circle aged 50 and more in the two cities, but was limited to Japanese expatriates who had been resident in the respective cities for longer than three months. A questionnaire sheet was sent to them. Participants comprised of 104 Japanese expatriates (41 people in the Philippines and 63 people in Thailand) who agreed to participate in the research. The average value of the 60-79 years of age (n=1996 in 60s, n=1909 in 70s) of The National Health and Nutrition Survey in Japan, 2017, was used for comparison (the control).

Results: The Philippines residents were 30 males and 9 females (no answer 2), with an average age of 63.2 years. The Thai ones comprised of 31 males and 17 females (no answer 15), with an average age of 69.8 years. The average dietary energy intake was 1970 ± 447 (standard deviation) kcal/day for the Philippine residents, 2072 ± 352 kcal/day for the Thai residents, and 1953 ± 521 kcal/day for the control. The averages values in the two residents were significant higher than that of the control ($p < 0.05$). In terms of food intake, grains, fruits, meat-fish-soy products, eggs, and milk were consumed by nearly 80% of the ideal amount in the two residents and the control. In two residents, vegetables were consumed about only 60 % of the ideal amount (Control 89%). Oils and fats were consumed about 100 % of the ideal amount, which was larger than that in the control (44%).

Conclusions: In the food intake situation of middle and older age Japanese expatriates, dietary energy intake was higher compared with same age Japanese people living in Japan. Although their food intake of main foods was not so much different from Japanese people living in Japan, the vegetable intake had the tendency to be lower.

Keywords: Japanese expatriate, Food intake, Vegetable, Oils and fats



Zone 3: Non-communicable Diseases and Risk Factors

P-55

Evaluate the Effectiveness of Health Knowledge and Attitudes of Teenagers in “Escape Room” Live-action Game in Tainan, Taiwan

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Abstract

Background/Objectives: In general, teenagers are not familiar with public health issues. This study focus on the student-centered learning model in health education by using innovative teaching methods. We improve the learning motivation of young people by flipping education rather than using traditional didactic teaching.

Methods: “Escape Room” Live-Action Game were held in July 7 to 15, 2018 in Tainan, Taiwan. Teenagers who participated in the game were separated into two groups. One is explanation-first group (do the post-questionnaire before the explained in the end of game), and the other is questionnaire-first group (explained before post-questionnaire in the end of game). We applied paired t-test to assess the public health knowledge change before and after attending the “Escape Room” Live-Action Game by using pre-and post-questionnaire. ,

Results: This study included 236 teenagers, and it showed that after attended the” Escape Room” Live-Action, the average score of public health knowledge, including tobacco control, cancer screening, obesity prevention, increased by 4.34 times compared with that before the activity ($P < 0.001$). regardless of explanation or not, the public health knowledge of teenagers were increasing significantly after attending the activity,

Conclusions: In terms of improving the health knowledge in young generation group, flipping learning is effective and more attractive to young people.

Keywords: Teenagers, Flipping learning, Health knowledge



Zone 3: Non-communicable Diseases and Risk Factors

P-56

Treating Patients with Non-communicable Diseases in Post-conflict Areas along Eastern Burma Border by Ethnic Health Organizations

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Abstract

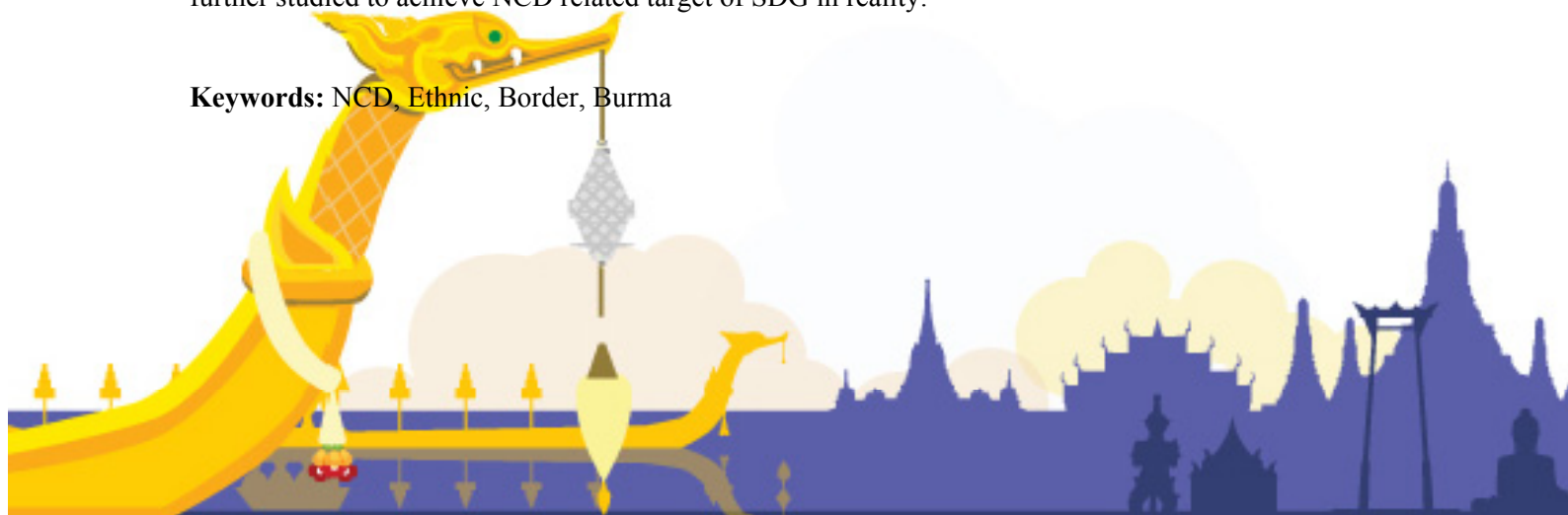
Background/Objectives: Although Sustainable Development Goals (SDG) includes target to reduce premature NCD mortality, Non-communicable diseases (NCD) accounts for 24% of premature deaths in Myanmar in 2016. Moreover, accessing health services continues to be difficult for NCD patients, especially for those living in post conflict areas in Myanmar because transportation is challenging for patients and non-local health care providers due to political and security reasons. Thus, local ethnic health workers from ethnic health organizations were well trained to provide treatment for NCD and asked to provide treatment in these hard-to-reach areas. This study aims to assess the risk factors associated with hypertension and diabetes in post conflict areas to inform strategies to screen high-risk patients.

Methods: Secondary data analysis was conducted on 4211 outpatients from 6 clinics that recorded data on NCDs from October 2017 through June 2018. Chi-square analysis was conducted to identify significant demographic risk factors according to data entered into electronic logbooks.

Results: Among 4211 outpatients, (4.3%) had hypertension and (0.4%) had both hypertension and diabetes. Among 196 hypertensive patients, (69%) were over 45 years old, (57%) were female, (75%) were Karen ethnicity and remaining were Burma and other. (33.2%) were agriculture workers, (16%) were general workers, and (34%) were “dependent.” (21%) of patients were treated at least twice during the study period. (31%) of patients had controlled blood pressure (<140/90 mmHg) at their last clinic visit. Female sex and Burma ethnicity were associated with higher risk and agricultural work was associated with lower risk of having both hypertension and diabetes. Patients with both diseases were significantly more likely to visit a clinic at least twice in 8 months, and significantly more likely to control their blood pressure compared to those with hypertension alone.

Conclusions: Outpatients who are female or Burma may need to be targeted for NCD screening. While data demonstrate that EHOs can offer treatment to hypertensive patients in conflict-affected areas in Myanmar, few patients made routine visits to the clinic and challenges in accessing NCD care need to be further studied to achieve NCD related target of SDG in reality.

Keywords: NCD, Ethnic, Border, Burma



Zone 3: Non-communicable Diseases and Risk Factors

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Alcohol, Substance Use and Depression Among Schooling Adolescent in Anuradhapura

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Abstract

Background: The adolescent period is crucial and vulnerable. Mental health of the adolescents is more important than other groups, because adolescent development transmit the disease burden in childhood as well as gain during adolescence to the adulthood. The most important adverse effects of mental health problems are suicide and addictions, which leads to stigma and discrimination.

Objective: To assess the prevalence of depressive symptoms, alcohol and substance use and its associations to depressive symptoms among schooling adolescents in Anuradhapura.

Methods: A descriptive cross sectional study using cluster sampling according to probability proportionate to size was conducted in 11 schools, in Anuradhapura educational zone. Center for Epidemiologic Studies Depression Scale (CSE-D) was used to assess depressive symptoms. Data on alcohol and substance use were collected using self-administrative questionnaire.

Results: Among 1086 adolescents included 528 males (48.5%) and 560 females (51.5%), 58.5% adolescents have depressive symptoms (48% males and 52% females). One of the most harmful adverse effect was addiction to alcohol and substance use. From 1086 students 5.2% (n=57) were addicted to alcohol or substance use. Among depressive adolescents, 7.6% students were addicts (p = 0.001). From the addicted adolescents 98.2 % adolescents were live with their own family. History of alcohol and Substance use in a close family member was significantly associated with adolescent substance abuse which is 78.6% (n = 44) (p = 0.000). out of depressive adolescents 11% adolescents (n = 136) had suicidal ideation and this was significantly associated with alcohol and substance use (p = 0.005).

Conclusions: Prevalence of Depressive symptoms, alcohol and substance use were significant among schooling adolescents in Anuradhapura. Significant number of students had suicidal ideation. Sri Lankan health and education systems must have interventions to address these problems and further evaluation studies to elaborate.

Keywords: Depression, Adolescents, Alcohol, Suicidal ideation, Sri Lanka



Zone 3: Non-communicable Diseases and Risk Factors

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The Prevalence of Urinary Sodium and Potassium of Malaysian Adults According to their Physical Activity Status: Findings from Malaysian Community Salt Survey 2017-2018

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Abstract

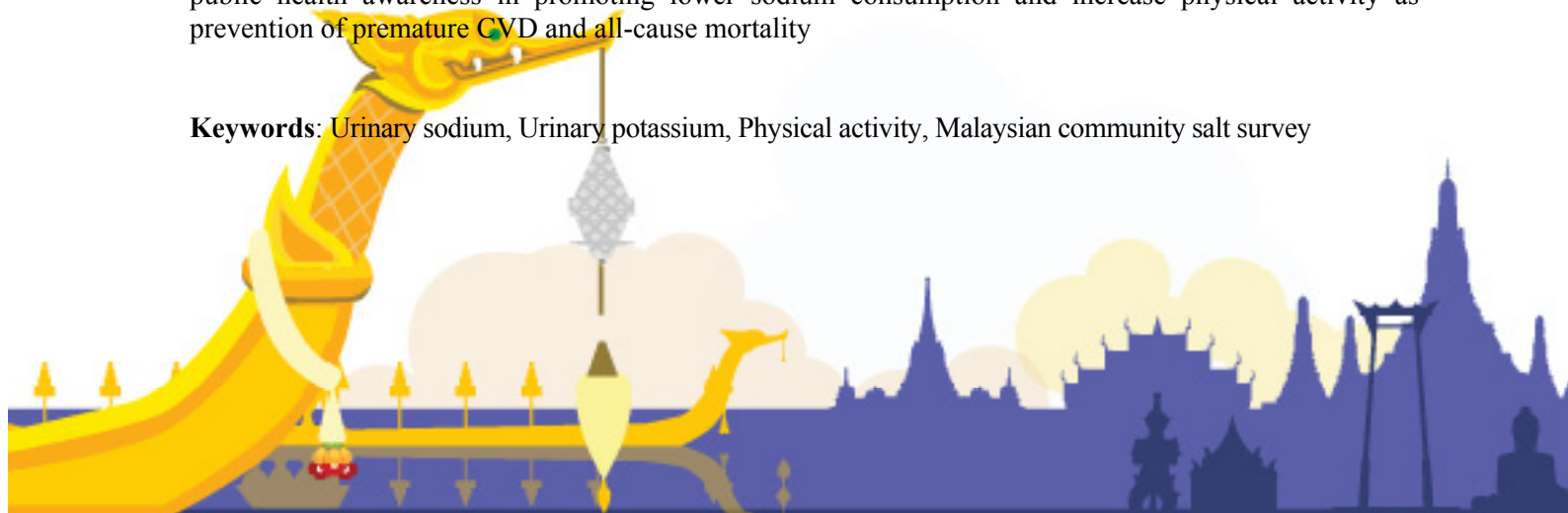
Background/Objectives: High urinary sodium and low urinary potassium increase the risk of high blood pressure. Low physical activity is a strong and independent risk factor for both cardiovascular disease (CVD) and all-cause mortality. This study assessed the urinary sodium and potassium according to the physical activity status of Malaysian adults.

Methods: A cross-sectional study was conducted among Malaysian adults aged 18 years-old and above from October 2017 to March 2018 using multi-stage stratified sampling to ensure national representativeness. Urinary sodium and potassium were determined by using a single 24-hours urine collection. WHO recommendation of adults should consume less than 2,000 mg of sodium and at least 3,510 mg of potassium per day. International Physical Activity (IPAQ) short form version (7 questions) was used to obtain respondents' physical activity information. Metabolic Equivalents (METs) are used to express the intensity of respondents' physical activities. Descriptive analysis was performed using SPSS Software version 21.0.

Results: Overall, 1047 respondents were interviewed and 748 respondents completed the 24-hour urine collection (71.4% response rate). The prevalence of respondents having MET 1 (low physical activity) was 52.6% (420) MET 2 (moderate physical activity) was 38.3% (306) and MET 3 (high physical activity) was 2.8% (22). The highest prevalence of mean urinary sodium was observed among the moderate physical activity group [3345.1 mg/d (95% CI: 2991.0, 3699.3)], followed by the low physical activity group [3089.74 mg/d (95% CI: 2904.9, 3274.6)] and high physical activity group [2633.8 mg/d (95% CI: 2068.4, 3199.3)]. The prevalence of the lowest mean urinary potassium was seen among the high physical activity group [1005.7 mg/d (95% CI: 668.2, 1343.2)], followed by low physical activity group [1077.2 mg/d (95% CI: 992.3, 1162.1)] and moderate physical activity group [1123.5 mg/d (95% CI: 1044.5, 1204.5)].

Conclusions: Overall findings suggest that Malaysian adults' consumption of sodium were higher than WHO recommendation and potassium consumption were lower than the recommendation. Malaysian adults also seen to be physically inactive. Given its severe health consequences, it is important to increase public health awareness in promoting lower sodium consumption and increase physical activity as prevention of premature CVD and all-cause mortality

Keywords: Urinary sodium, Urinary potassium, Physical activity, Malaysian community salt survey



Zone 3: Non-communicable Diseases and Risk Factors

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Association of Urinary Sodium to Potassium Ratio with Blood Pressure and Anthropometry: Findings from the Malaysian Community Salt Survey (Mycoss) 2017-2018

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Abstract

Background/Objective: High blood pressure was one of the risk factors for cardiovascular disease. High urinary sodium and low urinary potassium and high sodium to potassium ratio were related with increase the risk of cardiovascular diseases especially hypertension. This study was to determine the association of sodium potassium excretion and sodium potassium ratio to blood pressure and antropometry among Malaysian adults.

Methods: Data was obtained from the Malaysian Community Salt Survey (MyCOSS), a cross sectional survey of adults aged 18 years and above. A total of 1047 respondents involved in this study. 24-hour urine collection was used in this study . Urinary sodium and potassium concentration was analyzed using indirect ion-selective electrode (ISE) method. Samples with no missing urination and more than 500 ml were included in the analysis. Blood pressure measured by using OMRON HEM 907. Anthropometry was measured using Tanita digital weighing scale HD319, measuring tape SECA 201 and stadiometer SECA 213. Descriptive and correlation analysis were done using SPSS version 21.0.

Results: A total of 798 respondents (76% response rate) completed the 24-hour urine collection process. Results showed mean sodium was 3167 (95% CI: 2987, 3346) mg per day which is higher than the World Health Organisation (WHO) recommendation of 2000 mg/d of sodium while mean potassium was 1094 (95% CI: 1027, 1161) mg per day lower than WHO recommendation (3510 mg/day). Significant correlation between both sodium and potassium ($r = 0.368$, $p < 0.001$). The overall urinary sodium to potassium ratio (Na:K) was 3.3 and its was associated with age ($r = -0.119$, $p < 0.001$) and Body Mass Index ($r = 0.120$, $p < 0.001$). There were no significant correlation between sodium to potassium ratio with systolic ($r = -0.018$, $p = 0.606$) and diastolic ($r = 0.007$, $p = 0.813$) blood pressure.

Conclusions: In summary,there was significant association between sodium to potassium ratio with age and BMI and no significant association with blood pressure. Low sodium in daily food intake, educate on sources of food high in salt and high in potassium should be emphasize in controlling the risk of cardiovascular diseases.

Keyword : Sodium potassium ratio, Blood pressure, Anthropometry



Zone 3: Non-communicable Diseases and Risk Factors

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The Effect of Sleep Impairment on Gestational Diabetes Mellitus: A Systematic Review and Meta-analysis of Cohort Studies

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Abstract

Background/Objectives: To evaluate the influence of sleep duration or impairment (poor sleep quality, snoring, and obstructive sleep apnea [OSA]) on gestational diabetes mellitus (GDM) odds by performing a systematic review and meta-analysis.

Methods: PubMed, Embase, EBSCO, and WOS databases were searched up to March 4th, 2019, and the reference lists of related reviews and meta-analyses were evaluated. Cohort studies reporting odds ratio (OR), relative risk (RR), and hazard ratio (HR) with 95% confidence interval (CI) for the association between sleep duration or impairment and odds of GDM were included. OR with 95% CI were used as the measure of effects. Heterogeneity was assessed by the Chi-squared and I^2 tests. Dose-response analysis was performed for the relationship between sleep duration and GDM odds.

Results: A total of 16 studies with 2,551,017 pregnant women and 142,103 cases were included in this study. Both short and long sleep duration were associated with increased odds of GDM. There was a U-shaped relationship between sleep duration and GDM odds ($P_{\text{nonlinearity}} < 0.001$), and approximately 8 hours of sleep was recommended as the optimal amount for preventing GDM. Increased odds of GDM were also observed among participants with poor sleep quality, snoring and OSA. The impact of these sleep impairments was stronger during mid-pregnancy.

Conclusions: For preventing GDM, 8 hours is recommended as the optimal sleep duration. Poor sleep quality, snoring, and OSA were also associated with increased odds of GDM.

Keywords: Sleep duration, Sleep impairment, Gestational diabetes mellitus



Zone 3: Non-communicable Diseases and Risk Factors

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Social Determinants of Quality of Life Among Patients with Oral and Oropharyngeal Cancers in India: An Explorative Study

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Abstract

Background/Objectives: Oral and oropharyngeal cancers are one of the most common cancers in the world. Tobacco and alcohol consumption are the main risk factors for their occurrence. Differences across countries relate to distinct risk profiles and availability and accessibility of health services. Success of cancer treatment cannot be gauged by elimination of cancer cells alone, as quality of life of patients is equally important. There is need to identify factors which influence the quality of life among patients with oral and oropharyngeal cancers in order to tailor make, prioritize and institute the best treatment protocol.

Methods: Oral and oropharyngeal cancer patients visiting the Department of Oral Medicine and Radiology, Manipal College of Dental Sciences, Mangalore and Department of Oncology, Kasturba Medical College, Mangalore were included in the study. Information pertaining to various factors related to patient, tumor and treatment factors were recorded. Quality of life of patients as assessed by Oral Health Impact Profile (OHIP-14) and sociodemographic data were also recorded.

Results: Correlation analysis showed that OHIP scores were significantly associated with patient's education ($r=-0.238$, $p=0.024$), occupation ($r=-0.260$, $p=0.013$), numerical pain scale ($r=0.533$, $p<0.001$) and lymphatic nodal status ($r=0.204$, $p=0.05$). Results of the multiple linear regression analysis revealed that numerical pain scale ($r=0.533$, $p<0.001$) was a significant predictor of OHIP scores ($\beta=0.472$, $p<0.001$).

Conclusions: The present study revealed the role of socio-demographic variables on quality of life among patients with oral and oropharyngeal cancers. It highlights important policy implications to tackle this public health problem in various communities.

Keywords: Oral cancers, Oropharyngeal cancers, Quality of life, Social determinants



Zone 3: Non-communicable Diseases and Risk Factors

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Estimating Sleep Disorders Effects on the incidence of Breast Cancer in Taiwan: A Propensity Score-matched Cohort Study

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Abstract

Background/Objectives: About 10% of the population suffer from sleep disorders in Taiwan. Some previous studies indicated that sleep disorders may increase the risk of incident breast cancer. The mechanism underlying the association of sleep disorders and breast cancer is not clear. This study aims at estimating the effect of sleep disorders on the incidence of Breast Cancer in Taiwan.

Methods: This study was a retrospective cohort study, which conducted based on the 2000- 2013 Taiwan National Health Insurance Research Database (NHIRD). The study subjects were 31,058 female patients with sleep disorders as the study group and selected the control group (1: 4) by propensity score matching method to avoid selection bias. The study used the stratified Cox regression to investigate the correlation between sleep disorders and breast cancer after controlling for related variables, including age, residence, monthly insured income, and comorbidities (metabolic syndrome, obesity, and other cancer).

Results: The study results showed that the incidence rate of breast cancer in patients with sleep disorders was 0.15% per person-year. After controlling for related variables, the risk of incident breast cancer in patients with sleep disorders was higher than those without sleep disorders (adjusted hazards ratio [aHR] = 3.22, 95% confidence interval [CI] = 2.80–3.70). Patients with obesity had a lower risk of incident breast cancer (aHR = 0.58; 95% CI = 0.39–0.87). Furthermore, metabolic syndrome and other cancers were not related to breast cancer.

Conclusions: There is indeed a correlation between sleep disorders and breast cancer. Patients with sleep disorders may have a higher risk of incident breast cancer.

Keywords: Sleep disorders, Breast cancer, Propensity score matching, Cohort study



Zone 3: Non-communicable Diseases and Risk Factors

P-63

The Surveillance of Patients Risk Suspected Pre-hypertension by SMBP in Response Area of Ban Naipong of Primary Care Unit, Aotong Sub-district, Wangwiset District, Trang Province, Thailand

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Abstract

Background/Objectives: WHO had definite the mean of blood pressure any person who has a blood pressure measuring greater than 140/90 mm/Hg is considered high blood pressure and Those who suffering from high blood pressure and don't treatment them properly increases the risk of many diseases. Still we are screening blood pressure of general people once per year then we interested to bring data of suspected pre-hypertension give on intervention by SMBP.

Methods: This study was be descriptive study with the purpose of surveillance of suspected pre-hypertension disease to re-visiting by SMBP and to comparison the caring knowledge for their own patients suspected patients of hypertension. Target operational processes Re-visiting by SMBP is suspected pre-hypertension patients be selected specific group population levels of blood pressure values Systolic 140 - 159 mm/Hg and diastolic 90 - 99 mm/Hg after we screened from all people live in response area number 34 people then they got automatic sphygmomanometer per person in practicing by themselves 3 times per day on period intervention 7 days and take care with health education for change behavior on slogan (3E2N) eating diet food, exercise 3 days/ week, emotional, non-smoking and non-alcohol re-visiting by SMBP tools used to collect data from a questionnaire 3 Section 1 Overview Part 2 behavior data and knowledge sharing 20 Part 3 record patient information. Descriptive statistics using a pair simple test compares the blood pressure levels and comparative prior knowledge back into activity, behavior modification for patients with suspected disease, high blood pressure in the treatment Re-visiting by SMBP

Results: The results of screening 908 people representing 81.99%. High blood pressure suspected is pre-hypertension of 34 samples 18.01%. The systolic average 124 mm/Hg values and the diastolic average 80 mm/Hg. The target group depression patients suspected to have knowledge before and after comparison of (\bar{x} 15.56 \pm 0.67) the blood pressure levels of patients.

Conclusions: The way points of patient's high blood pressure levels that available control self-motivated to change their behavior. Increasing awareness against the problem isn't behavior of non-communicable diseases. The problem is the management of their patients is to exercise.

Keywords: SMBP, Surveillance, Suspected pre-hypertension



Zone 3: Non-communicable Diseases and Risk Factors

P-64

Impact of Psychosocial Constructs on Oral Health Behaviour among Young Adults in India: An Exploratory Study

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Abstract

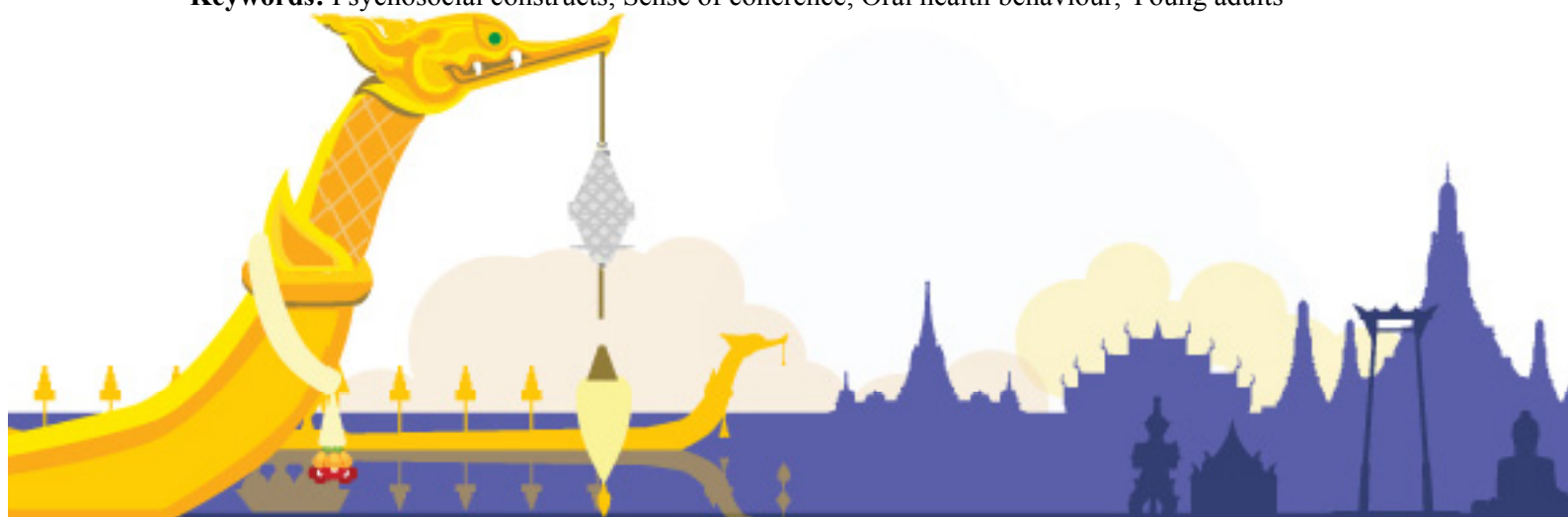
Background/Objectives: All individuals experience varying amounts of stress in their lives, which can influence their long-term health. Aaron Antonovsky, an American-Israeli social scientist observed that certain individuals stay healthy in spite of experiencing stressors in their lives. This concept was practically operationalized as the Sense of Coherence (SOC) scale. The relationship between SOC and oral health behaviour is yet to be clearly established. The present study was conducted to assess the impact of SOC on oral health related behavior among young adults in Mangalore.

Methods: A total of 1157 degree students from three randomly chosen institutions in Mangalore participated in the present study. Sense of Coherence was assessed using the 13-item Sense of Coherence (SOC-13) scale. Oral health behaviour was assessed by a questionnaire method and included brushing habits, tobacco use, visit to dentist and sugar intake. Information related to demographics was also obtained.

Results: Results of correlation analysis revealed that SOC was significantly associated with behaviour score ($r=0.011$, $p<0.001$), brushing habits ($r=0.389$, $p<0.001$), snacking ($r=-0.346$, $p<0.001$), visit to dentist ($r=0.480$, $p<0.001$), and tobacco use ($r=0.067$, $p=0.023$). Multiple linear regression analysis revealed that SOC emerged as significant predictor of oral health behaviour among study subjects ($\beta=1.966$, $p<0.001$).

Conclusions: SOC emerged as a significant predictor of oral health related behaviour among young adults in Mangalore. The present study emphasizes on the potential role of salutogenic model in oral health in developing nations such as India, where there is a lack of resources, compounded with an increasing disease burden.

Keywords: Psychosocial constructs, Sense of coherence, Oral health behaviour, Young adults



Zone 3: Non-communicable Diseases and Risk Factors

P-65

Association between Mental Health Status and the Odds of Developing Hypertension among Chinese Adolescents

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Abstract

Background/Objectives: In recent years, the average age at onset for hypertension has been decreasing. Mental health has been suggested to be associated with the incidence of hypertension, while there is a lack of evidence supporting this relationship among Chinese adolescents. Thus, this study aims to explore the relationship between mental health status (stress, self-esteem and depression) and the odds of developing hypertension among Chinese adolescents

Methods: A cross-sectional study was conducted in a middle school in Wuhan, China. A self-designed questionnaire was used to collect demographic characteristics, sleep quality, physical activity, food frequency, stress, self-esteem, and depression. Body weight status and blood pressure were measured by medical staff using standard instruments. Chi-square test and multiple logistic regression were performed using the Stata15.0 software (Stata Corporation, College Station, USA).

Results: A total of 1,145 students who met the inclusion criteria participated in this survey, 22.36% of which presented elevated blood pressure and 35.81% presented hypertension. There was a difference in distribution of blood pressure groups across stress groups ($\chi^2=10.93$, $P=0.03$), while no significant difference was observed across self-esteem or depression groups. However, the significant association between pressure and blood pressure group disappeared after adjustment for other variables, while students with moderate and very high level of depression showed higher odds of developing hypertension (OR with 95% CI for moderate level=1.96 (1.09, 3.55); for very high level=2.02 (1.07, 3.78)).

Conclusion: The mental health status of Chinese adolescents may be related to the odds of hypertension. Further studies are warranted to validate the results we found in this survey.

Keywords: Mental health, Adolescents, Hypertension



Zone 3: Non-communicable Diseases and Risk Factors

P-66

The Association between Sleep Characteristics and Hypertension among Chinese Adolescents

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Abstract

Background/Objectives: To examine the potential correlation between sleep characteristics and hypertension among adolescents in China

Methods: A cross-sectional study was conducted in a middle school located in Wuhan, China. A self-designed questionnaire was used to collect demographic characteristics, physical activity, food frequency, stress, self-esteem, and depression. Sleep characteristics were collected using Pittsburgh Sleep Quality Index questionnaire. Body weight status and blood pressure were measured by medical staff using standard instruments. Participants were divided into three groups according to the International Child Blood Pressure References Establishment Consortium: normal blood pressure, elevated blood pressure, and hypertension. Multiple logistic regression was performed using the Stata15.0 software (Stata Corporation, College Station, USA).

Results: 1,145 students participated in this survey, 22.36% of which presented elevated blood pressure and 35.81% presented hypertension. After adjusting for other variables, we found a higher odds of elevated blood pressure among students who had difficulty falling asleep (OR with 95% CI=4.73 (1.19, 18.85)), and the same trend was observed with hypertension but the significance disappeared (OR with 95% CI=3.41 (0.89, 13.11)). We did not observe any significant association between sleep duration, sleep quality, sleep efficiency, sleep disorders or sleep medicine use and elevated blood pressure or hypertension.

Conclusions: Difficulty with sleep onset might be associated with elevated blood pressure and hypertension among Chinese adolescents. Further studies are warranted to validate the results of this study.

Keywords: Sleep characteristics, Hypertension, Adolescents



Zone 3: Non-communicable Diseases and Risk Factors

P-67

Predictors on Attempts to Lose Weight among Overweight and Obese Adults

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Abstract

Background/Objectives: Reports have shown that Malaysia is the fattest nation in the Southeast Asia region. Many public health interventions have been introduced to modify behaviours associated with weight management, but with low success rate. This has been attributed to failures in identifying the perception about health and obesity from the overweight individuals. The objective of this study is to determine the predictors on attempts to lose weight among overweight and obese adults.

Methods: A cross sectional study was conducted in a Malaysian public health clinic. A self-administered questionnaire, incorporating the Health Belief Model (HBM), was used to collect data from 300 randomly selected overweight and obese adults. Multi-item reliability tests were conducted to test internal consistency of the constructs. Means score of each construct was computed based on results of factor analysis. Multivariate binary logistic regressions were carried out to identify the predictors on attempts to lose weight.

Results: The study found 33.7% of the respondents were overweight with body mass index (BMI) between 24.0kg/m²-29.9kg/m², and 66.3% were obese with BMI 30kg/m² or more. Only 38.0% of them had attempted to lose weight in the last 12 months. Multivariate binary logistic regressions found that females (2.4 times), those with absence of associated medical conditions (3.8 times), those who satisfied with weight status (6.2 times) and those who have a higher mean score in the perception of benefits gained from healthy eating and exercise habits (2.2 times) were more likely to attempt to lose weight.

Conclusions: This study identified gender, associated medical condition, satisfaction with weight status, and perceived benefits as the predictors on attempts to lose weight. The predictors can be used in the design of interventional activities to support overweight and obese adults manage their weight.

Keywords: Overweight and obese, Health belief model, Predictors, Attempts to lose weight.



Zone 3: Non-communicable Diseases and Risk Factors

P-68

Comparison of Repeated Measures ANOVA, Generalised Estimating Equations (GEE) and Mixed Effects Models (MEM) in Analysis of Body Fat Percentage Using Data from MyBFF@school Study

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Abstract

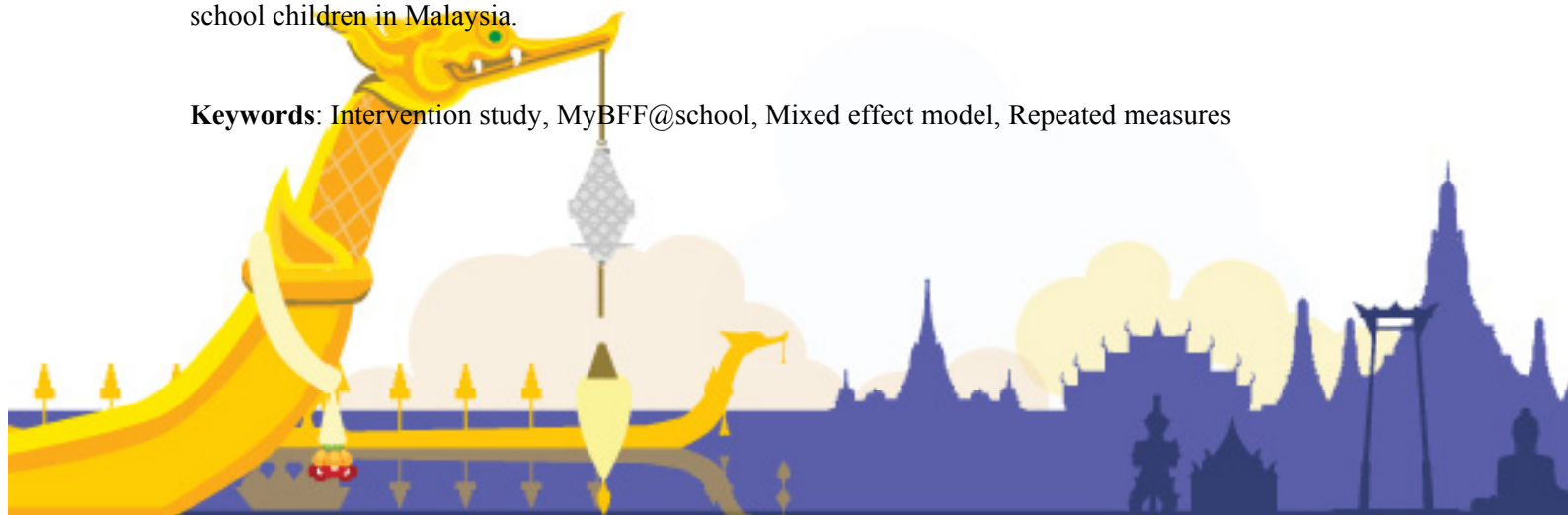
Background/ Objectives: Longitudinal or correlated data are important in understanding how factors of interest change over time as well as producing better epidemiological measures. Our goal is to apply the appropriate methods for analysing correlated data such as body fat percentage data.

Methods: A total of 2,470 overweight and obese school children aged between 8 and 16 participated in the My Body is Fit and Fabulous at School (MyBFF@school) Study were used in the analyses. A total of 1,392 of students were allocated to intervention group, while 1,078 were in the control group. In this study, generalised estimating equation (GEE) and mixed effect model (MEM). were used for analysing body fat percentage data to assess the effectiveness of MyBFF@school program. Finally, these methods are compared to the conventional method, repeated measures ANOVA.

Results: Based on the results, we found that the three methods were found to be similar in terms of estimation, the percentage of body fat before and after intervention between and within groups comparisons. We found that, the average amount of percentage body fat was reduced significantly ($p < 0.05$). The average percentage body fat in the six months after intervention were 38.401(6.653) and 39.268(6.904) in treatment and control group, respectively. The difference between the two groups was statistically significant ($p = 0.022$).

Conclusions: Due to their advantages, MEM and GEE should be strongly considered for analysing repeated measure data. MEM should be used to explore subject-specific effects. Whereas, GEE should be utilised if ones would like to explore for overall average effects. As a conclusion to these methods, MyBFF@school program was effective in reducing the percentage body fat in overweight and obese school children in Malaysia.

Keywords: Intervention study, MyBFF@school, Mixed effect model, Repeated measures



Zone 3: Non-communicable Diseases and Risk Factors

P-69

Prevalence of Cardiovascular Risk Predictive Symptoms and Signs among First Trimester of Pregnant Mothers in Anuradhapura District, Sri Lanka

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Abstract

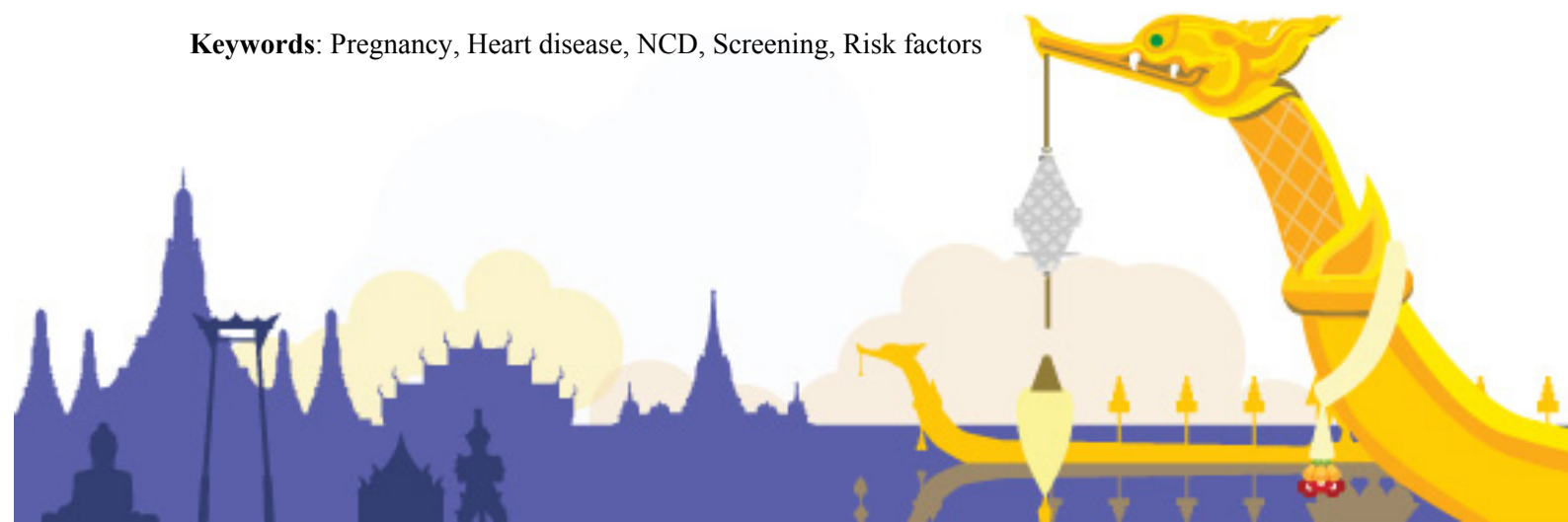
Background/Objectives: Every day, approximately 800 women die from preventable causes related to pregnancy and childbirth. Ending Preventable Maternal Mortality (EPMM) still remains as a high priority in the global health agenda predominantly in low and middle-income countries (LMIC). Cardiac disease is second most common cause for maternal deaths after postpartum hemorrhage.

Methods: A descriptive cross-sectional study is conducted in Anuradhapura district of Sri Lanka among first trimester pregnant mothers during July 2019. The study involved community-based data collection as a part of developing large cohort of antenatal mothers. Data was collected using an interviewer-administered questionnaire.

Results: There were 455 pregnant females from 20 MOH areas. The study sample includes 143(31.4%) primi mothers, 140(30.8%) in their second pregnancy and the rest (37.8%) were in para 3 or more. Mean age was 28 years (SD 5.8). Mean height, weight, hip and waist circumference were 155.8cm, 54.5kg, 76.0cm, and 101.2cm respectively. Mean systolic blood pressure was 107mmHg (SD 11.2) and diastolic blood pressure was 66.8mmHg (SD 8.5). Mean BMI was 22.9(SD 4.8). Proportion of obese, overweight and underweight participants was 8.3% (n=37), 38.9%(n=173) and 16.6%(n=74) respectively. The distribution was not different among participants with POA less than 8 weeks and more than 8 weeks. Proportion of obese females steadily increased from 2.2% to 17.3% from lowest to highest age quintile. Age and BMI showed a significant correlation ($p<0.001$, $r=0.304$). Waist circumference measurements shows that 85(19.0%) and 99(22.1%) of participants are either at high (>88cm) or moderate(>80cm) risk. Waist to hip ratio was more than 0.85 among 206(46.1%) and between 80and 85 among 124(27.7%). Only 2(0.4%) patients were detected as having elevated blood pressure while 17(3.7%) were already diagnosed as chronic hypertension. Known heart diseases, rheumatic fever, dyslipidaemia and stroke were reported by 2, 1, 4, and 1 participants. However, difficulty in breathing, chest pain, syncope, palpitation, orthopnoea and paroxysmal nocturnal dyspnoea was reported by 31(6.8%), 21(4.6%), 16(3.5%), 7(1.5%), 5(1.1%) and 2(0.4%) respectively while at least one murmur was detected among 32(7%) patients.

Conclusions: Prevalence of signs and symptoms of cardiac conditions were higher among the studied cohort. Evidence-based screening methods for early detection of heart diseases remain crucial.

Keywords: Pregnancy, Heart disease, NCD, Screening, Risk factors



Zone 3: Non-communicable Diseases and Risk Factors

P-70

Drastic Increase of Youth Suicide, and Identification of Shorter Survival Times after Onset of Main Reason for Suicide in Japan: Successful and Unsuccessful Interventions

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Abstract

Background/Objectives: In 2019, Japan recorded drastic increase of youth suicide (<20yrs.), while total suicide death number and rate gradually decreased in all ages. We sought to 1) identify factors associated with suicide in Japan, and 2) determine high risk group with shorter survival time after onset of the main reason for suicide.

Methods: First we analyzed national suicide data, and we statistically analyzed 523 deceased individuals, collected from bereaved persons with in-depth interviews as a cross sectional study. Also we categorized qualitative data from respondents using KH-Coder.

Results: Youth suicide in Japan showed significant association with jumping into train ($p<0.001$). Installation of platform screen door significantly reduced number of jumping into train suicide ($p<0.001$). However, SNS based consultation, 'Call SOS education' did not show expected outcome to reduce suicide. Neighbors, school friends demonstrated low sympathy to the deceased, compared with office colleagues (KH Coder analysis). In addition, our study identified median survival length from the onset of the main reason for suicide among the deceased was 5.4 years (median 1956 days, $N=523$). The highest-risk group (fewest survival days) were male self-employed founder-presidents. Half of the founder-presidents died within 2 years of onset of the precipitating cause (median 1.9 years). Determinants of early death (<3 years) from the onset of main cause of suicide by logistic regression analysis were as follows; Self-employed, founder president: AOR: 4.52 (2.01–10.15, $p<0.001$), employee: AOR: 3.93(1.62–9.54, $p=0.002$), Male: AOR: 2.51(1.02–6.20, $p=0.046$).

Conclusions: Some urgent effective interventions examined, but not succeeded in reducing youth suicide in Japan. Also Japan should support more for self-employed founder president to prevent economic based suicide.

Keywords: Suicide, Youth, Japan.



Zone 3: Non-communicable Diseases and Risk Factors

P-71

Profile of Nutritional Status Children Aged 0-59 Months in Banggai Regency, Central Sulawesi, Indonesia

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Abstract

Background/Objectives: Nutritional problems in children aged 0-59 months are still a public health problem, one of which is characterized by the prevalence of stunting > 20%. Banggai Regency is one of the priority areas for national stunting handling programs. The purpose of this study was to describe the nutritional status problems of children aged 0-59 months in 10 villages in Banggai Regency.

Methods: This survey study involved a total sampling of 617 children aged 0-59 months in 10 villages collected from August to September 2018. Data were collected through anthropometric measurements using the Camry brand digital scales, length board, microtoise and interviews using a structured questionnaire. Data collection results processed and analysed with WHO anthro and SPSS 21 software.

Results: This study shows that nutritional status based on Weight for Age index is overweight 2,27%, Wellnourished 72,77%, Underweight 19,77% and Severely Underweight 5,19%. Nutritional status based on Height for Age index is Height 1,46%, Normal 64,67%, Stunted 24,80% and Severely Stunted 9,08%. Nutritional status based on Height for Weight index is Obesity 0,00%, Normal 90,76%, Wasted 6,16% and Severely Wasted 3,08%

Conclusions: Stunting problems in 10 villages in Banggai Regency are still very high, so it needs serious attention from all parties in their handling, one of the strategies in handling stunting is through the efforts of convergence and effectiveness of intervention of all parties involved.

Keywords: Nutritional status, Children aged 0-59 months



Zone 3: Non-communicable Diseases and Risk Factors

P-72

A School-Based Interventional Study to Improve Healthy Eating Practices among Malaysian Adolescents: Protocol for Feasibility of Quasi-Experimental Pilot Trial

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Abstract

Background: A school environment can influence its students' dietary habits. Hence, the implementation of healthy canteen intervention programme in schools has been recommended as a strategy to improve students' dietary intake. This study examines the feasibility of providing healthier food options in collaboration with selected secondary school canteen operators in Malaysia. It also aims to measure the changes in food choices before and after the intervention.

Methods/design: A pilot quasi-experimental feasibility study is conducted in six secondary schools (intervention, n = 4; control, n = 2) includes three rural and three urban schools in Selangor and Perak states in Malaysia. The intervention duration is four weeks among Malaysian adolescents (15 years of age). Two interventions are proposed which focus on providing healthier food options at the canteen and convenient shops in the selected schools. Intervention 1 and 2 entail training the canteen and school convenient shop operators. In addition, intervention 2 includes subsidizing the price of fruits, vegetables and low energy-dense kuih (traditional cake). The control group continues to sell the usual food. Trained dietitians will audit the canteen menu and food items sold by the school canteen and convenient shops in all schools. Study outcome measures will be assessed by 3-day diet history and anthropometric measurements conducted at baseline and post-intervention (4 weeks after intervention). Focus group discussions with students and interviews with headmasters, teachers and school canteen operators are conducted post-intervention to explore intervention acceptability. Under this Healthy School Canteen program, school canteens are prohibited from selling 'red flag' foods. This refer to foods which are calorie dense and not nutritious, such as confectionery and deep-fried food. They are also prohibited from selling soft drinks which are sugar-rich and without any nutritional content. Instead, the canteens are encouraged to sell 'green flag' food and drinks, such as fruits and vegetables).

Discussion: It is anticipated this feasibility study can provide a framework for the design and implementation of nutritional interventions at school canteens in Malaysia.

Keywords: Healthy eating, Adolescents, Intervention

Zone 3: Non-communicable Diseases and Risk Factors

P-73

Examining Depressive Symptoms among Parents with Low Socio-Economic Status in Kuala Lumpur, Malaysia

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Abstract

Background/Objectives: Numerous studies reported that those with low socio-economic status (SES) and among females were more frequent to experience depression. Therefore, this study aimed to examine the depressive symptoms among parents with low income status and the interaction between the other socio-demographic risk factors for depression.

Methods: A total of 205 parents with children from four People's Housing Project (PHP) around Kuala Lumpur completed a self-report questionnaire includes demographic profile form for screening the depressive symptoms availability using Beck's Depression Inventory (BDI). In order to measure all the socio-demographic risk factors that possibly related to the depressive symptoms among parents, the cross tabulation analysis and Chi Square test were used to present the data.

Results: The study showed the higher prevalence of high depressive symptoms among mothers, 24.7% compared to fathers, 20.3% but no significant association between the gender and the level of depression occurred. The Chi Square tests for other socio-demographic risk factors (age, number of children, employment status and the household income) were found that only the employment status has the significant association to the depressive symptoms among the parents.

Conclusions: The prevalence of the depressive symptoms among the low SES and the associated variable were determined. Further research on intervention to educate parents is needed to react the present findings and to reduce the transmission risk to the children as well as to develop the healthy nations.

Keywords: Depressive symptoms, Low SES, Parents, Depression



Zone 3: Non-communicable Diseases and Risk Factors

P-74

Investigation of the Status Quo and Influencing Factors of Obesity in Young Children in Hubei Province

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Abstract

Background/Objectives: Children's overweight and obesity has become one of the common problems in the world. In the past 20 years, the overweight and obesity rate of young children in China has risen sharply. The key period to prevent childhood obesity is in infants and young children.

Methods: In this study, a cross-sectional descriptive study with 430 participants aged 1-3 years was conducted in five cities in Hubei Province by means of convenient sampling. Data was collected using The Young Children's Obesity Questionnaire. Multivariate logistic regression analysis was performed to identify the influencing factors.

Results: The rate of overweight and obesity were 18.1%, 14.0%, respectively. The influencing factors included birth patterns, sweets taking frequency, caregiver gender, family monthly income, and feeding method during infant age.

Conclusions: Caesarean section, eating sweets frequently, male caregiver sex and infants in family with high monthly household income were more likely to be overweight or obese.

Keywords: Obesity, Infant, Young children



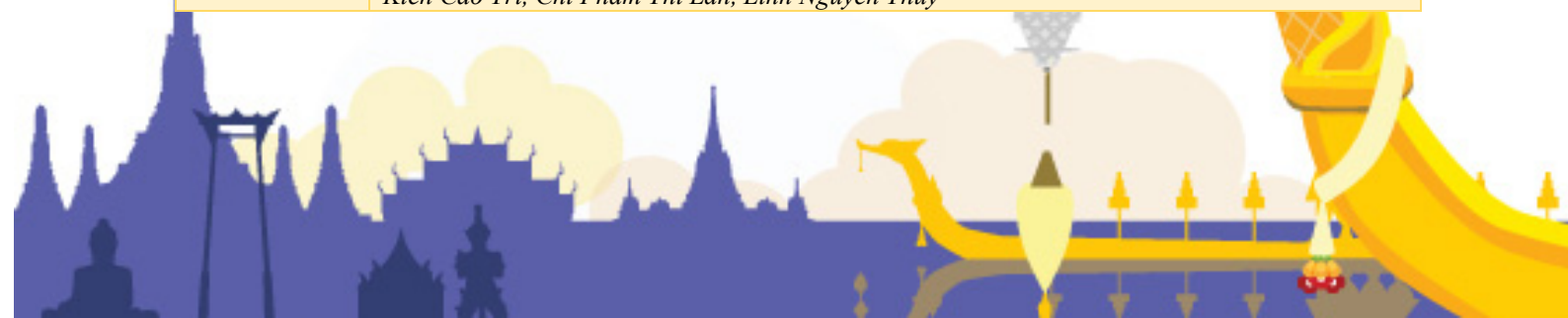
November 21, 2019

Venue: Banglampoo Room, Floor 6

Time: 13.00 – 13.30 hrs

Zone 4: Other Public Health Relates

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P-76	Social, economic, and political events affecting gender equity in China, Nepal, and Nicaragua: a matched, interrupted time-series study <i>Tuan Nguyen, Ashley Darnell, Mellissa Withers</i>
P-77	Dietary exposure of polycyclic aromatic hydrocarbons among Taiwanese <i>Tsou M.Y., Hsu K.C., Yang D.J., Chiang C.F.</i>
P-78	Comparison of eye movement patterns of non-disabled persons, stroke patients with and without hemi-spatial neglect <i>Yeajin Ham, Wonjin Lee, Joon-ho Shin</i>
P-79	The quality of life between western medicine treatments and with adjunctive Chinese medicine treatments for patients with breast cancer <i>Yeong-Ruey Chu, Pei-Tseng Kung, Liang-Chih Liu, Chin-Yao Lin, Fu Ou-Yang, Chia-Herng Yue, Shan-Yu Su, Ying-Yu Chen, Wen-Ching Wang, Wen-Yu Chou, Wen-Chen Tsai</i>
P-80	Mental health of school teachers in Okinawa <i>Paul Ratanasiripong, Takashi China</i>
P-81	Mental health needs and quality of life among systemic lupus erythematosus (SLE) patients in Thailand: A multi-site study <i>Nop Ratanasiripong, Rojana Warawitsaranggoon, Tiraporn Junda, Paul Ratanasiripong</i>
P-82	Knowledge, awareness, and behavior of women in reproductive age regarding the fortification of foods with folic acid and the intake of folic acid <i>Chiaki Meguro, Megumi Fujita, Sanae Yamaguchi, Saori Ono</i>
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P-84	Effects of the transition from cigarettes to heat-not-burn tobacco on health <i>Kosuke Kawamura, Kazuko Yamada, Ikuharu Morioka</i>
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Taiwan Total Diet Study: Health Risk Assessment of Heterocyclic Amines

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Abstract

Background/Objectives: Heterocyclic amines (HCAs) are often produced in BBQ and fried foods. The International Agency for Research on Cancer (IARC) classifies 9 HCAs into carcinogens of categories 2A and 2B. Clinical trials have found that HCAs have long-term or short-term potential risks to humans, but international standards for foods have not been established. We study the exposure of HCAs among Taiwanese children and adults with total diet study and assess their health risks.

Methods: Referring to the WHO-recognized core-food matching method, we designed 43 CFs of sampling list, reaching a coverage of 96.7%. Subsample design of each CF can be matched to 60% or more, complying with the international criteria. We collected 190 subsamples of various cooking methods. We evaluated the carcinogenic risk with margin of exposure (MOE) for each HCA.

Results: Only norharman and harman were found to have a mean MOE less than 10,000, showing a high level of concern among adults group and children group. Soybeans, pork and beverages are the top three contributors of norharman, while pork, soybeans and rice are top three contributors of harman, both among children. Among children the contributors are slightly different: pork, soybean and rice for norharman; and pork, rice and eggs for harman. Totally there were 12 food categories with potential risks (MOE<100,000) among adults and children.

Conclusions: The use of weighted ratio of consumption and cooking method for subsample pooling provides reliable food matching in exposure assessment. The food safety authority is suggested to provide the follow-up control measures on norharman and harman.

Keywords: Food safety risk assessment, BBQ and fried food, HCAs.



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P-76

Social, Economic, and Political Events Affecting Gender Equity in China, Nepal, and Nicaragua: A Matched, Interrupted Time-series Study

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Abstract

Background/Objectives: Improvements in gender equity can improve health and increase economic development at the individual and country levels. This study's objective was to analyze recent trends in gender equality and the historical and contextual factors that may have contributed to changes in gender equity.

Methods: We used the Gender Gap Index (GGI) to assess gender equity changes in three countries--China, Nepal, and Nicaragua. The GGI provides data from 147 countries on women's economic participation, educational attainment, health, and political empowerment. We selected the three countries because of significant changes in their GGI and diversity in geographical location and economic status. We reviewed major social, economic, and political events during 2006-2017 and identified key events in each which may have influenced subsequent gender equality. For each country, we identified matched controls with similar GGIs at baseline and compared them using ITSA procedures.

Results: Shifts in women's economic participation helped explain GGI changes across the three countries. This shift can be attributed to more equity in women's job opportunities, girls' access to education, and global trade impacts. Nepal and Nicaragua had dramatic increases in GGI levels, which could be linked to major societal changes and improvements in women's status. Nepal and Nicaragua were strongly influenced by the empowerment component of the GGI, namely political empowerment which likely linked to improved access to education and employment opportunities. Despite economic growth and relaxation of the One-Child Policy, China had a significant decline in GGI, which was attributed to decreased gender equity in educational attainment and economic participation. For example, despite major economic growth, China ranked low on women's formal labor participation, wage equality, and sex ratio at birth in 2010. These discrepancies support our findings of a significant GGI decrease.

Conclusions: An analysis of key social, economic, and political events can help explain trends in countries' gender equity. In terms of women's increased economic participation, the quality of employment opportunities for women must be taken into consideration. Supportive social and political environments are key to ensuring better health and increased empowerment for women.

Keywords: Gender, Empowerment, Gender gap, Social determinants of health



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Dietary Exposure of Polycyclic Aromatic Hydrocarbons among Taiwanese

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Abstract

Background/Objectives: Polycyclic aromatic hydrocarbons (PAHs) are formed due to over-heating and inappropriate cooking, especially in grilled and fried foods (GFF). PAHs in food can also derived from environmental contamination via food chain. At least thirty PAHs congeners are currently classified as carcinogens. This study presents the first total diet study (TDS) on PAHs in Taiwan.

Methods: Based on the 24-hr recall data in NAHSIT, we aggregated about 380,000 records into 237 CFs, and the sample list was shortened to 39 CFs relating to GFF and grain food. Subsample design of each CF is weighted with consumption and cooking method. This represents an intake coverage of 80% to the total diet with a matching rate greater than 60% for each CF. Totally, 165 subsamples were collected and mixed into 39 composites for analysis using high performance liquid chromatography (HPLC) with fluorescent detector and ultraviolet detector, capable of the completing simultaneous separation of 15+1 PAHs within 18 minutes, excepting the non-fluorescent BaA.

Results: Margin of exposure (MOE) risk analysis shows 39 CFs are all acceptable (MOE>10,000) in BaP, 4PAH, and 8PAH among adults and children, while 3 CFs (rice and porridge, toast, and pork meat) are potentially risk (MOE<100,000) among children. Surprisingly, rice and porridge contributes the highest of 46% and 34 % in 8PAH among adults and children, respectively. The second goes to pork meat (19%) among adults and toast (23%) among children.

Conclusions: We concludes two major sources of dietary PAHs exposures: grilling of meat and aquatic products as well as environmental contaminants in rice with high consumption. We suggest to evaluate the inhalation exposure to PAHs in barbecue restaurants.

Keywords: Dietary exposure assessment, Grilled and fried food, Polycyclic aromatic hydrocarbons (PAHs)



Zone 4: Other Public Health Relates

P-78

Comparison of Eye Movement Patterns of Non-disabled Persons, Stroke Patients with and without Hemi-spatial Neglect

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Abstract

Background: Hemi-spatial neglect is often associated with right hemisphere stroke patients, negatively impacting the survivors' functional ability and quality of life. To identify the characteristics of spatial neglect after stroke, this study compared the information about the participant's eye movements including the patterns of eye movement and dwell time depending on the area of interest.

Method: This study design was a case-control observational study. Thirty-three participants were classified into three groups; non-disabled, stroke without neglect syndrome, and stroke with neglect syndrome. All participants were evaluated the movement of the eyes quantitatively using BIT, which is a gold standard assessment tool for neglect syndrome. The eye tracker collected eye data of the participants while evaluation. Compare and analyze the difference in eye movement according to the severity of spatial neglect between non-disabled and stroke patients. The one-way ANOVA test was used as the statistical method for comparisons between three groups.

Results: In the scan path motion analyzing the pattern of eye movement, the non-disabled group showed well-distributed patterns, the stroke group showed distorted and scattered patterns, and the distortion intensified according to the severity of the neglect. In addition, the mean of dwell time percentages in left parts among groups showed statistical significance (p -value < 0.001) while other parts had no difference. This indicates that right hemisphere stroke patients stare left part less than non-disabled persons.

Conclusions: This study figures out the gaze patterns of stroke patients with and without neglect syndrome. Understanding these unique and limited patterns of stroke patients' eye movement could give some guidance in rehabilitation not only in visual-perceptual aspects but also in physical aspects.

Keywords: Perceptual disorder, Fixation, Ocular



Zone 4: Other Public Health Relates

P-79

The Quality of Life between Western Medicine Treatments and with Adjunctive Chinese Medicine Treatments for Patients with Breast Cancer

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Abstract

Background/Objectives: In Taiwan, the incidence of breast cancer was the highest among all cancers. Although adjunctive Chinese medicine treatments were used to ameliorate the side-effects or discomfort caused by treatments, no study focused on the assessment of the quality of life to those patients with adjunctive Chinese medicine treatments. In this study, we explored the quality of life between western medicine treatments and with adjunctive Chinese medicine treatments for patients with breast cancer.

Methods: The questionnaires were collected from seven hospitals, which had a Chinese Medicine clinic. Breast cancer patients who had cancer staging I, II or III, and also underwent resection surgery were the study population. They were divided into two groups, including the patients only receiving western medicine treatments (western medicine group) and the patients receiving western medicine treatments with adjunctive Chinese medicine treatments (combined treatment group). The 1:1 matching was used to obtain the study participants. The EQ-5D, EORTC QLQ-C30, QLQ-BR23 questionnaires were used to assess the quality of life. Statistical analysis used t-test and ANOVA test to compare the difference between variables. The conditional multiple regression model was applied to explore the associated factors of quality of life in breast cancer patients.

Results: A total of 543 participants were surveyed and 450 participants were matched in the study. In EQ-5D outcome, the combined treatment group (81.60±11.67) were significantly higher than the western medicine group (78.80±13.10) (p<0.05). The results of a conditional multiple regression model showed the combined treatment group had a higher (3.45 points) quality of life than those of western medicine group (p=0.002) after adjusting other related factors. The age, BMI, education level and conscious health status from the EORTC QLQ-C30 were associated with the quality of life. After stratifying by cancer stage, patients with the cancer stage II and stage III had 5.58 points and 4.35 points higher in the combined treatment group than those of western medicine group (p<0.05), respectively.

Conclusions: The western medicine treatment with adjunctive Chinese medicine treatments for breast cancer patients have a higher quality of life than those only receiving western medicine treatments.

Keywords: Breast cancer, Quality of life, Chinese medicine treatment, Adjunctive Chinese medicine treatment



Zone 4: Other Public Health Relates

P-80

Mental Health of School Teachers in Okinawa

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Abstract

Background/Objectives: A few studies have been conducted on the mental health of teachers in Japan and found that Japanese teachers have high levels of depression, anxiety, and stress. These factors often led to negative outcomes for both the individual and the community, including leave of absences and substance abuse. None of the previous studies have focused on teachers in Okinawa, which have specific subculture that is different from mainland Japan. This research study aims to understand the mental health issues and associated factors among school teachers in Okinawa.

Methods: This cross-sectional survey study was conducted at 7 elementary and high schools in Okinawa, Japan. A total of 174 teachers participated in this study (64% female, 35% male). The average age of teachers was 41.65 years old (SD = 10.07, Range = 22-62). Instruments utilized in the study included demographic information, Depression, Anxiety, Stress Scale, Rosenberg Self-Esteem Scale, and Connor-Davidson Resiliency Scale.

Results: Among school teachers in Okinawa, there were no significant differences in number of years being a teacher, class size, or employment status (tenure -vs- contract). Two factors that significantly predicted depression among school teachers in Okinawa included self-esteem and resiliency. Two factors that significantly predicted anxiety included self-esteem and resiliency. Three factors that significantly predicted stress included self-esteem, resiliency, and family financial status.

Conclusions: In order to improve the mental health of school teachers in Okinawa, public health personnel and school administrators need to create program and services to help improve resiliency and self-esteem of the teachers. Recommended interventions include programs to increase peer and familial support, training to improve teaching competency, and activities to increase positive thoughts and feelings about the teaching profession.

Keywords: Depression, Anxiety, Stress, Resiliency, Self-esteem



Zone 4: Other Public Health Relates

P-81

Mental Health Needs and Quality of Life among Systemic Lupus Erythematosus (SLE) Patients in Thailand: A Multi-site Study

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Abstract

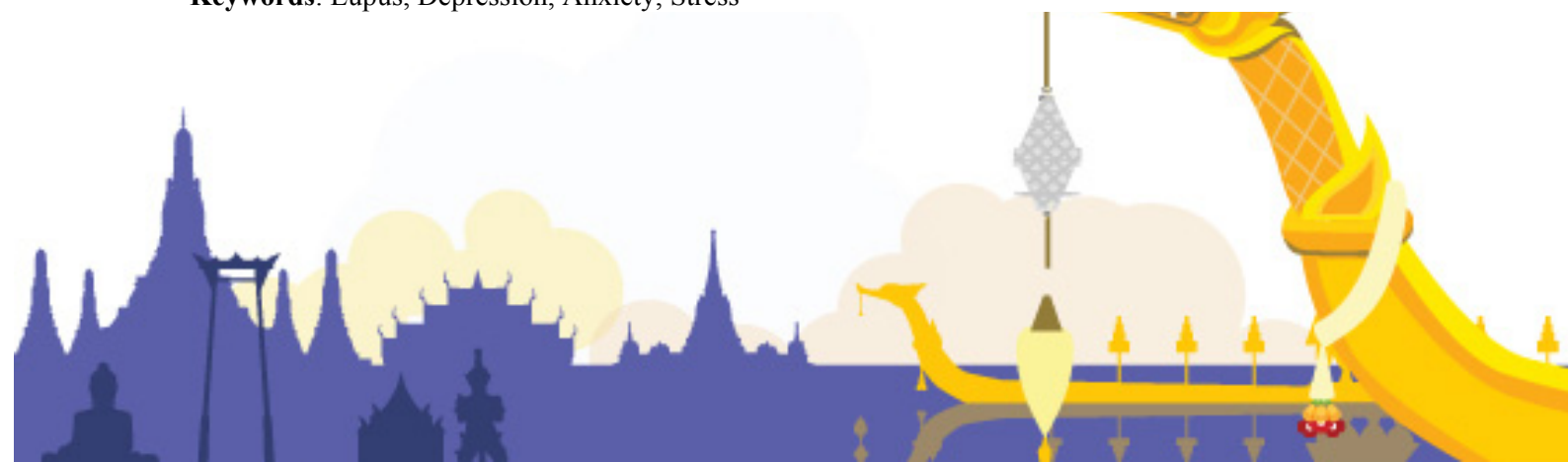
Background/Objectives: Systemic Lupus Erythematosus (SLE) is an incurable autoimmune disease which the immune system attacks various body parts that it is designed to protect. Depending on what organs the autoimmune strikes, the most common symptoms include painful joints, extreme fatigue, skin rash, chest pain, anemia, nephritis. Mentally, the SLE patients may experience stress, anxiety, and depression as well. Furthermore, the health-related quality of life (HRQoL) and life expectancy among these patients were lower than the general population. However, limited research has been done in this area. This study examined mental health needs and HRQoL among SLE patients in Thailand.

Methods: This cross-sectional study was conducted at Rheumatology Clinics at four major hospitals in Thailand. The paper-based questionnaire was completed by 330 SLE patients. The questionnaire consisted of demographic, health history, Depression/Anxiety/Stress Scale (DASS), and disease-specific Quality of Life Scale (LupusQoL). Descriptive statistics were used to describe participant demographics, health history, and the variable of interests. Depending on the variable's level of measurement, Spearman's Rho or Pearson's Product Moment correlation coefficients were used to examine the relationships between the variables. Multiple regression was also applied to identify the predictors of the quality of life.

Results: The mean score of depression was 3.5 (SD 3.6), of anxiety was 4.5 (SD 3.7), and of stress was 5.9 (SD 4.1). Based on the DASS severity ratings, the mean scores of depression and stress among the SLE participants can generally be classified as normal while the mean score of anxiety was at the mild level. All eight domains of LupusQoL were affected with intimate relationship domain being impacted the most (61.5/100). The overall LupusQoL can be predicted by the mental health status level (depression, anxiety, and stress) by 54%, $F(2,84) = 51.55, p = 0.000$.

Conclusions: Since the overall SLE-related quality of life can be greatly impacted by the patient's mental health, it is critical that the health care providers provide holistic interventions to help the patients deal with both physical and mental needs. These may include providing stress management education and using multidisciplinary approach to provide psychological counseling services to those who are in need.

Keywords: Lupus, Depression, Anxiety, Stress



Zone 4: Other Public Health Relates

P-82

Knowledge, Awareness, and Behavior of Women in Reproductive Age Regarding the Fortification of Foods with Folic Acid and the Intake of Folic Acid

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Abstract

Background/Objectives: The periconceptional intake of folic acid reduces the risk of neural tube defects (NTDs). Globally, 82 countries have legislation mandating the fortification of food with folic acid, but not in Japan. In fact, the incidence of spina bifida in Japan was higher than in countries implementing mandatory fortification of food with folic acid. This study aimed to clarify the knowledge, awareness, and behavior of women in reproductive age regarding the fortification of foods with folic acid and the intake of folic acid.

Methods: In this cross-sectional study, an Internet survey of 412 ordinary women aged 20 to 39 years was conducted. The analysis method was descriptive statistics. The survey contents included demographic characteristics, knowledge (i.e., name of folic acid, the risk of NTDs, recommended doses, and timing), behavior (i.e., intake of folic acid and reading of food label), and awareness of the fortification of food with folic acid.

Results: Parous women (91.7%) knew that women should be consuming folic acid pre-pregnancy. Seventy percent of women had not consciously taken folic acid supplements; 70.3% of women reported the benefits of fortification of food with folic acid, and women (72.3%) needed more detailed information on folic acid.

Conclusions: More than half had not consciously consumed folic acid. Therefore, it is suggested that a policy regarding the fortification of food with folic acid is necessary. First, providing information about fortification of food with folic acid to women before pregnancy will lead to the promotion of the policy.

Keywords: Knowledge, Behavior, Fortification, Folate, Women



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Online Time and Experiences of Being Cyber-bullied among High School Students in Hanoi, Vietnam

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Abstract

Background/Objectives: The shift from traditional communication to online communication can expose Internet users to a greater risk of Internet harassment like cyber-bullying. This study aims to explore the association between the average time of Internet used per day among high school students in Hanoi, Vietnam and the risk of being cyber-bullied.

Methods: A total of 215 students aged 13-18 years completed an online survey using respondent driven sampling method. The experience of being cyber-bullied was examined using the modified Patchin and Hinduja's scale.

Results: The average daily time spent on Internet showed dose response association with the risk of being cyber-bullied. The prevalence of having experienced cyber-bullying was 54% among subjects used Internet >3 hours/day compared to 39% among subjects used 1-3 hours and 30% among used <1 hours. The score of negative emotional impacts after being cyber-bullied also varied significantly as a function of average time on Internet.

Conclusions: This study shows that Internet has become a primary mode of communication among high school students and time spent on Internet may be a strong predictor of cyber-bullying experiences. Cyber-bullying can be pernicious for adolescent since they have not had the emotional resilience of adults. We need immediate interventions and teach high school students how to behave in a healthy and positive way online.

Keywords: Cyber utilization, Internet time, Cyber-bully, Patchin and Hinduja's scale, Negative emotional impacts



Zone 4: Other Public Health Relates

P-84

Effects of the Transition from Cigarettes to Heat-Not-Burn Tobacco on Health

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Abstract

Background/Objectives: The aim of this study was to clarify the health effects of the transition from cigarettes to heat-not-burn tobacco.

Methods: Participants in this study were twenty-five male smokers. They had a complete transition from cigarettes to heat-not-burn tobacco for two weeks. The concentration of cotinine in saliva was measured after the transition. A questionnaire survey was performed before and after the transition to evaluate nicotine dependence (Fagerström Test for Nicotine Dependence, FTND), nicotine withdrawal symptoms (Minnesota Nicotine Withdrawal Scale, MNWS), subjective symptoms and smoking behaviors. As to subjective symptoms, cough, phlegm, shortness of breath, headache, fatigue and ulcers in the mouth, and so forth were asked.

Results: The concentration of cotinine in the saliva of heat-not-burn tobacco users corresponded to that of cigarette smokers. The number of cigarettes consumed was significantly positively related to the score of FTND. The number of heat-not-burn tobacco sticks consumed was significantly positively related to FTND and MNWS scores. The group in which the number of heat-not-burn tobacco sticks consumed increased after transition showed a smaller number of cigarettes consumed and a higher MNWS score before transition than the group in which it decreased after transition. These two factors were significantly related to the difference between the numbers of cigarettes and heat-not-burn tobacco sticks in multiple linear regression analysis. In nine heat-not-burn tobacco users, one of the subjective symptoms disappeared after the transition. However, coughing, fatigue, and ulcers in the mouth appeared in 2 people who increased the number of heat-not-burn tobacco sticks consumed.

Conclusions: There were the possibilities that nicotine dependence and nicotine withdrawal symptoms appear after transition and that the number of heat-not-burn tobacco sticks consumed increases. When the number of heat-not-burn tobacco sticks consumed increases some subjective symptoms might appear.

Keywords: Heat-not-burn tobacco, Health effects, Nicotine dependence, Nicotine withdrawal symptoms, Smoking behaviors



Zone 4: Other Public Health Relates

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Factors Associated with Physician Factor that Leading to Unscheduled Revisits Emergency Department and Admission to Intensive Care Unit within 72 hours

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Abstract

Background/Objectives: To investigate the factors associated with the physician factor which would lead to unscheduled revisits emergency department and admission to intensive care unit within 72 hours in order to reduce the risk.

Methods: A retrospective design and secondary data analysis was undertaken of adult patients who were discharged from the emergency department, returned within 72 hours and were admitted to the intensive care in a Would-be Academic Medical Center from 2012/01/01-2017/12/31. Three ER specialist reviewed medical records and divide the revisits reasons into two categories: physician factors and non-physician factor. A multivariate logistic regression analysis was used to evaluate the effect of patient's and physicians' characteristics.

Results: During the 6-year study, 327,288 discharged in our ED. 153 patients unscheduled revisited emergency department and admitted to intensive care unit within 72 hours, 147 patients met the our criteria. Of the 147 cases, 35 (23.8%) were due to physician factor and 112 (76.2%) were due to non-physician factor (such as leaving prematurely, Disease Progression or environment of hospital). Length of stay in ICU first-visit was significantly related to the physician factor. Patient who stayed in ICU first-visit less than 2 hours had higher risk of physician factor than who stayed in ICU more than 2 hours. However, Physicians' Seniority and patient's characteristics including age, gender, Diagnostic Categories, triage, specialty of registration and CCI were not the effect factor of physician factor.

Conclusions: After control the patients' and physicians' characteristics, the study found that length of stay in ICU first-visit was the significant factor to affect the physician factor leading to unscheduled revisit and admission to ICU. It is suggested that designed the diagnosis process, checklist, and provide clear indications for the neurological diseases with the highest proportion of errors to reduce the misdiagnosis.

Keywords: 72-hour revisit, Emergency department revisits, Physician factor, ICU



Zone 4: Other Public Health Relates

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Japanese People's Awareness of Third-Party Assisted Reproductive Technology

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Abstract

Background/Objectives: Assisted reproductive technology (ART) has currently advanced further in many countries, but implementation in Japan is still difficult. This study aimed to survey the Japanese medical consumers' overseas experiences and their opinions on the third-party ART procedures, and to discuss the appropriate nursing care for the patients concerned in such third-party ART procedures.

Methods: We conducted the Internet survey to clarify the Japanese people's awareness of the third-party ART by requesting a research company having more than 10,000,000 people enrolled throughout Japan. The participants were divided into two groups: a male group consisting of 309 men having experienced infertility treatments, and a female group consisting of 309 women having experienced infertility treatments. Age of the participants was limited to thirties and forties.

Results: There were 21 men (6.8%) and four women (1.3%) who had actually gone abroad to receive the ART procedures. In the both groups, nearly half the participants answered that all kinds of third-party involved ART procedures might be permitted with or without any conditions when considered objectively. In particular, the host surrogacy was most accepted. As high as about 60% of the both groups answered that the host surrogacy might be permitted with or without any conditions. On the other hand, the answers of not accepting accounted for 20 to 30% in every procedure. Nearly 20% of the participants in the both groups also chose the option of "I have no idea" with respect to every procedure. In contrast to the above, an overwhelming majority (50 to 70% or more) answered from the standpoint of a person concerned that they had not wanted to use any of the third-party ART procedures.

Conclusions: These results imply the current tendency that even the procedures not available in Japan are likely to be accepted by approximately half or more of the men and women having experienced any infertility treatment. It is necessary to get exact information about how the couples with infertility problems can lead to having a child and to provide appropriate nursing care with them even though the number of such couples is a few.

Keywords: Assisted reproductive technology, Internet survey



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A Study on the Process by which People who had their Homes Destroyed by Tsunami Started Living in their New Homes

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Abstract

Background/Objectives: In March 2011, the Great East Japan Earthquake*¹ occurred in Japan. The Pacific coast of East Japan was devastatingly damaged by strong quake and large tsunami. Many people lost their homes and had to live in shelters such as gymnasiums. The main solution of the Japanese government was to build and provide temporary housings made by prefabrication. Recently, in the affected areas, reconstruction activities are constantly being continued, and most of the residents there have finished housing reconstruction*² Hakozaki area in Kamaishi City, Iwate Prefecture, where the research team has been providing support immediately after the disaster, has also finished. In this study, we clarify problems and this factors in that process.

Methods: Hakozaki area, the target area, had 711people and 248 households, with 229 damaged buildings and 129 victims (At the time of earthquake). Many residents left there and entered temporary housing. There are two analysis methods. 1): In order to understand the living condition and housing reconstruction awareness, we conducted a questionnaire survey for the past five times for residents there. 2): In order to grasp the progress of the reconstruction and the reconstruction plan, we made on-site visits and utilized the literature and web site.

Results: In the Hakozaki area, maintenance of lands for reconstruction of settlement *³ and disaster public housings*□ was later than in the surrounding area, and households who wished to rebuild their homes outside the district gradually increased. As a result, this area is facing new challenges such as the decline of fishery and commerce, and the dilution of communities.

Conclusions: Problems and this factors in that process were clarified. In addition, the new issues of the area due to the impact were clarified.

Keywords: Home, Tsunami, Reconstruction process



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International Migration of Children and Health-related Quality of Life in Left-behind Older Nepali Parents

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Abstract

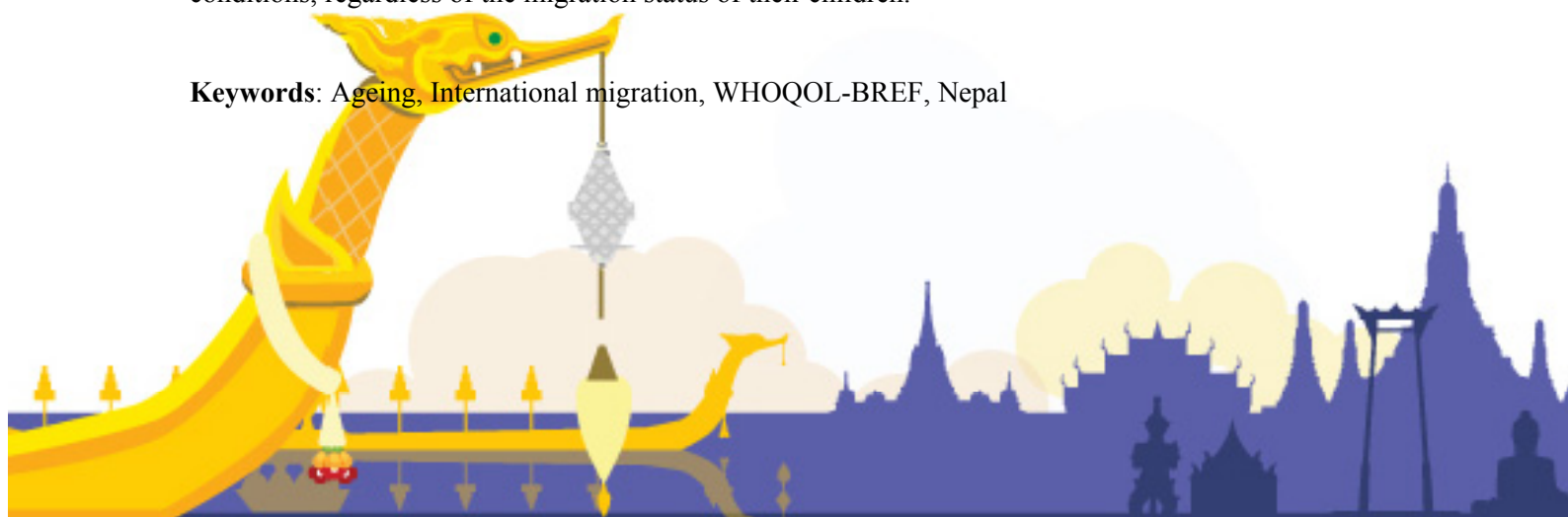
Background/Objectives: World Health Organization's Global Strategy and Action Plan on Ageing and Health is an important step towards meeting the Sustainable Development Goals. One objective of the Strategy and Action Plan is to improve measurement, monitoring and research on healthy ageing. In accordance with this objective, this study was conducted to improve our understanding of the health and wellbeing status of senior adults in a low-income country context. The study objectives were to 1) understand what influenced health-related quality of life in older Nepali adults, 2) and whether having children migrate internationally was associated with better or worse health-related quality of life in left-behind parents.

Methods: Surveys were conducted with a random sample of 449 parents (207 parents of migrants and 242 parents without migrant children) aged 60 years and above from Chitwan district in Nepal with high rates of international migration. WHOQOL-BREF was used to measure their health-related quality of life. Multiple linear regression analyses were employed to identify factors influencing their quality of life, including the international migration of children. Assessments were made across the four domains of WHOQOL-BREF: physical, psychological, social and environmental.

Results: When considering children's international migration status, there was no statistically significant difference in older parents' quality of life scores across all four domains. However, living in a family with an income above the national urban average was positively associated with the physical, social and environmental domains. Having some level of education was positively associated with the physical and environmental domains. Age was negatively associated with the physical, psychological and environmental domains. Belonging to Janajati ethnicity was negatively associated with the psychological domain, and so was living with two or more chronic health conditions. Belonging to the most disadvantaged social ethnic class was negatively associated with the environmental domain.

Conclusions: To improve the quality of life of older Nepali adults and thereby contribute to their healthy ageing, it is particularly important to focus on older adults from economically disadvantaged families, belonging to the most disadvantaged social ethnicity, with no formal education and living with chronic conditions, regardless of the migration status of their children.

Keywords: Ageing, International migration, WHOQOL-BREF, Nepal



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Experience of Being Cyber-bullied among Frequent Facebook Users Aged 13-18 in Hanoi Vietnam

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Abstract

Background/Objectives: Online social networking may expose students to higher risk of being cyber-bullied. Facebook is a popular social tool among high school students in Vietnam. This study examined the experience of being cyber-bullied among students who frequently used Facebook.

Methods: The study employed a sample of 168 high school students aged 13-18 years reported having used Facebook daily. Respondent driven sampling together with Google online forms were used to collect data. The modified Patchin and Hinduja's scale was applied to evaluate the experience of being cyber-bullied.

Results: Results showed that the % of subjects reported ever experiencing at least one type of cyber-bully and being frequently bullied was 50% and 14.9%, respectively. The most common type of cyber-bullying was being called by names/ made fun of. Of those being cyber-bullied, 4.8% were reported to ever have suicide intention.

Conclusions: The prevalence of experiencing being cyber-bullied was very high among high school students in Hanoi. Cyber-bully creates great risk of negative emotional impacts among victims. Interventions are required to support those at risk and challenge the bullies are critical.

Keywords: Facebook, Cyber-bully, Patchin and Hinduja's scale, Negative emotional impacts



Zone 4: Other Public Health Relates

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A Study on Restructuring of Traffic System Based on Traffic Estimation and Theoretical Model in Provincial Cities: A Case of Sakura City in Tochigi, Japan

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Abstract

Background/Objectives: In provincial cities in Japan, public transports are forced to reduce or abolish due to effects of the motorization and decreasing birthrate and aging population. On the other hand, most of users are weak people in transportation such as students and elder people. Consequently, reduction and abolition of traffics prevent them from going to medical facilities, commercial facilities and schools. Further, in the above background, traffic accidents by elderly people has become one of the big social problem. The Objective of this study is to examine the traffic system corresponding to living activities in an aging society.

Methods: First, 1000 copies of questionnaire for elder people were performed to grasp living activities and the daily traffic use of elder people in Sakura city, Tochigi. Second, optimum locational patterns of traffic hubs were calculated by p -median; one of the theoretical models of facility location. In addition, these hubs were evaluated from the point of accessibility comparison with the current traffic system.

Results: Questionnaire survey revealed each facility which was frequently used concentrated on city zone. In addition, optimum locational patterns of traffic hubs were calculated in two points within the current city area and new one point.

Conclusions: In this paper, the traffic system corresponding to living activities in an aging society was examined based on traffic estimations obtained by the questionnaire, and evaluated by comparison with the current traffic system.

Keywords: Aging society, Public transport, Questionnaire



Zone 4: Other Public Health Relates

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Evaluation of Genetic Risk Score Models on Complex Diseases: A Simulation Study

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Abstract

Background/Objectives: Use genetic risk score (GRS) to assess the association between genetics and complex diseases to address the small impact of single nucleotide polymorphisms (SNPs) on phenotypes. We consider that different GRS models may have different predictive abilities on complex disease risks. The aim is to develop a GRS model that performed the best predictive complex diseases.

Methods: There are three GRS models including unweighted simple count GRS (SC-GRS), logistic regression weighted GRS (LR-GRS) and explained variance weighted GRS (EV-GRS) models. We are interested in three factors that might influence power and type I error: (i) prevalence; (ii) odds ratio; (iii) ratio of cases to controls. Using SeqSIMLA to simulate datasets to explore the capabilities of three GRS models. All analyses were performed with PLINK 1.09 and SAS 9.4.

Results: SC-GRS (power=0.990) had higher power than LR-GRS (power=0.852) and EV-GRS (power=0.988). The type I error for three GRS models was robust, but LR-GRS (type I error=0.086) and EV-GRS (type I error=0.088) controlled it better than SC-GRS model (type I error=0.193).

Conclusions: SC-GRS was robust to variation of the three factors in terms of power, whereas LR-GRS and EV-GRS were affected by these factors. The type I error for three GRS models were robust to the variations in the factors. Our findings are similar to Xin et al (2018), who found that SC-GRS model have the best prediction compared to the other GRS models. According to our results, these three GRS models are useful in overcoming small impact of SNPs on phenotypes. Our findings have shown that three GRS models should complement each other in complex disease prediction.

Keywords: Simulation, Genetic risk score, Single nucleotide polymorphism



Zone 4: Other Public Health Relates

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A Risk Haplotype of Monoamine Oxidase a Gene Associated with Habitual Smoking in Women

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Abstract

Background/Objectives: Cigarette smoking concomitant with alcohol and/or betel quid in Taiwan. Activity and level of catechol-O-methyltransferase (*COMT*) monoamine oxidase A (*MAOA*) in the brain and plasma were associated with these substance use disorders, but genetic effects of both genes remain controversial.

Methods: Four single-nucleotide polymorphisms (SNPs) of *COMT* (rs4680) and *MAOA* (rs5953210, rs2283725, and rs1137070) were genotyped in 327 cigarette smokers and 896 nonsmokers. The genetic susceptibility to smoking behavior were examined using a haplotype analysis.

Results: No significant difference appeared between *COMT* rs4680 polymorphisms and smoking in either sex; compared to nonsmokers, *MAOA* rs5953210 (AA), rs2283725 (GG), and rs1137070 (CC) genotypes raised susceptibility to smoking (adjusted OR = 4.1 - 5.3; $p < 0.01$) in women but not men. Women with *MAOA* AGC-haplotype had higher risk of habitual smoking than those with non-risk patterns after adjustment for covariates ($p = 0.0005$), especially women who started smoking at or after 20 years old ($p = 0.0038$).

Conclusions: Our findings indicate that *MAOA* AGC-haplotype pattern specific in women predispose toward susceptibility to habitual smoking.

Keywords: Smoking, MAOA, Single-nucleotide polymorphisms, Haplotype



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Status of Knowledge, Attitude, and Practices of Menstrual Hygiene Management (MHM) among Adolescent Girls in Bangladesh: Results Based on Field Survey Data

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Abstract

Background/Objectives: Menstrual hygiene management (MHM) in a hygienic, safe, effective and dignified way has remained as a challenge for adolescent girls in low- and middle-income countries (LMICs). Despite of adverse health effects on girls, MHM has not attracted adequate attention from a public health perspective. The objective of the present study, hence, was to assess the current knowledge, attitude and practice (KAP) towards MHM of adolescent girls in rural Bangladesh, to provide insights into development of effective MHM program.

Methods: A self-administered survey was conducted in February 2019 among 408 adolescent girls, who had experienced menarche, from four high schools in Sirajganj District, Bangladesh, using a structured questionnaire to assess the current level of KAP regarding menstruation. Data from the survey were analyzed for descriptive statistics using R Studio Version 1.1.456. Ethical approval for the study was obtained from the Seoul National University Institutional Review Board.

Results: Although 85% of the girls considered menstruation as ‘a natural process for physical maturity’, 82% of the girls simultaneously did not understand what was happening during their menarche. Moreover, girls felt scared (40%), ashamed (27%), and embarrassed (27%) during menstruation. 93% of girls consulted about menstruation with mothers; their mothers were the main channel to get information (92%) and who they can freely discuss with (87%). A majority (79%) did not talk with their friends and family due to ‘shame’ they felt. The proportion of girls who practice good MHM, based on the UNICEF/WHO guidance, was 62%.

Conclusions: Findings of the study show that girls had limited knowledge, negative attitudes and restrictive practices during menstruation. This study suggests the need to raise more attention on MHM education program to improve girls’ KAP. Also the study indicates that educating and empowering mothers, as they are the main source of information for girls, would be critical in improving MHM among Bangladesh girls.

Keywords: Menstrual-Hygiene-Management (MHM), Knowledge-Attitude-Practice (KAP), Adolescent girls, Bangladesh



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Frailty and its Related Factors for Elderly in Community-dwelling

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Abstract

Background: The increasing proportion of older adults in many countries. The frail symptoms are the common issue among elderly and these frail older people are at an increased risk of unhealthy outcomes, such as falls, declines of activity daily living function, increasing long-term care need, institutionalization and mortality rate.

Objectives: The aim of this article was to explore the factors related to the frailty among elderly in community dwelling.

Methods: We enrolled older people (65+) who from the community dwelling in northern Taiwan from December 2018 to May 2019. The Fried frailty criteria, including body weight loss, exhaustion, low physical activity, slowness and weakness was used to evaluate frailty index and then the we confirmed participants who were non-frail (score 0), pre-frail (score 1–2) or frail (score 3 and above). The demographic data and health status questionnaires were also collected at the same time. Data were analyzed using the chi-square test, independent t-test, and Spearman correlation by SPSS version 21.0.

Results: We enrolled a total of 60 older adults. None of them was non-frail, 54 participants (90%) were pre-frail and 6 participants (10%) were frail. The higher ratio of frailty were participants who unmarried or no exercise habits. Age ($r=0.391$, $p<0.01$) and self-rate health ($r=0.407$, $p=0.001$) were significantly positive correlation with frailty scores.

Conclusions: There were higher prevalence of pre-frail in these community than the previous studies. We also found the major factors affecting frailty of elderly in community-dwelling. Therefore, our findings were helpful for healthcare professionals to design an appropriate community-based strategy may be developed to prevent or alleviate frailty symptom in the future.

Keywords: Frailty, Elderly, Fried frail index



Zone 4: Other Public Health Relates

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Bedside Manners to Foreign Patients of Nurses Working in an Accredited Hospital in Japan

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Abstract

Background/Objectives: The number of foreigners visiting Japan is increasing. There are a lot of people who become ill during the stay and visit a medical institution. There, nurses need to be aware of cultural differences and to nurse foreign patients. This study is aimed to clarify the bedside manners to foreign patients of nurses working in an accredited hospital that is well managed to accept foreign patients, and to obtain suggestions for improving the bedside manners to foreign patients.

Methods: An anonymous self-administered questionnaire survey was conducted with 300 nurses working in one institution that has received the certification from Japan Medical Institution Service Accreditation of International Patients. The question items were basic attributes, experience of nursing foreign patients, and the situation of bedside manners to foreign patients. The χ^2 test was used to compare the proportions.

Results: The response rate of the questionnaire was 70.7%. Of the nurses that answered, 69.7% did not have the qualification for English and 50.2% did not speak English at all. Those who had the experience of nursing foreign patients were 90.5%, and those who consulted medical interpreters when nursing foreign patients were 84.9%. As for troubles in bedside manners, "Language and communication" was 78.3%. As to what was successful, "Language and communication" was the most frequent at 46.7%. The percentages of those who answered "ready" were significantly higher in 6 items of "knowledge" and 2 items of "basic attitude" in nurses who had the experience of nursing 11 and more foreign patients than those in nurses who had the experience of nursing 10 or less foreign patients. A significant difference was obtained in one item of "communications."

Conclusion: Nurses who had many experiences of nursing foreign patients were aware of the background, such as cultures and values, of foreign patients, and took time to provide them with nursing care. As the bedside manners for foreign patients to receive medical care at ease, it was suggested that it was important to pay attention to their cultural background, understand the cultural differences from Japanese one, and take time to respond them carefully.

Keywords: Foreign patient, Nurse, Cultural competency, Communication



Zone 4: Other Public Health Relates

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Maintenance Situation of System for Accepting Foreign Patients at Hospitals in Kansai area, Japan

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Abstract

Background/Objectives: The number of foreigners visiting Japan is increasing. There are a lot of people who become ill during the stay and visit a medical institution. However, the system of medical institutions for accepting foreign patients is not yet fully established. This study aimed to clarify the maintenance situation of the foreign-patient acceptance system of hospitals in the Kansai area, Japan, and to obtain suggestions for improving the system for accepting foreign patients.

Methods: An anonymous self-administered questionnaire survey was sent by mail to 343 facilities in the Kansai area, Japan. The question items were basic attributes, the experience of foreign patient acceptance, the system for accepting foreign patients, and the system for treating them in the future, the self-assessment scores of the maintenance situation of the foreign patient acceptance system.

Results: The response rate of the questionnaire was 23.0%. Of the hospitals that answered, 83.5% had experience of foreign patient acceptance. As to the system for accepting foreign patients, 53.2% stated "The hospital keeps the consent form exchanged with a foreign patient," and 32.9% described "There is a system that can explain the treatment policies and contents in a language that foreign patients understand." However, the rates of answering that it is in order in many other items were low. Regarding the current burdens in accepting foreign patients and concerns in the future, about 80% pointed out "language and communication problems." The self-assessment score of the maintenance situation of the foreign patient acceptance system ranged from 0 to 40 points in 80% of the hospitals. Many hospitals recognized that the maintenance situation was not enough from the point of self-assessment score.

Conclusions: Although many hospitals have the experience of accepting foreign patients, the acceptance system has not been established as yet. As the medical care system to accept foreign patients, it was suggested that improving the facility information on the website and placing medical interpreters etc. were important for foreign patients to receive medical care at ease.

Keywords: Foreign patient, Accepting system, Hospital, Self-assessment



Zone 4: Other Public Health Relates

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Use of Plastic-bottled Beverages of Nursing Students in a University and Awareness about Microbial Contamination in Unfinished Beverages

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Abstract

Background/Objectives: Plastic-bottled beverages have a problem with recap, and the bacterial contamination may progress in unfinished beverage. Since medical personnel need to be conscious of microbial contamination of unfinished beverages and to instruct patients how to drink it properly, it is necessary to cultivate such awareness from student days. In this study, we aimed to clarify the use of plastic-bottled beverages of nursing students in a university and awareness about microbial contamination in unfinished beverages.

Methods: The subjects were all the first to third graders of a Nursing University (Student group). As controls, all students in a graduate school and those majoring the midwifery at the same university, who qualified as nurses, were recruited (Nurse group). An anonymous questionnaire sheet was sent to both groups.

Results: The questionnaire sheets were collected from 229 (92.3%) of Student group and 32 (88.9%) of Nurse group. Those who drank up the beverages for 4 hours or more were more in Student group (76.6%) than in Nurse group (66.7%). There was no significant difference in how to drink the beverages of their own between two groups. However, more (70.5%) of Student group drank the beverages of others than Nurse group (54.5%). The percentage of those who answered that the unfinished beverages were contaminated were 99.1% in Student group, same as Nurse group (93.8%), but those who took measures, such as discarding unfinished beverages in one day, and keeping it refrigerated were fewer (Student group 17.4% vs. Nurse group 42.4%). As to the awareness of microbial contamination, masks in a bag (69.3% vs. 87.9%), nurse calls (75.1% vs. 87.9%) and stethoscopes used by nurses (61.3% vs. 87.9%) were lower in Student group. There was no difference in the plastic-bottled beverages at the bedside of a patient, personal computers in a ward, and handles of a wheelchair placed at a ward.

Conclusions: Nursing students had some awareness of microbial contamination in unfinished beverages, but their use of plastic-bottled beverages was not appropriate. It is necessary to provide them with the health education for proper use of plastic-bottled beverages and for increasing awareness about microbial contamination.

Keywords: Plastic-bottled beverage, Microbial contamination, Nursing students, Drinking



Zone 4: Other Public Health Relates

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Factors Related to the Smoking Cessation Rates at Eating and Drinking Establishments: Examination by Municipality Data

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Abstract

Background/Objectives: With the 2020 Tokyo Olympics, Japan will completely ban smoking at eating and drinking establishments. Since the smoking cessation rate (SCR) there has a negative correlation with age-adjusted mortality rates by prefectures and by municipalities, it is necessary to proceed the smoking cession positively. However, in rural areas, there may be difficulties to proceed it. If factors related to it in small rural cities would become clear, they would help proceed it. Thus, we investigated the factors related to the SCR in municipalities.

Methods: In this survey, the researchers examined the relationship between various data and the SCR at eating and drinking establishments in each municipality in Wakayama Prefecture, Japan. The smoking information of 7,377 eating and drinking establishments was derived from one registered in the private gourmet site in April 2019. That of "cafe" and "restaurant" was also used. The SCR was defined as the percentage of stores that completely smoked out among those indicated smoking information. Data were "percentage of population aged 15-64", "percentage of population 65 or older", "percentage of elderly households", "percentage of elderly single person households", "labor force participation rate", "medical care expenditure per person" and so forth. Pearson's correlation coefficient was used to examine the relationship between the two factors.

Results: The SCR of all stores was positively correlated with the "percentage of population 65 or older", "percentage of elderly households", and "percentage of elderly single person households". There was a negative correlation with "percentage of population aged 15-64", "labor force participation rate". The SCR of restaurants showed similar correlation to that of all stores in the indicators other than "labor force participation rate (male)". The SCR of cafes was positively correlated with "medical care expenditure per person" and negatively correlated with "labor force participation rate (female)".

Conclusions: The SCR at eating and drinking establishments was negatively correlated with the "percentage of population aged 15-64" and "labor force participation rate". This suggested that in areas with a large population including the age of high smoking rates, it is necessary to take proactive measures to proceed the smoking cession.

Keywords: Smoking cessation, Eating and drinking establishment, Cafe, Restaurant



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Does It Success in Free Screening and Earlier Diagnosis of Dementia Policy in Japan?

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Abstract

Backgrounds/Objectives: In Japan, it estimates 7.2 million older people will be living with dementia in 2025. Although earlier diagnosis of dementia is desirable for several reasons, the diagnosis of dementia is often delayed. To promote earlier diagnosis, some local governments have started free dementia diagnosis policy. This study aimed to assess perception and needs of earlier diagnosis of dementia among older people.

Methods: In 2018, 2 cities namely Akashi and Kobe, Hyogo prefecture started free diagnosis of dementia system first time in Japan. A questionnaire survey was conducted in area where extends Akashi and Kobe cities. Self-administered questionnaires were distributed to all elderly people and 1877 samples were analysed. Descriptive statistics was applied to assess perception and needs of earlier diagnosis of dementia policy. The Ethical Committee of the Kobe Gakuin University was approved the study protocol.

Results: Around 24% of the participants know free earlier diagnosis policy and 3% of them have had dementia examination using this policy. More than 60% of the participants want to use free dementia examination near future. Female participants know this policy rather than male participants. Nearly 40% of the participants strongly desire to receive medical support if they have gotten dementia or mild cognitive impairments.

Conclusions: Although local governments encourage city dwellers to check their cognitive function in earlier, the results showed low public awareness of this policy. Improve public awareness of benefits of early detection of dementia is challenges of success in the policy.

Keywords: Care needs, Dementia, Policy



Zone 4: Other Public Health Relates

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The Influence on the Life Style by the Space Composition in Integrated Facility for Medical and Long-term Care

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Abstract

Background/Objectives: In Japan, the Integrated Facility for Medical and Long-term Care was newly institutionalized as a home for the elderly requiring continuous medical care and support in daily living. In this study, we will identify the actual condition of the Integrated Facility for Medical and Long-term Care and analyze the relationship between the residents' health condition such as dementia and the place of stay. We believe that this paper would be a useful resource for creating the Integrated Facility for Medical and Long-term Care plan to increase the number of such facilities in the future.

Methods: In the Integrated Facility for Medical and Long-term Care, we conducted an observational survey on two weekdays to understand the residents' lives, their places of stay, and the spread of the living range.

Results: 1)The average need for nursing care among residents was 4.2, and there were many people bedridden in their own rooms. However, some people could move on their own using a wheelchair. 2)The partitions that separate the beds were different depending on the facility, such as inorganic ones, movable ones, and also designed surfaces. 3)At facilities with a dining room and lounge, it was seen that residents interacted with each other, family members, and staff.

Conclusions: The degree of care required for residents and whether they can move on their own vary. In order to play a role of "place of life", the Integrated Facility for Medical and Long-term Care encloses the bed periphery with partitions, etc. and creates a single room; but it is also important for them to establish a lounge, etc. so that residents can choose the place to stay according to their mood.

Keywords: Care, Elderly, Conversion, Lifestyle



Zone 4: Other Public Health Relates

P-101

International Migration of Adult Children and Nutritional Outcome in Older Nepali Parents

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Abstracts

Background/Objectives: World Health Organization's Global Strategy and Action Plan on Ageing and Health is an important step towards meeting the Sustainable Development Goals. One objective of the Strategy and Action Plan is to improve measurement, monitoring and research on healthy ageing. In accordance with this objective, this study was conducted to improve our understanding of the health and wellbeing status of senior adults in Nepal. Nutrition is an important indicator of health and wellbeing in older adults but there is limited information available on the nutritional status of older Nepali adults, and even less information in terms of whether international migration of children affects older parents' nutritional status.

Methods: Surveys were conducted with a random sample of 449 parents aged 60 years and above living in Chitwan district of Nepal with high rates of international migration. Calf-circumference was taken in migrant (n=207) and non-migrant parents (n=242) and dichotomized according to recommendations to categorise nutritional status. Hierarchical binary logistic regression analysis was used followed by sub-group analyses for migrant parents.

Results: Parents of migrants had thinner calves than the parents of non-migrants suggesting poorer nutritional status (OR=0.63) but the finding was not statistically significant. Older age (OR=0.92, P<0.001) and belonging to a disadvantaged ethnic group (OR=0.20, P<0.001) were found to negatively predict nutritional status. Fathers (OR=2.42, P<0.01) and parents from families earning higher than average incomes (OR=1.85, P<0.05) had better nutritional status. Among migrant families only, older parents had worse nutritional status (OR=0.92, P<0.01). Fathers of migrants (OR=2.96, P<0.05) and the parents of migrants from Janajati ethnic group as compared to other ethnic groups (OR=5.17, P<0.01) had better nutritional status. Parents of children migrating to the countries in the Middle Eastern Gulf and Malaysia (OR=0.26, P<0.05) had worse nutritional status as compared to parents of migrants who had migrated to Australia, Europe or North America.

Conclusions: Older women belonging to poor families and disadvantaged ethnic groups with children migrating mostly for physical labour abroad were found to be the most at-risk groups for poor nutritional status. These findings can inform public health practices in Nepal and other countries with similar contexts.

Keywords: Ageing, International migration, Nutrition, Nepal



Zone 4: Other Public Health Relates

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Examination of the Influence on the Life Style by the Space Constitution in Various Facilities for the Elderly

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Abstract

Background/Objectives: Japan is aging and it is necessary to have knowledge to correspond the diverse needs of elderly people with various circumstances. In this study, we investigate the influence that space composition has on the living condition of the resident for five kinds of facilities for elderly with different care services (Group Living, Small-scale Elderly Care Facility, Satellite Unit Type Nursing Home, Unit Type Nursing Home, Home hospice). After that, by comparing the results, we will examine the way of living facilities common to all living facilities for elderly people.

Methods: In 23 surveyed facilities, we conducted an observational survey on two weekdays to understand the residents' lives, their places of stay, and the spread of the living range.

Results: 1)Users of Group Living and Small-scale Elderly Care Facility stay in two or three spaces a day. Residents of Home Hospice and Nursing Home spend their day either in their own room or in the dining room. 2)People who can't move on their own tend to spend much of the day in the same place (the private room or the dining room). Tenants who can move on their own tend to stay in multiple places such as cafeterias and corridors without staying in their own room for a long time. 3)When all the private rooms in the facility face the common space directly, the tenants tend to spend more time in the dining room than when the private rooms face the corridor.

Conclusions: Regardless of the type of facility, the influence on the place of stay is seen depending on the situation such as whether or not the resident can move by himself or nursing care level. In addition, it was also found that the positional relationship between the private rooms and the common space affects the staying place of the tenants.

Keywords: Care, Elderly, Lifestyle, Facility



Zone 4: Other Public Health Relates

P-103

Organizing the Factors that Make Multi-generation Symbiosis Housing a "Symbiosis Community"

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Abstract

Background/Objectives: At present, cases that multiple generations live together are increasing in Japan, and these cases considered to provide mutual understanding and mutual assistance between generations. This paper examines the various ways of multi-generation symbiosis housing, the actual conditions of operation and life, and arrange the elements as a "Symbiosis Community". This paper examines the various ways in which multigeneration symbiotic houses exist and the actual conditions of their operation and living, and summarizes the factors for the formation of "symbiotic community".

Methods: The research method used a literature survey on the Internet, a survey of interviews with business owners and residents, and used a database of multi-generation symbiosis housing created from those surveys.

Results: A database was created and each case was evaluated from the following three viewpoints; (1) "Openness" showing how open it is to the surroundings, (2) "Sharedness" showing the degree of sharing by multiple people, and (3) "Diversity" representing the diversity of user attributes. As multi-generation symbiosis housing has many generations of residents, each case has the element of (3). And if it has shared space such as LDK, it satisfies the element of (2). Furthermore, when the space was open to the local residents (partly), it is decided that the element of (1). As a result, symbiosis can't always be realized simply by the presence of the element of (3), and it is necessary to combine the elements of (1) or (2), or both of them. In particular, it is thought that the elements of (2) directly affect the interaction between the residents. In addition, the element of (1) is not limited to the spatial meaning. Intangible aspects such as residents actively participating in local events and intervention by prospective residents and local residents from the time of project planning are also factors in the formation of sustainable communities.

Conclusions: Not only "Diversity" but also having elements of "Openness" and "Sharedness" in terms of tangible factors and intangible factors promoted interaction among residents and recognition and understanding of local residents. Moreover, it turned out that they contribute to the formation of the "Symbiosis Community"

Keywords: Regional bases, Symbiosis community, Housing



Zone 4: Other Public Health Relates

P-104

Regional Trends in Improving the Nutritional Status of Children in Japan

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Abstract

Background/Objectives: Although it is known that Japan overcame infant mortality and undernutrition in 70 years after the war, little has been done to investigate the improvement of the nation's nutritional status using past empirical data.

Methods: We extracted infant mortality rate the Vital Statistics as a nutrition proxy index from 1945 to 2000, and data of height and weight of children at 5 years old as index of nutrition status extracted from the School Health Statistics. The stunting rate was calculated using the WHO standard, and the yearly trend at the national level and the yearly trend by region were examined.

Results: Regarding the infant mortality rate, the differences between regions are large immediately after the war, but it decreased and converged in the mid 50's. Urban areas (Tokyo, Kanagawa, Kyoto, etc.) and central areas are low throughout the period, but Northern Japan are above average until the 1960s. The rate of stunting varied from prefecture to prefecture in the 1950s, but converged in the 70s. The average of height was consistently high in the 50's and 60's in the Tohoku, Hokuriku, urban areas, and toward the south.

Conclusions: Although the regional differences between the two indicators were large immediately after the war, they were converging and improving in the 70's when economic development advanced.

Keywords: Infant mortality, Stunting, Yearly trend, Regional difference



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P-105

The Value of HbA1C in Screening of Postpartum Glycaemic Status in Women with Prior Gestational Diabetes Mellitus

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Abstract

Background/Objectives: Women with prior GDM are at high risk of future pre-diabetes, T2DM and recurrence of GDM. Glycaemic screening is mandatory in early identification of complications. The aim of this study was to identify a suitable diagnostic test for postpartum glycaemic screening of GDM mothers.

Methods: This cross-sectional component of a prospective quasi-experimental study (n=70) was conducted in three districts of Sri Lanka in postpartum mothers with prior GDM. Glycaemic status was assessed by fasting plasma glucose (FPG), OGTT and HbA1C one year after delivery. Insulin resistance was assessed by HOMA-ir. Percentages of subjects who have progressed to pre-diabetes and diabetes (based on recommended cut-offs) were calculated separately by each diagnostic test. These tests were evaluated by the area under the receiver operating characteristic (ROC) curve, sensitivity and specificity. The positive predictive value was calculated by Chi-square test. Ethical approval was obtained from Ethics Review Committee, University of Sri Jayewardenepura.

Results: Mean age (\pm SD) was 33.6(\pm 5.8) years. Percentages of pre-diabetes and diabetes based on FBG, OGTT and HbA1C were 37.4%; 17.1%, 27.1%;11.4% and 34.3%;17.1% respectively. When HOMA-ir was used as the gold stand, assessment of glycaemic impairments according to FBG test had 67% sensitivity, 62% specificity and 20% positive predictive value, OGTT had 62% sensitivity, 63% specificity and 60% positive predictive value. The HbA1C test had 70% sensitivity, 70% specificity and 70% positive predictive value.

Conclusions: HbA1C is a sensitive and specific diagnostic tool which can be used alone to predict glycaemic impairments in women with prior GDM.

Keywords: GDM, HOMA-ir, HbA1c



Zone 4: Other Public Health Relates

P-106

Effect of Group-based Otago Exercises Program on Balance, Mobility and Fear of Falling in Nursing Home Residents older than 65 Years

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Abstract

Background/Objectives: In China, more and more old people are taking care of themselves in nursing homes. With the elderly getting older, their balance and mobility become worse and worse. Fear of falling (FOF) also frequently occurs on them. Balance, mobility and FOF cause plenty of adverse outcomes, such as poor life quality, high risk of falls and so on. Otago exercise program (OEP) incorporating balance and strengthening exercises and walking has been proven as effective in community dwelling older people. But only in a few studies it was investigated as group-based OEP or on the elderly who living in a nursing home. This study aimed to examine whether the group-based Otago exercise program (OEP) is more effective than usual care on balance, mobility and FOF in nursing home residents older than 65 years.

Methods: A intervention study include 58 residents (age \geq 65 years) who can walk and have clear consciousness were divided into the experimental group (EG, n=29) and the control group (CG, n=29). The EG received the group-based OEP for 4 months, while the CG only received usual care of the nursing home. The Time of Up and Go test (TUG), four-stage Balance test (FSBT) and Survey of Activities and Fear of Falling in the Elderly (SAFFE) were adopted to evaluate the participants' mobility ability, balance ability and FOF. The data were analyzed by SPSS for descriptive statistics, t-test, rank sum test and chi-square test with inspection level $\alpha = 0.05$.

Results: At the baseline time, there were no significant difference in FSBT and SAFFE between the EG and the CG ($p > 0.05$), and EG were worse than the CG in TUG ($p < 0.05$). After 4 months, the EG significantly improved in TUG, FSBT, SAFFE ($p < 0.05$), and the CG were significantly worse in the TUG, FSBT ($p < 0.05$), while the CG had no significant difference in SAFFE ($p > 0.05$). The EG were better than the control group in the TUG, FSBT, SAFFE after 4 months ($p < 0.05$).

Conclusions: The group-based OEP was shown as effective in improving balance, functional mobility and reducing the FOF of the elderly who living in a nursing home.

Keywords: Fear of fearing, Otago exercise program, Nursing home, The elderly



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P-107

Usefulness of Home Program for Children with Cerebral Palsy in Northeast Thailand

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Abstract

Background/Objectives: One of the SDG targets is to empower people with disability. Receiving physical rehabilitation regularly is essential to aid children with cerebral palsy (CP) to have independent and active lives. Sri Sangvalya Khon Kaen School, a boarding school for children with disability in northeast Thailand, regularly provides rehabilitation for their students; however, their likelihood to receive rehabilitation when they go home during the semester breaks is reduced. Consequently, their physical functions are reportedly lowered when they come back to school. To address this, a set of simple exercises that can be done at home (home program) was developed. This study investigated whether the home program was useful for children with CP.

Methods: Children with CP at the school were randomly allocated to the intervention group (IG, n=27, mean age =14.6±2.7, 12 males) and the control group (CG, n=25, mean age =15.0±2.9, 13 males). Before they returned home for a nearly two-month semester break, IG was instructed to do four types of exercise combining stretching, strength, and balance exercises at home at least 5 times a week. The data collected from each participant before and after the semester break include Modified Ashworth Scale, five times sit-to-stand test (FTSST), Time up and Go, weeFIM, etc. The data between IG and CG, before and after the break were compared using t-test.

Results: There were no statistical differences in the scores of physical functions and ADL between the two groups before and after the break. However, when the scores were compared before and after the break among IG, significant improvements were found in FTSST (12.3 vs 10.4, p<0.01), the right knee joint (1.52 vs 0.81, p<0.05), total weeFIM (120.2 vs 123.8, p<0.05), weeFIM (motor functions, 86.6 vs 89.6, p<0.05). There were no such differences identified in the control group.

Conclusions: The study indicated that the home program had some positive impacts on physical functions and ADL of children with CP. Further studies are needed to modify the home program to be more suitable to the need of each child with CP.

Keywords: Cerebral palsy, Rehabilitation, Home program, ADL



Zone 4: Other Public Health Relates

P-108

Comparative Study of Public Perception for Health Risk between Uzbekistan and South Korea

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Abstract

Background/Objectives: As the prevalence rates of disease vary from country to country and also the environment is different, it is expected that each country will be aware of the risk of public health issues.

Methods: We used survey result from the report of “National risk awareness of public health issues and application for future policy developments (2016)” and also conducted a survey in the Tashkent city. The 3,317 participants (age20-59) were recruited for the online panel survey in April to May 2015(95%, CI±1.71%) in the South Korea. And the 271 participants were recruited for the household survey in October to December 2019 in the Tashkent city, Uzbekistan.

Results: The study found that the both countries has different rank for public risk perception on 6 major health issues (Smoking, Drinking, Mental health, Fine dust (PM10, PM2.5), cardiovascular disorders and cerebrovascular disease). The most health risk of the South Korea is the fine dust (5.36) whereas the Uzbekistan is the drinking (5.41) according to the 7 point Likert scale.

Conclusions: As a result of the study, public perception on health risk were identified depending on gender, socio-economic level, education and country. And also, between the risk perception and other questions (personal knowledge, controllability and fear of the health factors) were shown differently.

Keywords: Risk perception, Public awareness, Uzbekistan, South Korea, Comparative study, Health issue



Zone 4: Other Public Health Relates

P-109

The Situation of Participation in Extracurricular Activities and the Relationship with Depression, Anxiety and Stress of Medical Students of Hue University of Medicine and Pharmacy

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Abstract

Background: Extracurricular activities are a useful environment and play the role for students to exercise, develop soft skills, relieve stress after school. For current students, especially medical students, studying is always top priority, but with a large amount of knowledge, many students feel pressure and the rate of depression, anxiety and stress of medical students was a concerned issue. The aims of the study is to research prevalence of participation in extracurricular activities and evaluate the association between extracurricular activities and depression, anxiety and stress relief in students of Hue University of Medicine and Pharmacy.

Objectives: The aims of present study was to describe the situation of participation in extracurricular activities and obtain associated with depression, anxiety and stress of medical students of hue university of medicine and pharmacy.

Methods: A cross sectional- sectional survey was conducted on a random of 659 college students, majoring in general practice doctor from first year to fifth year of Hue University of Medicine and Pharmacy. Depression, anxiety, and stress were assessed anonymously using DASS-42.

Results: 38.5% students participated in extracurricular activities. A proportion of students joined society activities (70.9%), art – sport activities (40.9%) and researching activities (30.3%). The rate of students had signs of depression, anxiety and stress was respectively 27.3%, 39.6% and 29.6%. Participation in extracurricular activities was correlated with depression, anxiety and stress ($p < 0.05$).

Conclusion: Extracurricular activities should be seen as an important element in education, and a participation in extracurricular activities as a supportive measure in improving the student's mental health. This study showed that participation in extra-curricular activities reduces the risk of depression, anxiety, and stress.

Keywords: Extracurricular activities, Depression, Anxiety, Stress



Zone 4: Other Public Health Relates

P-110

Neonatal and Post Neonatal Mortality Trend in Indonesia from 2000 to 2017

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Abstract

Background/Objectives: Neonatal and post neonatal mortality describe of health services quality in a country. It is one of indicator of welfare each countries, particularly in Indonesia. Several factors have determined as main contributors of mortality, say neonatal factors, maternal and health services. The government should take a policy to handle and fix the complexity of those problems. The objective of this research is to describe neonatal and post neonatal mortality in Indonesia with specific etiology related to the problems.

Methods: The data was taken from WHO global burden disease, children mortality from 2000 to 2017. There were two main data, neonatal mortality rate (NMR) and post neonatal mortality rate (PNMR). The data was searched according to WHO regions and continued with descriptive analysis by line graphs. The in-depth analysis was conducted based on specific finding on the graphs.

Results: According to the data found that there was declining of both mortality rate from 2000 to 2017, yet in 2004, there was unexpected increasing of PNMR. The most causes of NMR are premature baby, birth asphyxia, congenital disease, sepsis and acute respiratory infection. In the other aspect of PNMR are injuries, other NCD, congenital, premature baby and birth asphyxia, respectively. From the data found that both NMR and PNMR caused by premature baby, birth asphyxia and congenital anomalies. Eventually, the most significant of NMR and PNMR is congenital defect.

Conclusions: Congenital defects are the most horrible factor that contributed in both NMR or PNMR in Indonesia. The most cases of congenital disease are talipes equinovarus, orofacial cleft, neural tube defects, abdominal wall defects, atresia ani.

Keywords: Neonatal, Post neonatal mortality, Indonesia



Zone 4: Other Public Health Relates

P-111

The Association between Nutritional Status and Depressive Symptoms among Older People in Galle District, Sri Lanka

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Abstract

Background/Objectives: Aging is a global public health issue. It has been shown that, malnutrition and depressive-symptoms are prevalent in old age. This study aimed to examine the association between nutritional status and depressive symptoms among older people living in Galle District, Sri Lanka.

Methods: A community based cross sectional study was conducted in 2016 using a sample of 396 older people (aged 60 years and above) residing in Galle district. Mini Nutritional Assessment (MNA) was used to assess nutritional status and Centre for Epidemiological Studies-Depression (CES-D) scale was used to assess depressive symptoms. Ethical clearance was obtained from the Ethical Review Committee of the Faculty of Medicine Galle, Sri Lanka.

Results: Mean age of the participants was 69 years (SD=7.2 years) and 67.7% (n=268) were women. Of the total sample, 30.8% (n=122) were found to be at risk of being malnourished and 14.8% (n=59) had depressive symptoms. There was a statistically significant weak negative correlation between MNA score and the CES-D score of the study participants ($r = -0.198$, $p = 0.000$).

Conclusions: Nutritional status is weakly associated with psychological well-being of the elderly people. Further studies are needed to promote the well-being status of the elderly people.

Keywords: Nutritional status, Depressive symptoms, Older people, Sri Lanka



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Prevalence of Child Abuse and its Risk Factors among 15-16 Years Old Children in Sri Lanka

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Abstract

Background/Objectives: Child abuse is a global public health problem results in high morbidity and mortality. But, in Sri Lanka, there is a paucity of scientific evidence on burden and associated factors of child abuse. Hence, this study was conducted to assess the prevalence of child abuse and its risk factors among children aged 15-16 years in the Welikanda Divisional Secretariat (DS) area in North Central province of Sri Lanka.

Methods: A descriptive cross-sectional study was conducted in the Welikanda DS area from January 2017 to December 2017. A sample of 416 children was selected using the multistage sampling method and data were obtained from children. A self-administered questionnaire was used to collect data. Descriptive statistics was used to calculate the prevalence and associated factors were determined using logistic regression conducted by Statistical Package for Social Sciences version 19.

Results: The lifetime prevalence of negligence, emotional abuse, physical abuse and sexual abuse were 41.8%, 64.9%, 60.3% and 3.8% respectively. Lifetime prevalence of negligence was significantly associated with having an affair, suicidal ideation, domestic violence, mother ever been abroad and level of relationship with the family. Age, education level of the mother and father, having an affair, suicidal ideation, domestic violence, father ever been abroad, alcohol consumption by father and level of relationship with the family were significantly associated with lifetime prevalence of emotional abuse while number of siblings, education level of the mother and father, having an affair, suicidal ideation and domestic violence were significantly associated with lifetime prevalence of physical abuse. Lifetime prevalence of sexual abuse was significantly associated with mother ever been abroad, father ever been abroad and having a phone.

Conclusions: The commonest type of child abuse was emotional abuse followed by physical abuse among children aged 15-16 years in the Welikanda DS area. Associated factors were from individual and family level categories on which prevention strategies should be targeted on.

Keywords: Child abuse, Prevalence, Risk factors, Sri Lanka



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P-113

Beta Thalassemia and Associated Factors in Kota Belud, Sabah, Malaysia

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Abstract

Background/Objectives: Consanguineous marriage is associating factors in development of β -thalassemia. Thus, avoidance of inter cousin marriages of carrier can prevent β -thalassemia in children. Screening, premarital counseling and education with couples having thalassemia traits an important step in prevention of thalassemia. The main objectives of this study were to determine the association of consanguineous marriage and β -thalassemia and assessing the level of knowledge on Thalassemia in Kota Belud district.

Methods: Study design was Case control (1:2) study which was conducted from March 2018 to September 2018 at Hospital Kota Belud and four Health facilities in Kota Belud.

Results: Total of 180 sample size were recruited for the study by inclusion criteria. Association of consanguineous marriages with β -thalassemia was highly significant ($P = 0.009$, $OR = 3.2$). Ethnic Kadazan-dusun shows significant association with β -thalassemia at $P = 0.03$. Family history, fathers and mothers thalassemia, screening before marriage factors are also significantly associated with P value < 0.001 .

Conclusions: Consanguineous marriage is more widespread in family with β -thalassemia and has a strong association with development of thalassemia diseases in Kota Belud. Kadazandusun ethnic shows more prevalent with β -thalassemia compared to other indigenous groups. Screening and awareness are vital in avoidance of consanguineous marriage to break spreads of this disorder.

Keywords: β -thalassemia, Consanguineous marriages, Ethnic Kadazan-dusun, Kota Belud, Sabah



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Resilient Universities: The Role of Universities in Disaster Management

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Abstract

Background/Objectives: The goal 11 of SDG is to make cities and human settlements inclusive, safe, resilient and sustainable. Universities are a major part of the social fabric with a considerable potential to help achieve this goal. This study had the following objectives: (1) Identify and clarify the role and contribution of universities in disaster management and hazard mitigation. (2) Identify and evaluate the factors that impact the roles played by Universities in hazard mitigation and disaster management. (3) Identify or develop a framework for University resilience.

Methods: This study involved interviews with key informants from a University in Saudi Arabia (n=3), and other experts from Australia (n=4) and Saudi Arabia (n=5).

Results: Analysis identified 7 sub-themes which broadly fell under 3 common themes that contributed to a conceptual framework of broad functions or roles expected of universities:

(1) Universities as critical infrastructure. (2) Universities as contributor to community resilience and capability. (3) Universities as resource provider to community. In addition, analysis of the themes identified leadership and systems structures as two principal ways to enable those roles. It also identified the need for ways in which universities performance in this domain may be evaluated.

Conclusions: There is a need for policies at universities and the introduction of coordinated approaches to the development of resilient universities that in turn could contribute to resilient communities. Such policies need to be evidence based; built around a more in-depth understanding of the role that universities should play, incorporating the ways to evaluate them.

Keywords: Universities, Disasters, Resilience, SDG



Zone 4: Other Public Health Relates

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News Coverage of Sedentary Behavior as a Health Issue: A Content Analysis of Three Major National Japanese Newspapers in 2000-2018

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Abstract

Background/Objectives: Sedentary behavior (too much sitting) is an important contributor to increased chronic disease risk. Japanese adults have the longest sitting time. It is important to inform reducing total time and breaking up prolonged sedentary time. This study investigated articles on sedentary behavior published in Japanese newspapers.

Methods: A content analysis of news coverage about sedentary behavior was conducted using three major national Japanese newspapers published between 2000 and 2018. Coding variables included main topic of article, population group, sedentary behavior contexts or domains, health outcome, solution of too much sitting.

Results: A total of 24 articles were identified and subsequently coded. In the quarter articles (6 articles), sedentary behavior was the main topic, otherwise sedentary behavior was mentioned in articles on other main topic such as disease or workers. Workers (37.5%, 9 articles) as a population group, and workplaces (41.7%, 10 articles) as a domain were frequently noted in articles. The health influences of sedentary behavior were mentioned in more than 80% (20 articles), but less than 60% (14 articles) of articles mentioned the solution for sedentary behavior.

Conclusions: News coverage requires more mention of elderly people, children and daily life in addition to workers and workplace in Japan. Moreover, it is better to mention solutions and benefit to reduce sedentary time as well as negative health impacts of sedentary behavior in Japanese newspaper. It would be helpful for reducing or breaking up prolonged sitting to give effective and accurate information to the public.

Keywords: Sedentary behavior, Health communication, Mass media



Zone 4: Other Public Health Relates

P-116

Social Inequity and Accessibility to Maternal Health Service

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Abstract

Background/Objectives: Dalit refers to those ethnic group who had experienced complicated interconnection of social biases. Maternal health seems poor among Dalit women which is likely due to social deprivation and inaccessibility to health service. Thus, the objective of the study was to compare accessibility to maternal service between Dalit and non-Dalit women in Morang district of Nepal.

Methods: A cross-sectional study was conducted in Morang district of Nepal using probability proportional to size (PPS) and simple random sampling to select 600 reproductive aged (15-49 years) women having a child below 2 years old. Amongst them, 335 were Dalit and 265 were non-Dalit. Interviews using structured questionnaire were performed and chi-square test was used for analysis.

Results: The study found inequitable accessibility to maternal service. Non-Dalit women had nearly 2 times good accessibility as compared to Dalit women which was statistically significant ($p < 0.001$). Likewise, regarding geographical, financial, cultural and functional accessibility, non-Dalit women had 1.7, 1.3, 1.7 and 1.2 times good accessibility than Dalit women respectively.

As regards to socio-economic factors ($p < 0.05$), adolescent pregnancy was 2 times higher in Dalit as against non-Dalit. The educational level of the respondents and their husband was about 5 times higher in non-Dalit rather than in Dalit. Furthermore, regarding household income, non-Dalit had almost 3 times higher income when compared against Dalit.

Conclusions: Equity and accessibility to maternal service needs improvement among Dalit which seems possible through interventions addressing caste based discrimination and human right. Thus, multi-sectoral interventions could increase accessibility to maternal service.

Keywords: Maternal health service utilization, Accessibility, Social inequity



Zone 4: Other Public Health Relates

P-117

Commuting Patterns and Health Problems of Commuters in Regional Tourist Destination (Case Study in Denpasar Greater Area)

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Abstract

Background/objectives: Commuting has become a global phenomenon in various metropolitan cities in the world including Denpasar. Denpasar is the center of tourist destinations for Indonesian and foreign tourists. Denpasar is the center of tourist destinations for Indonesian and foreign tourists. This condition makes Denpasar as a business and economic center for residents in the surrounding area. Conditions have encouraged an increasing number of commuter workers in Denpasar from sub-urban areas, namely Badung, Gianyar and Tabanan. The people facing several problems such as traffic, air, noise, thermal pollution, long duration of commuting and also poor transportation system. For women, this condition becomes a real problem, because women have dual role within the households. The purpose of this study is to analyze whether commuting have an impact for the health problems of commuters.

Methods: This study analyzes secondary data of the Sarbagita (Denpasar, Badung, Gianyar and Tabanan) Commuter Survey 2015 from CBS Indonesia. Sample study: commuter workers aged 15-65 years with exclusion criteria are commuters active commuting. The final sample were 652 persons. The Health problems cover physical, mental/psychological and social aspects. These aspects are represented by the variables such as; physical; psychological/mental (feel stress, have had bad experiences such as accidents and sexual harassment); and social (involvement in community activities and refreshing). Commuting pattern: time (minutes), distance (km), main mode transportation, frequency of commuting/week, number of modes, and transportation cost.

Results: Majority commuter used private transportation such motorcycle and they have long commute to work more than one hour (one way). Female commuters use more public transportation than men. The findings of this study prove the existence of commuting paradoxes in commuters. This study show that commuting has correlated with health problems.

Conclusions: Some recommendations from this study that the burden of commuting must be minimized by developing a reliable public transportation system especially women, and also encouraging the use of mass transportation through campaigns from a public health perspective.

Keywords: Commuting, Commuters, Health outcomes



Zone 4: Other Public Health Relates

P-118

Microbial Assessment of Honey Imported into the Maldives

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Abstract

Background/Objectives: Honey is a supersaturated solution of sugar which emerges from the bellies of *Apis mellifera*, commonly known as honey bees. The quality of honey is determined by the sensory, physiochemical and microbiological characteristics. Honey is a quite saturated and is endowed with antimicrobial properties, but there are certain varieties of microorganisms that possess the ability to tolerate the concentrated sugar. The objectives of this study is to conduct a market study focusing on microbiological assessment of honey that are imported into the Maldives. All honey distributed and consumed in the country are imported but there have been no studies so far to determine the quality and the safety of the imported honey product.

Methods: A total of thirty-four honey samples, seventeen brands, were randomly selected from the local shops and supermarkets of Male', the capital of the Maldives. The products originated from variety of countries; India (23%), Malaysia (23%), Australia (12%), Spain (6%), Saudi Arabia (6%), SriLanka (6%), German (6%), and Singapore (6%). The samples were analysed using standards microbiological testing methods for most common indicators of safety and hygiene; Coliforms, Yeast & Mold count, Presumptive *Bacillus Cereus*; *Salmonella*, and Fungal identification.

Results: Total coliform and *Salmonella spp.* were absent in the all samples tested. Almost half (47%) of products contained yeast and mould between the ranges 1×10^2 to 1×10^5 CFU/g. Presumptive *Bacillus cereus* which are associated with the gut of honeybee, were positive in 29% of products between the ranges from 1×10^2 to 3×10^2 . Fungal colonies were observed in 35% of the products including yeast and *Aspergillus spp.*

Conclusions: The presence of specific bacteria and yeast and moulds indicates hygienic issues associated with products important in to the country. These results suggest the need for stricter border control and improve food safety. It is recommended to conduct random sampling to ensure the quality and safety of honey imported into the Maldives.

Keywords: Honey, Microbiological analysis, *Bacillus cereus*, *Aspergillus*, Mould, Yeast



Zone 4: Other Public Health Relates

P-119

Factors Contributing to Drug Use Initiation among Young People in the Maldives

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Abstracts

Background: Drug use and drug addiction is a major problem among adolescents and young people of the Maldives. This has a major impact on health and well-being, economic status of individuals, social relationships and the economy of the country.

Aim: The aim of the study is to gain an in-depth understanding of the factors that lead to drug use initiation and addiction among the young people in the Maldives.

Methods: To date there has not been any research undertaken in Maldives in this area. Thus, given that this is new research territory and the aim was to explore the experiences of young people, a qualitative approach was used. The study was a case study based on the principles of narrative research and phenomenology. A total of 20 young people who had experienced drug initiation and addiction, 8 parents/legal guardians and 8 staff from related organizations participated in the study.

Results: The results showed that most commonly used drug in the initiation was heroin. The main reasons that lead for their initiation included; difficult relationships, broken homes, weak connection between parent and them, husband or boyfriend was an addict. None of the participants knew what drugs were, or how it would impact their health/life or the negative impact of drug addiction when they initiated it. All participants strongly pointed out that they would never have tried drugs if they knew the consequences would be so dire. A major difference in the initiation age and financial condition of the families were observed for males and females. Other negative consequences of addiction included becoming beggars and prostitutes to finance their addiction

Conclusions: The main reasons for drug initiation in Maldives included; difficult relationships, broken homes, weak connection between parent and them, husband or boyfriend was an addict. Proper rehabilitation and awareness programs need to be implemented to overcome the issue of drug initiation and addiction in the Maldives.



Zone 4: Other Public Health Relates

P-120

Chronic Pain and Quality of Life among Institutionalized Older Adults in Malaysia

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Abstract

Background/Objectives: Chronic pain is one of the most prevalent health conditions faced by older adults, and is recognized as a major concern for this segment of the population. The objective of this study is to estimate chronic pain in elderly residents residing in public institutions in Malaysia and to understand the relationship between chronic pain, quality of life and its correlates.

Methods: This is a cross sectional survey involving a sample of 317 older persons aged 60 years and above living in public institutions in Malaysia. A face-to-face interview were conducted using a structured questionnaire. Measures include sociodemographic, comorbidity, chronic pain, loneliness, activity of daily living and perceived quality of life. The interview took about 30-60 minutes to complete.

Results: Approximately 24.9% of respondents reported experiencing chronic pain that had persisted for 3 months or more. One third of the respondents felt that their chronic pain had frequently disrupted their daily life. Females (Mean 45.2) appeared to view their quality of life in a more positive light compared to males (Mean 42.9) ($p=0.006$). Correlations were found between quality of life with chronic pain, functions of daily activity, comorbidities, loneliness and depression status.

Conclusions: This study is important for caregivers to understand chronic pain when caring for the elderly living in public institutions. Individualized health care intervention could help to reduce pain among older persons and improve their quality of life.

Keywords: Chronic pain, Quality of life, Institutionalized elderly



Zone 4: Other Public Health Relates

P-121

Detection of *Salmonella Enterica* in Retail Chicken Eggs from a Selected Public Market in the City of Manila

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Abstract

Background/Objectives: Poultry products, specifically eggs, are commonly implicated food vehicles in transmitting human Salmonellosis. *Salmonella enterica* serotypes are one of the most common causative agents of Salmonellosis worldwide. However, there is scarcity of available information on the presence of *Salmonella* in eggs in the Philippines. The primary objective of this study is to determine the presence of *S. enterica* serotypes from different parts of the chicken egg sold in a selected public market in the City of Manila.

Methods: A descriptive research design was employed for the detection of the presence of *Salmonella spp.* in different parts of retail chicken eggs. The methodology for the preparation, pre-enrichment, selective enrichment, isolation and identification of *Salmonella* primarily followed the guidelines set by the US Food and Drug Administration as seen in the Bacteriological Analytical Manual (BAM) with some additions and modifications.

Results: Among the seventy – two egg samples obtained, a total of 184 colonies were isolated, 40 (22%) of which were undetermined since they failed to satisfy any of the discard criteria and meet any of the biochemical profile of identifiable *Salmonella enterica* serovars. Among these isolates, 1% were identified to be *Shigella spp.*, while another 1% were found to be *Providencia spp.* The rest (20%) were classified as potential *Salmonella* isolates. These potential isolates were obtained from 29 out of the 72 eggs, which means that 40% of the eggs are possibly contaminated with *Salmonella*. Out of these 29 eggs, 19 (66%) had isolates coming from the egg shells, while 7 (24%) had colonies from the egg content. The remaining 3 (10%) eggs had isolates from both the egg content and the shell. Furthermore, 21 (87%) out of the 24 stalls had at least one of their eggs possibly contaminated with *Salmonella*.

Conclusions: There were potential *Salmonella* colonies isolated from the chicken eggs examined with majority of these obtained from the eggshells. Further testing such as serotyping is needed to guarantee the presence of *S. enterica* in the examined chicken eggs, which may provide more definite implications on the sanitary conditions in the market, poultry farms, or in food handling.

Keywords: Chicken eggs, *Salmonella*, *Salmonella enterica* serotypes, Public market



Zone 4: Other Public Health Relates

P-122

Development of a Japanese Version of the Gay Affirmative Practice Scale

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Abstract

Background/Objectives: Research on lesbian, gay, bisexual, and transgender (LGBT) populations in Japan is scarce and none have used reliable scales specifically to measure clinical nurses' attitudes toward LGBT individuals. Meanwhile, medical staff in English-speaking countries have specific means, such as the gay affirmative practice (GAP) scale (Crisp, 2006), to improve their behavior toward LGBT people; no such reliable scales exist for medical staff in Japan. This is alarming because social concern and demand for such a scale is increasing. Thus, a Japanese-language version of the GAP scale has potential to be used as an evaluation tool to improve nurses' behavior in this regard and to provide opportunities for the education of medical staff concerning the LGBT population. Thus, the aim of this study was to develop a valid Japanese version of the GAP scale.

Methods: The original GAP scale was translated into Japanese, and subsequently each sentence was confirmed by back-translation. The scale of measurement for the attitude towards homosexuality for the general population in Japan created by Wada (2010) was used to certify convergent construct validity for the newly developed scale. A cross-sectional questionnaire survey was administered at two regional hospitals. To identify test-retest reliability, anonymous self-administered questionnaires were completed by clinical nurses. Statistical analyses included exploratory/confirmatory factor analysis as well as confirmation of internal consistency, construct validity, and coexistence validity.

Results: Results are yet to be seen.

Conclusions: This study is currently underway, and conclusions have not yet been reached.

Keywords: Japanese version of the GAP scale, LGBT, Scale validation



Zone 4: Other Public Health Relates

P-123

Social and Gender Inequities and Health Systems: Immunisation among Infants in Southeast Asian Countries

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Abstract

Background/Objectives: Communicable diseases have undergone decline or eradication in some societies. An intervention that has been successful on addressing such public health issues are infant immunisation programmes but some countries have yet to achieve this as those in Southeast Asia which may be due to social inequities in education, socioeconomic status, and gender structures.

Methods: The Demographic and Health Survey (DHS) is a standardised instrument that collect measures on maternal and child health along with social characteristics. For this study, the Southeast Asian countries included are those where DHS is collected. These countries with the year of collection are: Cambodia (2014), Indonesia (2012), Myanmar (2015-16), and the Philippines (2013). The analytic sample for the study is limited to the last child born to every woman. Censored in the sample are those born 12 months' prior the surveys. The immunisation schedule standard used for this study is from the World Health Organization whereby BCG, OPV I and II, DPT I and II, and Measles vaccines are to be administered at specific time of an infant's life.

Results: Certain factors are observed to be associated with completed adherence to the recommended immunisation schedule but with varying statistical significance between societies. Sociodemographic factors that exhibit this are increasing age of mother at birth and higher education attainment of parents. For gender autonomy factors, autonomy in household decision making and unintentional births are associated with better adherence to immunisations. The sole factor that is statistically significant with the immunisation adherence across the four countries is improving socioeconomic status of household.

Conclusions: Policies have to be created with consideration on social and cultural factors. Health policies are to be integrated with other social systems such as gender and household dynamics in order to bear positive outcomes. Nevertheless, socioeconomic situation of households has to be given particular attention because infant health may be afforded less prioritisation when resources are scarce.

Keywords: Infant health, Immunisation, Health Inequity



Zone 4: Other Public Health Relates

P-124

Perceptions of Depression among Malaysian Youth: A Qualitative Study

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Abstract

Background/Objectives: Youth's understanding of depression and their perceptions of its causes are important factors in ensuring the success of mental health programs for this population. In Malaysia, there has been limited effort devoted to the examination of youth's perceptions of depression. The objective of this study was to explore the perceptions of depression among Malaysian youth in urban cities.

Methods: This was a qualitative study wherein 28 interviews were held with youths in the urban areas of Kuala Lumpur and Selangor. Respondents aged 15-30 years were selected from an institute for skill development and from welfare institutions in two states (Federal Territory of Kuala Lumpur and Selangor). During these interviews, youth's perceptions and understanding of two areas of depression were explored, including: a) the meaning of depression, and b) factors contributing to depression. A thematic analysis was conducted to assess the presence of commonly occurring perceptions among youth.

Results: The participants perceived depression as involving sadness, uncomfortable feelings, and the occurrence of physical manifestations. Young people attributed depression to social circumstances: family conflict and neglect, academic concerns, loneliness, problems with peers, work stress, social media, and a high cost of living.

Conclusions: Our findings provide support for the proposition that when planning mental health programmes for youth, consideration must be given to the need for positive interactions within and between families and social groups.

Keywords: Youth, Perceptions, Depression



November 22, 2019

Venue: Banglampoo Room, Floor 6

Time: 13.00 – 13.30 hrs

Zone 5: Community Participation and Mobilization/ Injury Prevention and Disaster Management/ Oral Health

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P-137 Changing life states of disaster victims over 60-years-old in the course of the 2011 East Japan disaster
Kazuki Yoshida, Etsuko Onodera, Katsuko Suenaga

P-138 Oral health knowledge and behaviors of the elderly people in Taiwan
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November 22, 2019

Venue: Banglampoo Room, Floor 6

Time: 13.00 – 13.30 hrs

Zone 5: Community Participation and Mobilization/ Injury Prevention and Disaster Management/ Oral Health

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| P-140 | Demonstration of high value care to improve oral health of a remote indigenous community in Australia
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<i>Pichaya Rochanadumrongkul, Natee Nonpassopon, Kanyapak Maipoom, Sirikan Janwattanavej, Kodchaphon Naksanit, Saowalak Narachit, Sittipong Chaimanakarn</i> |



Zone 5: Community Participation and Mobilization/ Injury Prevention and Disaster Management/ Oral Health

P-125

Role of Social Relationship with Neighbors in Alleviating Depressive Mood Caused by Family Caregiver Burden: A Cross-sectional Study of Japanese Adults

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Abstract

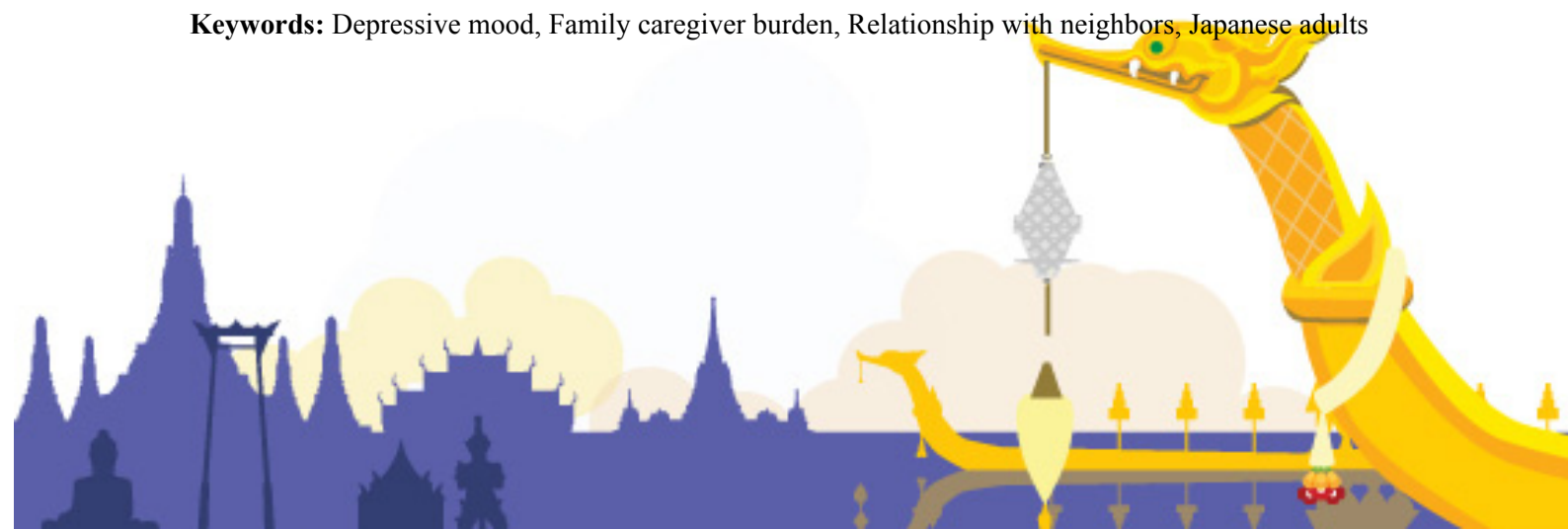
Background/Objectives: In this cross-sectional study, we aimed to examine whether social relationship with neighbors could alleviate depressive mood caused by family caregiver burden.

Methods: Japanese adults were recruited from the Japan Multi-Institutional Collaborative Cohort Study in the Okazaki area, and a questionnaire survey was administered between 2013 and 2017. Depressive mood was measured using Kessler 6 score (0–24 points—higher the score, more depressive is the mood). Based on the family care and caregiver burden, participants were categorized into four groups: “no burden,” “mild burden,” “middle burden,” and “severe burden.” Social relationship with neighbors was assessed with a single question: “What is your relationship with your neighbors like?”: Responses were divided into “good” and “poor.” We performed multivariable linear regression analysis to examine the impact of caregiver burden on depressive mood and the effect modification of relationship with neighbors.

Results: A total of 5,069 adults (2,843 males and 2,226 females) were analyzed. Multivariable analysis showed that higher the family caregiver burden, higher was the depressive mood after adjusting for all covariates (p for trend < 0.01). However, good relationship with neighbors alleviated the increase in depressive mood caused by family caregiver burden (p for interaction < 0.05).

Conclusions: The association between family caregiver burden and depressive mood was modified by neighborhood relationship. Our findings suggested the importance of developing a community with rich neighborhood ties to protect the mental health of family caregivers.

Keywords: Depressive mood, Family caregiver burden, Relationship with neighbors, Japanese adults



Zone 5: Community Participation and Mobilization/ Injury Prevention and Disaster Management/ Oral Health

P-126

The Establishment of Cooperation Platform among Civil Groups for Environmental Education

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Abstract

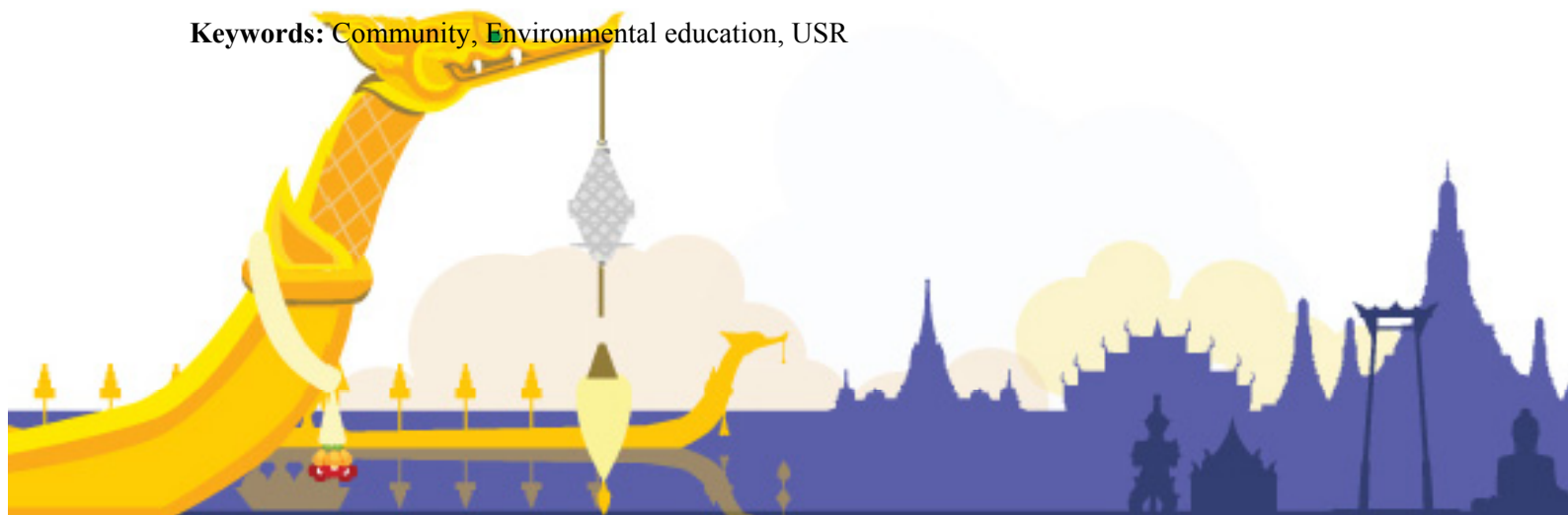
Background/Objectives: Health impact resulted by domestic environmental pollution has been notified and verified academically. However, the information is not that accessible to most local residents. The utmost purpose of university social responsibility (USR) is to passively resolve specific social problems, and to actively advise a future direction for sustainability. The USR project of Tunghai University, “Authentic food and clean air in partner community”, thus focuses on environment sustainability through popular concerns for food security and air cleanness.

Methods: We establish a platform for the university, community and government on multidisciplinary cooperation to enhance public understanding of sustainable environment, as well as civil participation in relevant issues. University students and teachers, communities, NPOs and local authorities thus may garner consensus through interdisciplinary courses and extensive activities.

Results: During the pilot phase of the project, a core collaborative team in the university has been established. Through the training of the curriculum, teachers and students are engaged in the establishment of the platform and the participation of citizens in action to enhance the public's awareness of the air pollution issue. We empower people by working with opinion leaders to hold lectures, workshops, and documentary film festivals in communities and universities. In addition, we invite industries to systematically support environmental courses in elementary schools and high schools. Local government is also our relevant partner in improving current surveillance and education network on air pollution.

Conclusions: The project is supportive to communities and corporates join our team and take actions on their own initiative. The cooperation platform in our university will keep providing the necessary resources to the community for environmental-friendly agriculture and air pollution prevention and control in the future. We sincerely hope to have more CSR and USR cooperation altogether for cleaner environment in Taiwan.

Keywords: Community, Environmental education, USR



Zone 5: Community Participation and Mobilization/ Injury Prevention and Disaster Management/ Oral Health

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A Study on Village Community and Possibility of Continuing Residence in the Village

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Abstract

Background/Objectives: At present, in Japan, in addition to the declining birthrate and the aging population, there are concerns about various problems due to depopulation in rural areas. Especially in rural areas, in the suburbs of urban areas, after traditional farming workers retire, the heirs often live in urban areas without inheriting a farmer. Therefore, in this study, we focused on the Mizufune village in Nihonmatsu City, Fukushima Prefecture, where our laboratory has been conducting research and support since 2013. The purpose of this study is to clarify the change of community in the village and the possibility of continuing to live in the village from the viewpoint of statistics.

Methods: The analysis was conducted based on the questionnaires and statistical information implemented in this laboratory in 2013 and 2018.

Results: According to the 2013 questionnaire survey, of the 15 respondents who live outside the village, there were two heirs who could return to the village. However, in the 2018 survey, of the 14 respondents, there were no heirs who could return to the village.

Conclusions: Although the heir who lives outside the village is aware of the activity by this laboratory, the participation rate to events by this laboratory and the village residents is low, and it can be said that the involvement in community formation in the village is low. However, because the heir lives in Nihonmatsu City or nearby urban areas, it is possible to drive from the village to the workplace and to live in the village in the future.

Keywords: Village near urban areas, Village community, Statistics, Questionnaire survey





Zone 5: Community Participation and Mobilization/ Injury Prevention and Disaster Management/ Oral Health

P-128

An Establishment of Five-periodic Dengue Prevention Calendar

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Abstract

Background/Objectives: A severe dengue epidemic broke out in Tainan in 2015. With this experience, Breteau index and adult mosquito survey as an important mosquito vector surveillance system, ovitrap surveillance also has been conducted and data analysis for vector control. The aim of this work is to provide the way to dengue prevention.

Methods: Since 2017, a partnership between Tainan city government and National Health Research Institutes (NHRI) deployed 3,456 ovitrap monitoring sites in 288 villages in Tainan. Relevant data, including the weather information (precipitation, average temperature, average high and low temperature), ovitrap index, and number of eggs, were presented and recorded weekly for immediate reference and appropriated vector control would be done. Tainan city government will mobilize employees and volunteers in the village to eliminate mosquito-breeding grounds, if ovitrap positive Ratio is higher than 40% ; Besides, chemical control will be implement, when ovitrap Positive Ratio is over 60% and number of eggs is more than 500.

Result: The data revealed that mosquito vectors increase significantly in the second week after rain. A five-periodic dengue prevention calendar was established by two-year data collection –ovitrap index, quantity of eggs as well as weather factors. Each period had different strategy in residents' education advocacy, mobilization volunteers, risk management and chemical control to against dengue.

Conclusions: The standard operation procedure is carried out in Dengue control; otherwise, reliability of data is increased and timing and management measure's execution in the future.

Keywords: Ovitrap index, Ovitrap surveillance, Dengue prevention



Zone 5: Community Participation and Mobilization/ Injury Prevention and Disaster Management/ Oral Health

P-129

The Relationship between Social Participation and Loneliness among Older People in China: A Cross-sectional Survey

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Abstract

Background/Objectives: To explore the relationship between different types of social participation and loneliness of the elderly people in China.

Methods: A convenient sampling method was used to select 260 elderly people aged 60 and above in four communities in Wuhan. General demographic scale was used to collect general information. Social participation was measured in seven dimensions. Loneliness was measured using the the short version of Revised University of California at Los Angeles Loneliness Scale (R-UCLA). Pearson correlation analysis and analysis of variance were conducted.

Results: (1) The average score of overall social participation was 1.75 ± 0.36 . Family participation (2.25 ± 0.62) scores highest, followed by cyber space participation (2.11 ± 0.83). Participation in religion, economics and voluntary work averaged 1.25 ± 0.62 , 1.38 ± 0.586 , 1.56 ± 0.75 . (2) 33.5% of participants had loneliness. The average score (4.51 ± 1.83) of loneliness showed great differences in different age groups, marriage groups, educational groups, health groups and retirement patterns. (3) Participation in family and cyber space were significantly negatively correlated with loneliness, with the correlation coefficients -0.387 and -0.214 , whereas participation in economics and religion were significantly positively correlated with it, with the correlation coefficient 0.234 and 0.338 respectively.

Conclusions: Social participation of elderly people in Wuhan was not optimistic, which mainly involved family participation, while the level of participation in economics, religious and voluntary work were low. The incidence of loneliness was 33.5%. Participation in family, economics, cyber space and religion are strongly correlated with loneliness.

Keywords: Elderly, Social participation, Loneliness





Zone 5: Community Participation and Mobilization/ Injury Prevention and Disaster Management/ Oral Health

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Relationship between Social Inclusion of Children with Disabilities and Positive Change in their Mothers' Psychological Well-being

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Abstract

Background/Objectives: Social inclusion of children with disabilities has been promoted and emphasized by UNICEF, and may provide positive effects on their primary caregivers' psychological well-being. This study, conducted in Japan, examined how social inclusion of children with disabilities related to positive psychological change in their mothers.

Methods: Data were collected between January and March 2016, with the cooperation of associations of parents of children with disabilities throughout Japan. Of the 2,311 self-administrated questionnaires distributed to mothers of children with disabilities, 1,133 were completed, and 1,012 of those mothers were under 20 years old. To examine the relationship between positive psychological change and factors relating to social inclusion, multiple regression analysis was performed.

Results: The respondents' mean age was 44.6 (SD = 5.5) and their children's mean age was 12.4 (SD = 4.1). Disability types experienced were: autism spectrum disorders (60.5%), Down's syndrome (15.0%), other intellectual disabilities (22.3%), and physical impediments (2.2%). Positive psychological change in mothers was positively related to higher scores of social inclusion, and negatively related to problem behavior and severity of disabilities in their children. However, 52.0% of mothers reported that their child with disability did not interact with children without disability in the community, and 45.3% of those mothers also felt that their children did not have a sense of belonging in the local community.

Conclusions: Social inclusion of children with disabilities was significantly and positively related to mothers' positive change. To facilitate mothers' psychological well-being, an inclusive environment for children with disabilities should be fostered. This study was supported by JSPS KAKENHI Grant Number JP 17H02612 and JP 26380716.

Keywords: Mothers of children with disability, Positive change, Social inclusion



Zone 5: Community Participation and Mobilization/ Injury Prevention and Disaster Management/ Oral Health

P-131

The Effectiveness of Family Based Rehabilitation Program for Post Stroke Patient in Community: A Systematic Review

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Abstract

Background/Objectives: Stroke is a major public health problem worldwide and leading cause of long-term disability resulting in patients, communities, and health care system, burdens. Family caregivers play an important role in providing care and rehabilitation. Accordingly, family support and encouragement can help patients to manage disability and return to normal. This study aim to review the effectiveness of family based rehabilitation program in post stroke patients.

Methods: Systematic review was conducted from electronic databases: MEDLINE, CINAHL, Scopus, PubMed and Embase between 2009-2019. The search for unpublished studies included manual search. The keywords included “stroke” and “family based”, “rehabilitation”, “activity of daily living”, “complication” Two reviewers extracted and summarized the details including studies using the JBI-MAStARI data extraction form independently. Descriptive statistic and narrative synthesis were brought in to explain the data.

Results: From total of 8 studies were selected including randomized controlled trials (n = 6), and quasi-experimental research (n = 2). Stroke patients receiving family based rehabilitation program also reported improved activity of daily living when compared to those receiving usual care at 3 months. No statistically significant effects on complication and quality of life of stroke patients were found.

Conclusions: The family based rehabilitation program was effective intervention in improving activity of daily living at 3 months. In order to promote effective long-term care and quality of life, collaboration between family caregiver and health care personnel should be strengthen.

Keywords: Family based, Rehabilitation, Stroke, Systematic review





Zone 5: Community Participation and Mobilization/ Injury Prevention and Disaster Management/ Oral Health

P-132

Knowledge, Attitudes, and Practices (KAP) of Motorist Drivers in Los Baños, Laguna on Road Traffic Safety: Basis for the Development of Health Promotion Materials

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Abstract

Background/Objectives: Knowledge, Attitudes, and Practices (KAP) of motorist drivers in Los Baños, Laguna on road traffic safety was explored in this study. Specifically, the study determined the socio-demographic characteristics of the respondents, their KAP regarding road traffic safety and the associations between their socio-demographic characteristics and their KAP on road traffic safety.

Method: Using simple random sampling, a total of one hundred eighty-five \pm 10 motorist drivers passing through the Los Baños National Highway served as the respondents of the study.

Result: Data of the motorists (i.e., registered franchise motorists of jeepney and tricycle) were secured through the Land Transportation Office (LTO) branch in the municipality of Los Baños. A survey was carried out using an adopted road safety survey instrument whereby its reliability and validity was tested. Analysis of data was processed using SPSS version 21. Mean and frequency were calculated and spearman's rank correlation was used to determine the relationships of the variables.

Conclusion: Results of the study can serve as the basis for the development of health promotion materials on road safety.

Keywords: Road safety, Knowledge, Attitudes, Practices



Zone 5: Community Participation and Mobilization/ Injury Prevention and Disaster Management/ Oral Health

P-133

General Nursing Home Staff Smoke Immersive Drill Results Sharing

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Abstract

Background/Objectives: The fire of Tainan's nursing home in 2012 raised the local government, long-term care operators and takers' awareness and devoted themselves into institute's fire prevention. However, the fire occurred in the nursing home in New Taipei City in August 13th, 2018, which led to 14 death and 10 injured, had again awakened Tainan City to strengthen local nursing homes' fire prevention capacity regarding the fact that the number of nursing home in Tainan has reached to the second nationwide. Through immersive smoke and role-play, we wish to increase on-site staff's feeling of presence, and effectively execute notification, evacuation and continuous care.

Methods: In the first half, experts and scholars were invited to talk about "General Nursing Home Fire Risk and Emergency Response Experience Sharing" and knowledge about fire escape. In the second half, the participants were led to Fire Bureau of Tainan City Government and simulated fire escape. The participants served as the commander, staff member and disabled patients to imitate drill notification, evacuation and continuous care. At the end of the drill, the instructors assembled and analyzed for review, and the participants completed the feedback.

Results: A total of 80 students from 75 institutions participated in the course and exercise. 71 participants replied the satisfactory survey, and the response rate was 89%. About one-third of the participants were involved for the first time. The survey questions such as "Can the classroom content be applied to the work?" got 100% of the participants with the response of "agree" and "strongly agree". "Whether the situational exercise can be applied to the work", the response "consent" and "highly agree" was 100%. For the city's "General Care Home Staff Courses and Exercises", the overall satisfaction rate is 99% (70 response for satisfaction and 1 for ordinary), and the participants' feedback included "experience the smoke environment, which is for institutional arrangements." "Very helpful." "I hope I can take the course again."

Conclusions: The changes in the social environment have made institutional care an indispensable means of care for those who cannot take care of themselves. In recent years, once a fire broke out in an institution, there are often a few casualties, and how staff can effectively perform notifications and evacuations when disasters occur, is one of the important topics of the competent authority. The city has increased the familiarity of firefighting and evacuation of institutional staff through immersive situational exercises, and hopes to minimize the misfortunes when disasters occur!

Keywords: Nursing home, Smoke immersive, Disaster management



Zone 5: Community Participation and Mobilization/ Injury Prevention and Disaster Management/ Oral Health

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Factors Related to Patient Safety Incidents by Nurses at Inpatient Ward in Bhayangkara TK III Hospital Manado

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Abstract

Background/Objectives: Patient safety forms an important global issue these days. It is identical with the quality service, because with better quality service, the better patient safety. Hospital Patient Safety is a system where a hospital tailors the care of a patient. This research aims to determine the causal factors of patient safety incidents by nurses in the inpatient unit by analyzing factors related to patient safety incidents by the nurses.

Methods: This analytic quantitative study is using cross sectional design. The sample for this study are 37 nurses using total sampling that met criteria nurses who work in the unit for at least 6 months (inclusion criteria) and nurses who hold managerial positions (exclusion criteria). Variables in this study are nurses' age, education background, years of service, treatment complexity, cooperation, interference/interruption, communication, Standard Operating Procedures and workplace environment.

Results: Based on this study results, respondents involved in this study were within age range of 21- 34 years old with educational background of D3 (70.3%) and more or equal than 5 years of working length (51.45%). The results show, there are seven factors were found relate with the patient safety incident namely nurses' age and years of service, cooperation, interference/interruption, communication, Standard Operating Procedures and workplace environment.

Conclusions: This study can be concluded that nurses' age and years of service, cooperation, interference/interruption, communication, Standard Operating Procedures and workplace environment are related to patient safety incidents by nurses in the inpatient unit of Bhayangkara TK III Hospital Manado. Therefore suggested that patient safety at hospital team need to be built considering they are the one who are responsible of patient safety program at hospital.

Keywords: Patient Safety, Incidents, Nurses, Hospital



Zone 5: Community Participation and Mobilization/ Injury Prevention and Disaster Management/ Oral Health

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Reducing the Incidence of Falls in Hematological Oncology Wards by Using Team Resource Management (TRM)

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Abstract

Background/Objectives: The aim of this study was to reduce the incidence of falls in hematological oncology wards by using a team resource management (TRM) approach. Through the case analysis of falls, it is found that the causes of falls are as follows: Multiple medications use, insufficient awareness of falls prevention by patients and their families, Inadequate Assisted Devices for patient use, and Care team did not set up a joint fall prevention program. The Side Effect of Chemotherapy such as vomiting , diarrhea and Peripheral Neuropathy leading to dysfunction of limbs, lack of nutrition and rehabilitation consultation standard. Objective: Six falls occurred in this ward in 2018, with an incidence rate of 0.04%. Two of them resulted in fracture and death. It is expected to reduce the incidence of falls without moderate or severe injury.

Methods: Through team resource management, integrating patient medication, enhancing patients' and their families' awareness of falls prevention, providing relevant assisted devices with social workers, and establishment of consultation process for nutrition and rehabilitation.

Results: From January to June in 2019, the incidence rate of falls decreased from 0.04% to 0.02%, and the moderate or severe injury was zero.

Conclusions: It is not only for nursing staff or family members to prevent falls but also Team work is needed. Individualized Care Direction, Integrating patient medication, providing appropriate nutrition education and appropriate rehabilitation Exercise so as to reduce the incidence and severity of falls.

Keywords: Fall, Hematological Oncology, TRM



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Reducing the Incidence Rate of Phlebitis in the Intensive Care Unit

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Abstract

Background/Objectives: In the intensive care unit, most patients have high disease severity and lack self-care and judgment. In the process of infusion, if the medical staff does not provide proper care, it will easily lead to phlebitis, and in severe cases, it will cause infection and necrotizing ulceration. The cases of phlebitis after intravenous injection in the nursing unit from January to March in 2019: 32 (patients)/2279(number of inpatients per day) incidence rate 1.40%). To explore the causes of phlebitis by observing and interviewing the main care workers at that time. The reason for the phlebitis was easy to be caused by the disinfection of the peripheral venous soft needle, the lack of dilution of the drug, the technical expertise of the nursing staff, and the lack of knowledge. Objective: The purpose of this project is to reduce the incidence of phlebitis in intensive care units, which can be reduced from 1.40% to 0.84%.

Methods: After literature review and clinical evaluation, formulate strategies to reduce the incidence of phlebitis, and invite experts in relevant fields (eg, infectious agents, sensory, and specialist nurses) to provide suggestions on strategy. The solutions include: disinfecting with 2% chlorhexidine, re-establishing the standard intravenous workflow, discussing with the physician and remarking the drug dilution concentration next to the drug, and organizing the "intravenous workshop" related courses for practical operation and reply. Trial teaching methods, strengthen the expertise of intravenous indwelling technology.

Results: Three months after the implementation of the project, the incidence of intravenous phlebitis has dropped from 1.04% to 0.77%.

Conclusions: Once venous infection occurs in severe patients, it will not only prolong the hospitalization days, affect the prognosis of the disease, but even cause death. Therefore, staff members must be more cautious. With the implementation of this project, the incidence of phlebitis after intravenous injection in the intensive care unit can be reduced, so as to improve the quality of nursing and patient safety.

Keywords: Phlebitis, Intensive care unit.



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Changing Life States of Disaster Victims Over 60-Years-Old in the Course of The 2011 East Japan Disaster

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Abstract

Background/Objectives: The 2011 tsunami disaster made many people in Miyagi evacuate to areas outside their hometown. The aim of this study was to clarify how their life states over the age of 60 changed before and after the disaster.

Methods: We carried out semi-structured interviews with 10 participants over 60 years old who evacuated from their hometown (due to the tsunami disaster) to other districts. Qualitative data were analyzed using the text-mining method. Focusing on each of the four periods (pre-disaster, immediately after earthquake, temporary shelter, and during evacuation), we created a list of extracted words and performed correspondence analysis.

Results: The average age of participants is 70.6 years old (min 63, max 81) and 6 (60%) of them were female. 4,791 sentences were analyzed. In all four periods, the following words were obtained with high frequency: “people,” “think,” “tell,” “come,” and “go.” Characteristic words were “embankment,” “sacrifice,” “distributing boiled rice,” in the immediately after earthquake periods; “commodity,” “remains,” “medical drug” in the temporary shelter period; and “Tome-city (evacuation destination),” “group,” “Minamisanriku-cho (participants’ hometown),” and “pleasurable” in the evacuation period.

Conclusions: These words reflect the disaster victims’ life states in each period. Therefore, the results can assist public health practitioners conduct more supportive activities for them.

Keywords: Life state, Disaster victims, Public health practitioners



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Oral Health Knowledge and Behaviors of the Elderly People in Taiwan

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Abstract

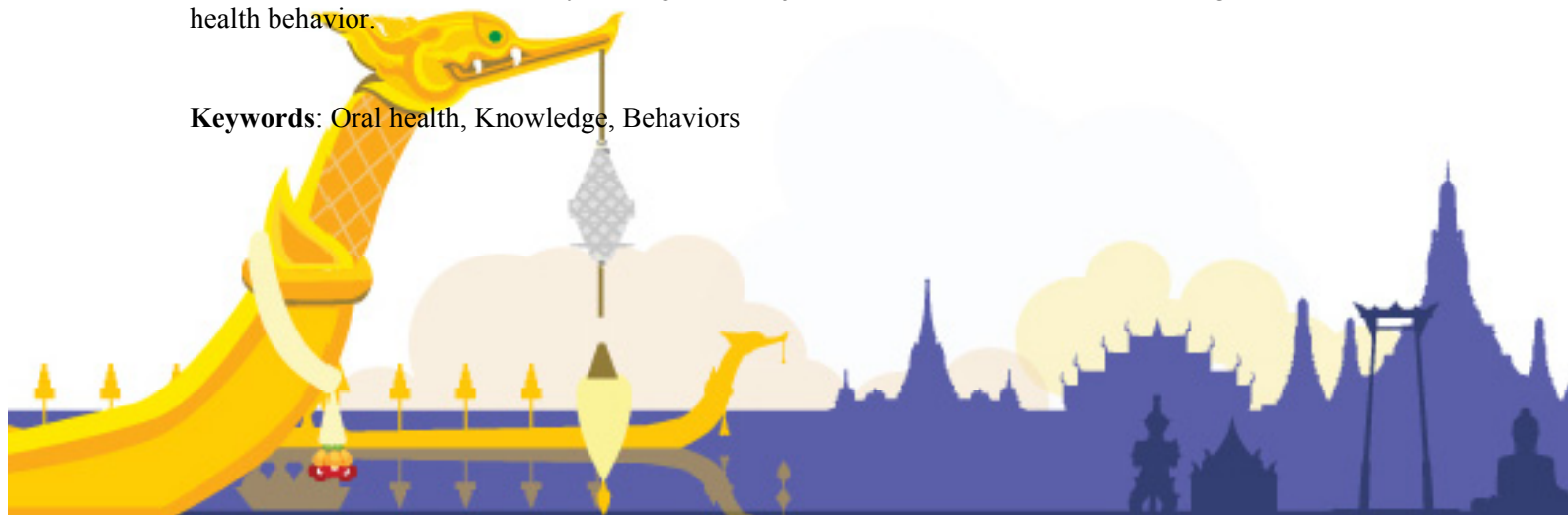
Background/Objectives: The World Oral Health Report 2003 emphasized that oral health is integral to general health and is essential to the quality of life. Moreover, oral health is an important component of active aging. Prevention and control of dental disease is highly dependent on personal behavior. Accordingly, the purpose of this study was to investigate knowledge and behaviors of general oral health among the elderly population, and to further analyze the association between knowledge and behaviors.

Methods: This study adopted a cross-sectional design, and used convenient sampling to recruit study subjects who were 65 years or older. We recruited and interviewed the subjects in parks, community centers, churches and long-term care facilities in August 2018 in New Taipei City, Taiwan. A structural questionnaire which included demographic data (age, gender, marital status, education), oral health knowledge and self-care behavior was used for this study. The oral health knowledge section included 11 multiple choice questions, and the score was calculated based on the total number of correct answers. The self-care behavior section comprised 12 questions about oral hygiene habits and the utilization of dental services. We used descriptive statistics to present the distribution of subjects characteristics and performed one-way ANOVA and Pearson product-moment correlation to analyze the associations between individual characteristics and knowledge, as well as individual characteristics and behaviors. Furthermore, we used a multiple regression model to analyze the associations between knowledge and behaviors by controlling for demographic variables. All analyses were performed using SPSS for Windows.

Results: We collected 303 valid questionnaires. Most subjects were women (59.4%), aged 65-70 (30.7%), married (63.4%), and no schooling/ primary (33.7%). In all subjects, the mean score of knowledge and behaviors was 6.36 (SD=2.11) and 9.00 (SD=2.18) respectively. According to the one-way ANOVA results, the knowledge scores differed significantly on the basis of marital status ($F=5.49$, $P<0.01$) and education ($F=16.70$, $P<0.001$), and the behaviors scores differed significantly on the basis of age ($F=5.36$, $P<0.05$), marital status ($F=6.22$, $P<0.001$) and education ($F=6.51$, $P<0.001$). Otherwise, the knowledge and behaviors present positive association ($r=0.35$, $p<0.001$) based on Pearson product-moment correlation results. The multiple regression model showed knowledge was significantly associated with behavior ($\beta=0.35$, $p<0.001$).

Conclusions: Based on the study findings, the subjects with better oral health knowledge had better oral health behavior.

Keywords: Oral health, Knowledge, Behaviors



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The Relationship between the Complete Denture Policy for the Elderly and Nutrition Tainan

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Abstract

Background/Objectives: In Taiwan, the complete denture policy for the elderly is implemented in many city governments. In Tainan, the Public Health Bureau has done a lot of tracking on this policy to understand its benefits. Previous studies have shown that there is a considerable improvement on oral-related quality of life for the elderly after 1 year of device follow-up, and it can even reach the same standard with the other elderly. Now, the current tracking point has moved to the changes of the elderly's nutrition.

Methods: This study analyzes the results of community-integrated screening for the elderly before and after receiving subsidized denture. By studying its indicators including albumin, heme, BMI, and so on, this study tracks the changes of the elderly's nutrition conditions and compare them with the other elderly.

Results: The results of the study shows that after 3 years of follow-up, in the performance of albumin and heme, the elderly with full-mouth active dentures have lower declination than the other elderly, and this is statistically significant. However, there is no significant difference in their performance of BMI.

Conclusions: After implementing the denture subsidy policy, the elderly increase the variety of their food intake patterns and benefits their nutrition maintenance. It should have better results with the support of the public health units and dental clinics.

Keywords: Complete denture, Nutrition, Elderly



Zone 5: Community Participation and Mobilization/ Injury Prevention and Disaster Management/ Oral Health

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Demonstration of High Value Care to Improve Oral Health of a Remote Indigenous Community in Australia

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Abstract

Background/Objectives: The oral health of Indigenous children in remote communities is much worse than other population groups in Australia. Providing and maintaining an oral health service is challenging due to the remoteness of communities, the associated high cost, and the low retention of clinical staff. An annual preventive intervention delivered by fly-in clinicians or local health workers may be a more cost-effective way to manage this problem.

Methods: A cost-effectiveness analysis was conducted based on an annual preventive intervention protocol. This included treating all dental decay in those with disease, applying fissure sealants, a disinfectant swab, fluoride varnish and providing oral hygiene instructions and dietary advice to all participating school children. These children were followed up for two years after the initial preventive intervention. A Markov model was built to assess the cost-effectiveness of the intervention compared with the usual care. Costs of treatment from the Queensland Department of Health were used and effectiveness was measured as quality-adjusted life years (QALYs) with the CHU-9D. One-way and probabilistic sensitivity analyses were conducted to identify key drivers and quantify uncertainty. This study included an intervention group and a natural comparison group in a remote Indigenous community in Far North Queensland, Australia.

Results: The preventive intervention was found to be RL, highly cost-effective. The incremental cost per QALY gained was AU\$3,747. Probability of new caries and treatment seeking were identified as the main drivers of the model. In probabilistic sensitivity analysis intervention was cost effective in 100% of simulations.

Conclusions: An annual preventive intervention for remote Indigenous communities in Australia is a highly cost-effective strategy to prevent dental caries and improve the quality of life of children.

Keywords: Oral health, Caries, Cost effectiveness, Prevention



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A Systematic Review of Health Status of Coastal Community in Sabah, Malaysia

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Abstract

Background/Objectives: Coastal communities are facing with numerous health issues. In Sabah, many of the coastal zones are isolated with lack of accessibility. Researches focusing on the health issues and health gaps of people at the coastal areas are lacking. The main objective of this study was to review published literatures on health status of coastal communities in Sabah, Malaysia.

Methods: A systematic electronic search strategy was conducted using the traditional search and citation forward and backward tracking with three databases, PubMed, Scopus, and Web of Science. The inclusion criteria applied in the literature search were:(1)full article journal,(2) studies that elicited health status/problem of a coastal community in Sabah,(3)studies that were published in English language and (4)studies that were published from 2009 to 2019.

Results: A total of 11 articles were finally considered and included in the review. Four main health issues found were:(i)malaria,(ii)tuberculosis(TB),(iii)seafood poisoning and (iv)antenatal problem. The incidence of malaria infection was estimated at 2.6/1,000 people/year in 2009-2011. The commonest species found was Plasmodium knowlesi, which was different from species in non-coastal area in Peninsular Malaysia. Factors that were associated with the risk of acquiring malaria infection in the studied coastal area were older adult, male, farmer, history of travel outside the village and rainy seasons. TB infection was occurred primarily among adult male. Many of the patients were diagnosed at later stage of the disease and 96% of the patients have low knowledge on TB disease. Poisoning due to seafood consumption is very common in Sabah. Studies have reported that, tetrodotoxin and paralytic shellfish poisoning were commonly reported with approximately 30-60 cases per year. Many of the pregnant ladies of the costal community did not have adequate knowledge on national antenatal care program. Despite the low knowledge, 99% of the patients received antenatal care at public healthcare facilities with 92% of them had safe delivery. Nevertheless, majority of the pregnant women had iodine deficiency due to low iodised salt intake.

Conclusions: Findings form this review highlighted that coastal communities in Sabah are experiencing considerable health problem. Specific attentions are required to enhance better health and wellbeing of coastal communities in Sabah.

Keywords: Health status, Coastal, Sabah





Zone 5: Community Participation and Mobilization/ Injury Prevention and Disaster Management/ Oral Health

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Demographic Characteristic and Depression as the Risk Factor of Fall for Indonesian Elderly

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Abstract

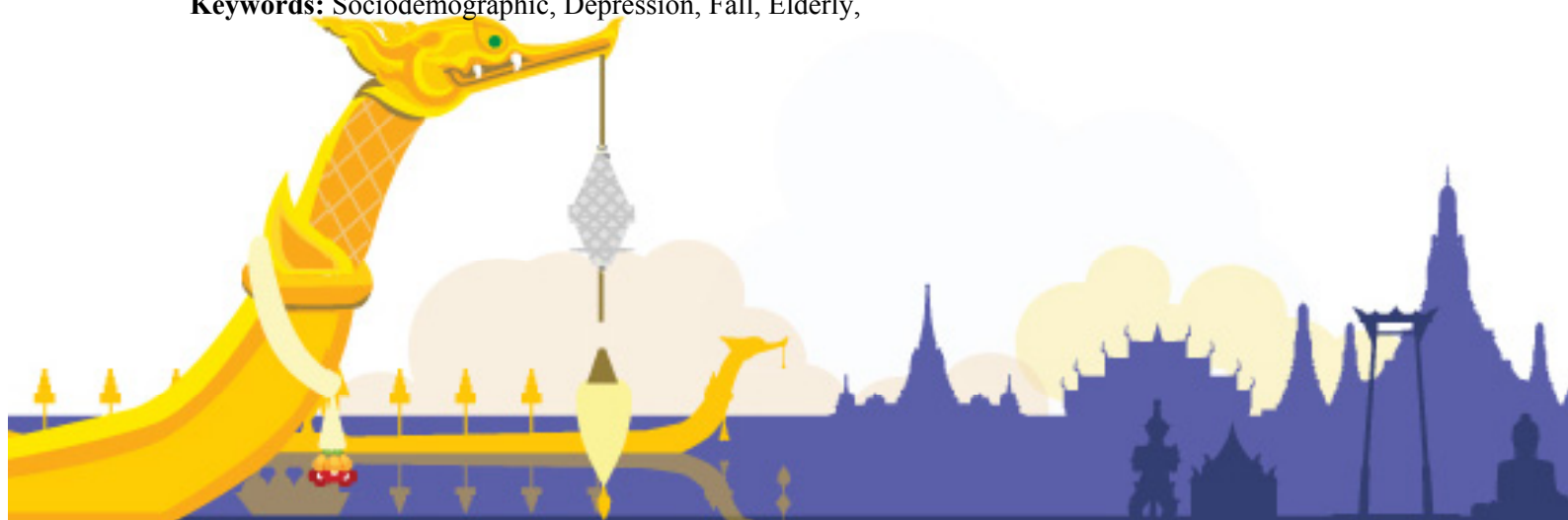
Background/Objectives: Fall-related injuries among older adults have been recognized as a major caused of morbidity and mortality. Falls and depression are common problems among elderly individuals that generally go undetected and untreated in primary care. The aim of this study was to identify the sociodemographic characteristic and depression as the predictor of the risk of falling among community-dwelling elderly individuals.

Methods: A cross sectional approach was used for this research, and, based on simple random sampling, a total of 427 elderly individuals (>60 years old). The data collection was based on the use of one set of questionnaires consisting of the demographic characteristics (age, gender, education background and economic status), Geriatric Depression Scale, and Johns Hopkins Risk of fall Assessment Tool. The study was conducted from July to September of 2018. A logistic regression was employed to identify the most appropriate model for depression and the risk of falling among the elderly participants.

Results: The prediction model for the risk of fall among the elderly showed that age and depression and was the predictors exhibiting a direct correlation with the risk of fall with risk ratio for ages = 2.281, (95% confidence interval = 1.445–3.601) and the risk ratio for Depression = 2.019, (95% confidence interval 1.259 – 3.329) . Those who older more than 70 years old likely to have 2.2 times higher risk of fall compare to those who are in 60 to 70 years old ages group and those who exhibited depression were likely to have a 2.1 times higher risk of fall than those elderly who did not have depression

Conclusions: Based on the results of this research, one can conclude that depression independently increases the risk of fall among elderly Indonesian individuals.

Keywords: Sociodemographic, Depression, Fall, Elderly,



Zone 5: Community Participation and Mobilization/ Injury Prevention and Disaster Management/ Oral Health

P-143

Assessment of Dental Professional Attitude Regarding Antimicrobials Usage and Resistance Awareness

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Abstract

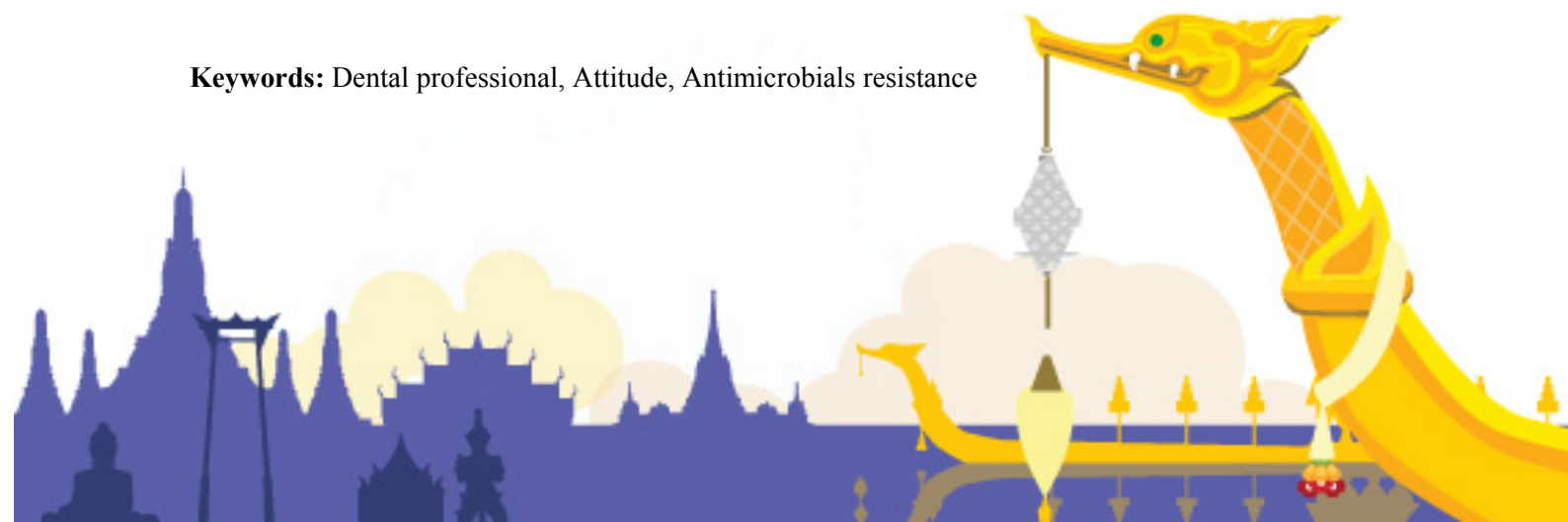
Background/Objectives: To assess dentists' attitudes and practices regarding antimicrobials usage and antimicrobials resistance in order to bring the rational usage of antimicrobials in the future

Methods: This was a cross-sectional questionnaire survey. The questionnaire was contained closed ended and opened ended questions, that covering the potential toward antimicrobials resistance, which was distributed to dentists in Mahidol dental hospital. The data was collected, tabulated and statistically analyzed. And content analysis was applied for open ended questions. The results were categorized in terms of answer frequency, which allowed assessment of the subject's comprehension of the theme of study.

Results: Majority of the participants were at the age range of 25-30 years old (78.85%) with 0-5 years of working experience (69.23%). and, almost were Oral and Maxillofacial Surgery specialist in the present survey (88.85%) and the data of different participants' attitude according to the antimicrobials resistance situations and recommendation of a solution to combat this growing problem of antimicrobials resistance were presented.

Conclusions: Our study provides an important insight regarding the attitudes and practices regarding antimicrobials resistance among the dentists in Dental hospital. Majority of the participants viewed antimicrobial resistance as a preventable public problem if appropriate strategies are designed. Nonetheless, most of them held some misconception regarding antimicrobial resistance, and their knowledge and attitude significantly vary across their field of study. Thus improving the knowledge, consequences and controlling strategies of antimicrobial resistance might be an approach to flourish their attitude and to rationalize their antimicrobial use in the hospital.

Keywords: Dental professional, Attitude, Antimicrobials resistance





November 22, 2019

Venue: Banglampoo Room, Floor 6

Time: 13.00 – 13.30 hrs

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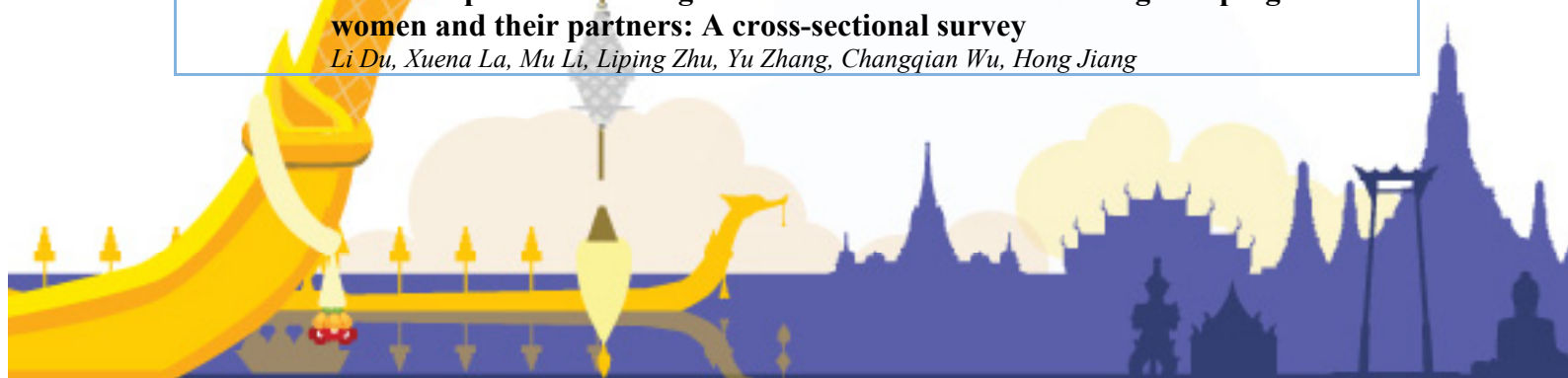
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P-155 A multilateral scale for measuring dementia knowledge: A review of the literature
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November 22, 2019

Venue: Banglampoo Room, Floor 6

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Zone 6: Life Course Health

P-144

Reconceptualising Dependency among Ageing Populations: Case of Thailand

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Abstract

Background/Objectives: The aim of this study is to explore the nature of ageing and dependency among older people in Thailand relative to the working age population. Old-age dependency ratio as a traditional measure is in the form of a homogenous aggregate whereby all persons aged 60 or 65 years old are considered dependents but much societal dynamics have occurred and this is unobserved in the trends within populations.

Methods: The survey, 2016 Population Change and Well-being in the Context of Aging Society (PCWAS), contains health dimension items including cognitive, physical, and psychological. These are then applied to the ratio of persons aged at least 60 years relative to the working-age population to attain a dependency ratio that is based on specific limitations in terms of health rather than being defined solely on chronological age.

Results: Current figures of health limitations are applied to population projections from 2020 to 2050 in order to evaluate the prospect of care needed in the coming years given the continued development of ageing of the Thai population. Cognitive function limitation shows higher dependence ratio than physical difficulty and psychological distress. It is also observed that the proportion of older persons living in unhealthy states would increase further.

Conclusions: Life expectancy has been increasing in recent decades but this does not relate to being free of disabilities. It is important though to identify which dimension of health declines worse in the form of functional limitations at the aggregate level for a population. In this paper, it is observed that cognitive functioning limitation is most prevalent in Thailand and this will persist in the coming years. More studies have to be done to understand the development of cognitive functioning among older persons in the country in order to prepare for the specific needs that older people may need.

Keywords: Ageing, Health, Population health



Zone 6: Life Course Health

P-145

Association of Socioeconomic Factors and Cognitive Performance Index among Thais Aged at least 60 Years

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Abstract

Background/Objectives: This study aims to determine socioeconomic, living arrangement, social engagement and health-related factors associated with increased cognitive performance among the ageing people in Thailand. This social aspect of cognitive functioning is less explored in the literature on ageing than physical and mental health.

Method: The nationally representative survey in Thailand which is the 2016 Population Change and Well-being in the Context of Ageing Society (PCWAS) was used for this study. The outcome being cognitive performance test score is standardised and association are done using OLS regression. The models used various factors including education, income, health behaviour, social engagement, and health status particularly physical function limitation and psychological distress.

Results: There is difference which health dimension affects cognitive health between sexes. Better education and higher income levels are the only factors consistent between males and females that contribute positively to cognitive performance. Co-residing with a child or other people benefit males' cognitive function. In terms of social engagement, attending religious activities has a positive effect on men while no such pattern is observed among women. With regard to health dimensions, presence of physical function limitation negatively affects males' cognitive functioning and having increased psychological distress has that effect among females.

Conclusion: Improved education and income have benefits on cognitive performance regardless of sex as per the observation in other societies. This shows that social factors have to be considered when studying cognitive functioning as it offers information that can be used for prospective interventions in ageing societies.

Keywords: Social determinants of health, Cognitive performance



Zone 6: Life Course Health

P-146

The Use of Galactogogues among Breastfeeding Mothers: A Systematic Review and Meta Analysis

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Abstract

Background/Objectives: Breast-milk remains the optimal form of enteral nutrition for term and preterm infants until up to six months postnatal age. Galactogogues are often considered to assist initiation, maintenance, or augmentation of maternal milk supply. But evidence supporting their role in clinical practice is uncertain. The purpose of this review was to indicate the most frequently used galactogogues, and to evaluate the efficacy and safety of galactogogues among breastfeeding mothers.

Methods: Two review authors independently searched PubMed, Embase, Cochrane Library and Web of Science for English-language articles based on cross-sectional study (survey) for the assessment of most frequently used galactogogues, and supplemented these with randomized controlled trials (RCTs) comparing galactogogues with placebo to assess the efficacy and safety of the galactogogues. The primary outcomes were the changes in the volume of breast milk from baseline. The secondary outcomes were the most frequently used galactogogues, side effects of galactogogues. Risk bias was evaluated by a modified version of the Newcastle-Ottawa scale for surveys and Cochrane Collaboration's tool for RCTs. The results of integration were reported as the risk ratio (RR), mean differences or standard mean difference with 95% confidence intervals (CI).

Results: 16 RCTs and 4 surveys of drugs involving 1488 participants, 14 RCTs and 8 surveys of herbs involving 2227 participants, 6 surveys of foods involving 1391 participants were included in this review. Domperidone and metoclopramide, fenugreek and mother's milk tea, milk and egg products were the most frequently used galactogogues. There were significant differences in this outcomes such as domperidone, growth hormone, sulpiride and fenugreek. No difference was evident with respect to maternal side effects of domperidone and metoclopramide. The maternal and neonate side effects were also reported in detail.

Conclusion: Most galactogogues such as domperidone, mother's milk tea are widespread acceptance and results in increased breast-milk volume among breastfeeding mothers.

Keywords: Breast milk, Galactogogues, Side effects



Zone 6: Life Course Health

P-147

Ideal Method of Food Delivery to Elderly People Receiving Medical Nutrition Care at Home in Japan

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Abstract

Background/Objectives: Recently, there have been a substantial nutritional problems among elderly people living at home rather than at nursing -homes in Japan. We investigate food delivery food service as a possible solution for medical nutrition care at home. The study sought to understand the current situation of food delivery service for the elderly people receiving medical nutrition care at home, to clarify its role, and suggest effective utilization methods.

Methods: We administered questionnaires via e-mail in ten companies and conducted telephonic interviews in two companies.

Results: 1) Eight companies provide services to the entire country but others cater only to eastern Tokyo. 2) Eight companies accept orders for a single meal, but others deliver only orders of over seven meals a week. The price is 700 to 800 yen a meal. 3) Ordinary, special diet (energy, protein fat, sodium, and potassium control diet etc.), and soft meal are available. 4) Companies hire registered dietitians or dietitians to regulate diets. 5) Meals are ordered via e-mail or telephone. 6) Six companies deliver meals and check customer' safety. 7) Two companies handle shopping as a service 8) Company staff have connection with care-managers or care workers, but not with medical doctors and nurses

Conclusions: There is an increase the demand for food delivery service. Companies must offer the most suitable diet for the elderly individually. Furthermore medical and care workers must have knowledge of food delivery services and convey accurate knowledge to elderly people receiving medical nutrition care at home.

Keywords: Food delivery service, Elderly people, Nutrition medical care at home



Zone 6: Life Course Health

P-148

Impact of Having A Spouse with a Disability on Healthy Aging: Mortality, Psychological Distress, and Community Activity

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Abstract

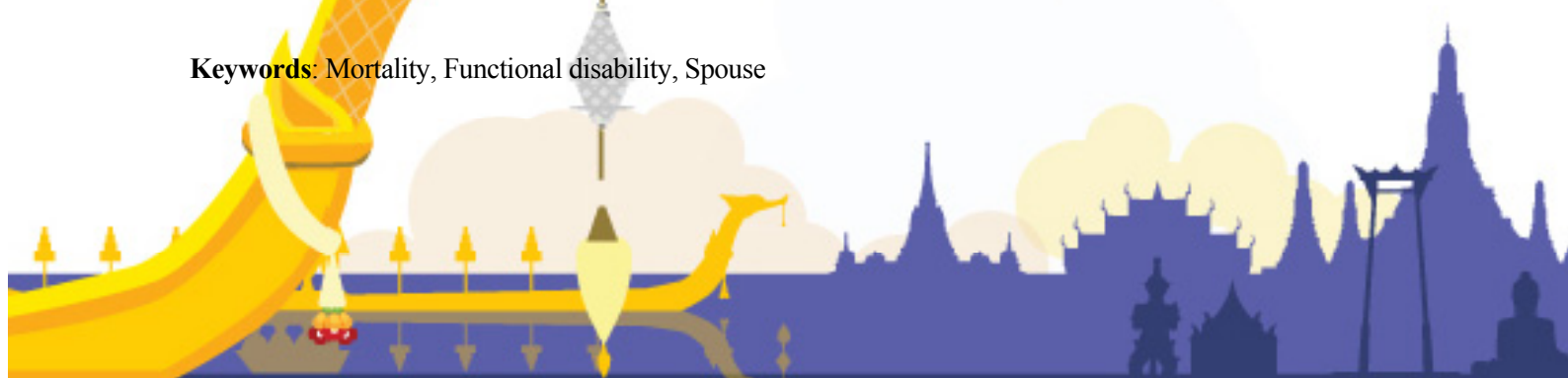
Background/Objectives: The burden of caregiving is known to affect a spouse's health and social life negatively. Previous studies indicate that spouses of people with functional disabilities experienced higher psychological distress and mortality, and engaged in community activities less frequently. Considering that the burden of caregiving differs by the level of care needed, this study is aimed at determining how the difference in the levels of care needed impacts mortality, psychological distress, and community activity.

Methods: A baseline survey involving community-dwelling individuals aged 65 years or more was conducted between December 1 and December 15, 2006. We analyzed the data collected on psychological distress; social activities; and date of functional disability, death, or emigration. Furthermore, we defined functional disability by certification for long-term care insurance in Japan; a Kessler 6 score of $\geq 10/24$ indicates the presence of psychological distress and more frequent community activity as engaging community activity more than once a month. Multiple logistic regression analysis was used to calculate the odds ratios and 95% confidence intervals for higher psychological distress and more frequent community activity in accordance with the categories for functional disability among spouses. After a follow-up of a maximum of 7.3 years, Cox regression analysis was used to assess mortality after the incidence of functional disability in a spouse. We conducted stratified analyses based on the difference in the levels of care needed (Support Levels 1 and 2; Care Levels 1 and 2; and Care Levels 3, 4, and 5).

Results: Compared with spouses of people without functional disabilities, spouses of people with functional disabilities had higher psychological distress and less frequent community activity, irrespective of the level of care needed. Our results also revealed that the mortality of spouses of people with functional disabilities was higher, irrespective of the level of care needed.

Conclusions: The results suggest that the burden of caregiving may increase psychological distress, decrease engagement in community activities, and lead to increased mortality, irrespective of the level of care needed. This suggests that improved support systems might play an important role in preventing deaths and the devastating consequences of functional disability.

Keywords: Mortality, Functional disability, Spouse



Zone 6: Life Course Health

P-149

A Survey of Postpartum Symptoms in Women after Normal Childbirth

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Abstract

Background/Objectives: Non-severe maternal morbidities among women after normal childbirth are underestimated and often regarded as normal phenomena. The aim of this study is to know postpartum symptoms among women who experienced first normal birth.

Methods: A cross-sectional community-based survey was conducted in 12 communities of a district in Shanghai, China during April and October of 2018. Woman who aged 18 years old and above, at six months after vaginal birth (without forceps) were surveyed. Multiple pregnancy and multiparas are excluded. The self-reported rate, the onset and the consequence of postpartum symptoms were described and compared between women with and without episiotomy.

Results: Totally 298 women were eligible for the study, 154 of which had episiotomy and 144 did not. 24 postpartum symptoms ever occurred within six months after birth were reported by women, the report rate was ranked from high to low in table 1. Five symptoms with highest report rate were hemorrhoids (39.6%), constipation (37.2%), vaginal discharge (23.5%), vagina pain (22.5%), and urinary incontinence (22.1%). The report rate of hemorrhoids in the groups with and without episiotomy had statistical difference ($\chi^2 = 4.571, P = 0.033$). The reported number of postpartum symptoms by types and starting times were demonstrated in Figure 1. Constipation (11.9%), hemorrhoids (11.7%), and urodynia (8.0%) are the top three symptoms within the first 7 days; while painful intercourse (17.6%), vaginal dryness (12.4%) and vaginal discharge (10.9%) in 60 days later (Figure 2). The care seeking were reported as 17.8% for hemorrhoids (21/118), 7.2% for constipation (8/111), 10.0% for vaginal discharge (7/70), 10.4% for vagina pain (7/67), and 6.1% for urinary incontinence (4/66) respectively (Figure 3). 79.9% (238/298) of the postpartum women had at least one self-reported symptom and 21% (50/238) of them has not recovered at six months after childbirth (Figure 4).

Conclusions: Women after normal childbirth confront variety of non-severe but bothering postpartum symptoms which may affect their daily life. The low proportion of care-seeking was found in women with frequently appeared symptoms. There are unmet needs for postpartum care and the management of postpartum symptoms should be provided and well scheduled to woman in need.

Keywords: Childbirth, Postpartum symptoms, Postpartum care, Women's health





Zone 6: Life Course Health

P-150

Community Integrated Intermediary Care (CIIC) Services for Older Adults, Enhancing Family Based Long-term Care in Thailand: Study Design and Base Line Survey of a Cluster Randomized Controlled Trial TCTR20190412004

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Abstract

Background: Support to caregiving families taking care of the elderly persons is a need common to ASEAN countries. While it has strong health system with well-established universal health coverage, Thailand is still progressing towards long-term care (LTC) policy to finance an effective LTC model for an estimated 11 million aging population in 2020.

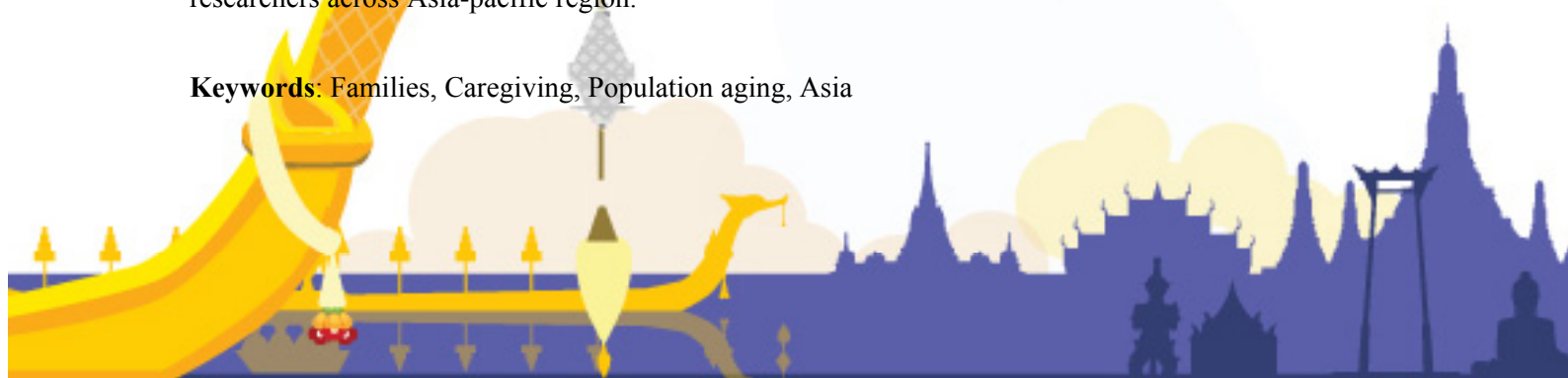
Objectives: To assess the effectiveness of community integrated intermediary care facility (CIIC) to reduce the burden of family care-givers and promote Thai elderly people's functional ability and quality of life

Methods: It is a cluster randomized controlled trial recruiting 2000 participants in six intervention clusters and 2000 in control clusters located in the Chiang Mai province, Northern Thailand. Study protocol was reviewed and approved by World Health Organization Ethics Review Committee (WHO-ERC) and registered at Thailand clinical trial registry. CIIC will provide intermediary care, short-term stay, services for the senior citizen whose family members are unable to sustain care. Families in intervention clusters will be invited to register for CIIC service. In addition, CIIC will also (1) do screening of elderly persons' dependency status and caregiver's burden (2) training caregivers technically for the need specific to the dependent, and (3) provide functional training to the non-dependent senior citizens to prevent dependency and care need. Caregiver burden inventory (CBI) will be assessed as the primary outcome. Activity of daily living (ADL) and health related quality of life of the elderly persons will be assessed as secondary outcomes. Study period is one and a half year. After feasibility surveys in June 2019, CIIC trial will start screening and recruitment in July 2019. Baseline surveys will be completed by October 2019.

Results: Details of the trial design, CIIC intervention, baseline surveys result and the lessons learnt in the implementing intervention through the CIIC facility would be shared in the 51st Asia-Pacific Academic Consortium for Public Health Conference 2019 in Bangkok.

Conclusions: CIIC is potentially new model designed to fit in the community of Thailand and countries with similar cultural contexts. Evidence and lessons we wish to share may benefit policy makers and researchers across Asia-pacific region.

Keywords: Families, Caregiving, Population aging, Asia



Zone 6: Life Course Health

P-151

Estimating the Prevalence of Severe Mental Illness in Korea Using Claims Data of National Health Insurance Service (NHIS)

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Abstract

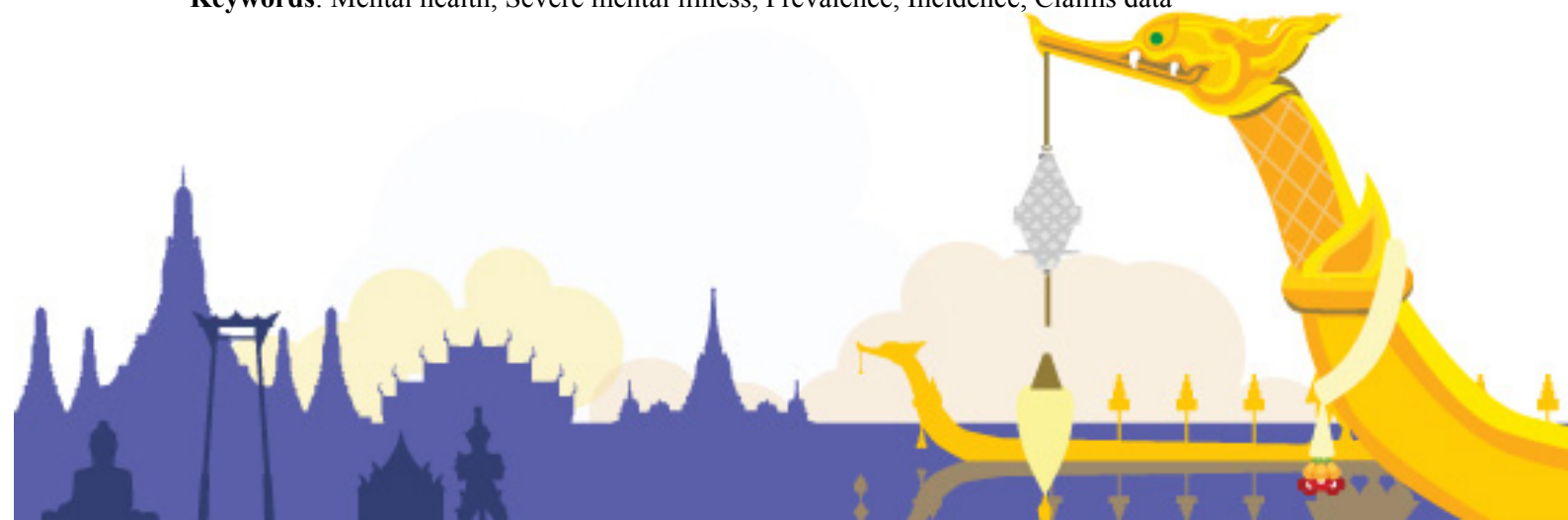
Background/Objectives: Most countries use CIDI, Composite International Diagnostic Interview, to estimate the prevalence of mental disease. However, in the case of severe mental illness with low prevalence, it is difficult to estimate by CIDI because of communication difficulties, and high possibility of false responses due to social prejudice. The purpose of this study is to investigate the prevalence and incidence of severe mental illness through claims data of National Health Insurance Service (NHIS) as a complementary research tool.

Methods: This study analyzed the prevalence and incidence of severe mental illness using National Health Insurance Service (NHIS) claims data from 2011 to 2017. Each severe mental illness is defined by the following ICD-10 codes: F20-F29 for schizophrenia, F31 for bipolar disorder, and F33 for recurrent depression. The prevalence is the percentage of person who diagnosed with the corresponding code at least once in the hospital or outpatient, and the incidence is the percentage of person diagnosed with the code at the medical institution for the first time in the year. Lifetime prevalence is defined as the proxy indicator for people who have been diagnosed with the code in the medical institution for 16 years during which the claim data is available.

Results: The prevalence of schizophrenia was 0.41% (male 0.40%, female 0.41%) in 2011, but 0.44% (male 0.43%, female 0.46%) in 2017, so the total increased by 0.03% and the gender gap widened. The incidence was maintained at 0.04%-0.05%, and lifetime prevalence was 0.89%. The prevalence of bipolar affective disorder was 0.19% and the incidence was 0.06% in 2017. The prevalence of recurrent depression was 0.18% and the incidence was 0.06% in 2017

Conclusions: In the survey of Mental Disorders in Korea in 2016, estimated the prevalence of the schizophrenia to be about 0.28%, but in this study, it was 0.44%. According to National Institute of Mental Health (NIMH), the estimated prevalence of the US which is derived from surveys, interviews, and medical records, ranges from 0.25% to 0.64%. Therefore, it is judged that NHIS claims data is valid as a method to identify the prevalence of severe mental illness with low prevalence.

Keywords: Mental health, Severe mental illness, Prevalence, Incidence, Claims data



Zone 6: Life Course Health

P-152

Frailty and Fear of Falling among Community-Dwelling Older Adults in Sri Lanka: A Population-based Cross-sectional Study

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Abstract

Background/Objectives: Frailty is a clinically recognisable state that explains the heterogeneity of health status among older adults in the same chronological age. Frail older adults are at a higher risk of experiencing several adverse health events including falls. Fear of falling is a common problem of older age that affects the confidence of older adults carrying out normal day-to-day activities. This analysis was performed to examine the association between frailty and fear of falling among community-dwelling older adults in Kegalle district of Sri Lanka.

Methods: A population-based cross-sectional study was conducted with 746 community-dwelling adults aged ≥ 60 years. A three-stage probability sampling design was used to recruit participants. Frailty was assessed using the Fried phenotype comprising five components: shrinking, self-reported exhaustion, weakness, slowness, and low physical activity level. Fear of falling was assessed using shortened version of the falls efficacy scale-international (Short FES-I) comprised of seven items. There were four answer options for each item 'not at all concern' to 'very concern'. The scores of 7-8, 9-13, and 14-28 were considered as low, moderate, and high concern about falling respectively. Multivariable-adjusted logistic regression was used to estimate associations between frailty and fear of falling.

Results: The median age of the sample was 68 (IQR 64: 75) years and 56.7% were female. 15.2% were frail and 48.5% were pre-frail. Of total sample 55.6%, 23.7%, and 20.7% reported high, moderate, and low concern about falling respectively. Of frail sub sample, 90.0% reported high concern of falling. The corresponding figures for pre-frail and non-frail older adults were 62.0%, and 33.1%. Of all seven activities, highest concern was reported for the 'walking up or down a slope' followed by 'going up or down stairs'. The multivariable-adjusted odds of reporting high concern about falling were almost six times high for those who frail versus non-frail (OR 5.67, 95% CI: 2.38 to 13.51). Additionally pre-frailty, advance age, female sex, lower education level, multimorbidity, and higher depressive symptoms were also independently associated with increased odds of reporting high concern about falling.

Conclusions: Frailty and pre-frailty were independently associated with fear of falling among community-dwelling older adults in Sri Lanka.

Keywords: Falls, Frailty, Older adults, Sri Lanka



Zone 6: Life Course Health

P-153

Palliative Care Education and its Effects on Knowledge and Attitude in the Professionals in Long Term Care Institutions

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Abstract

Background/Objectives: Most elderly people suffer from incurable diseases and spend months to years in long-term care institutions at the end of their lives. Staff members should be aware of the importance of palliative care. To study the effect of intervention in the course of palliative care and the change of knowledge and attitude of staff in long-term care Institutions.

Methods: In this study, 56 staff members of long-term care institutions were collected, and two groups of pre-and-post quasi-experimental studies were conducted to research and discuss the changes of nursing knowledge and attitude in the intervention of palliative care course.

Results: There was a significant difference in palliative care knowledge ($p=0.04$) and attitude ($p=0.016$) between the experimental group and the control group after curriculum intervention, while there was no significant difference in knowledge ($p=0.67$) and attitude ($p=0.526$).

Conclusions: After curriculum intervention, the knowledge and attitude of the experimental group increased significantly. Therefore, the education curriculum can enhance palliative care knowledge and positive attitude. It is suggested that institutions should offer relevant courses to enable staffs to obtain information.

Keywords: Palliative, Knowledge and attitude



Zone 6: Life Course Health

P-154

The Relationship between Hospital Breastfeeding Supportive Services and Exclusive Breastfeeding at Time of Discharge

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Abstract

Background/Objectives: Breast milk is the ideal food to provide all nutrients a baby needs for healthy growth. Hospital stay around childbirth is a critical time for breastfeeding (BF) promotion. Implementing the Baby-friendly Hospital Initiative (BFHI) has positive impact on BF. There are 74 designated Baby-friendly Hospitals (BFHs) in Shanghai. The status and effect of BF supportive services in hospitals are unknown. This study aimed to investigate the status of BF supportive services in BFHs after childbirth and to examine the effect of hospital services on the exclusive breastfeeding (EBF) on the day of hospital discharge in Shanghai.

Methods: This study was a hospital-based prospective study, conducted in eight BFHs in Shanghai between October 2015 and January 2017. A total of 707 mothers were recruited in the 3rd trimester and EBF data was collected on the day of hospital discharge after childbirth.

Results: The rate of EBF rate was 34.4% on discharge. Maternal and child hospitals performed better regarding BFHI than general hospitals. Mothers who received more BF supportive services during hospitalization were more likely to have EBF at discharge compared with mothers who received less BF supportive services (aOR: 3.01; 95% CI: 2.08, 4.36; $p < 0.001$).

Conclusions: BF supportive services during hospitalization were significantly associated with higher rate of EBF at discharge. The quality of BF supportive service during hospitalization remains a challenge. BFHs should strengthen the implementation of BFHI to increase the BF and EBF rate and in turn promote maternal and child health.

Keywords: Baby-friendly hospitals, Exclusive breastfeeding



Zone 6: Life Course Health

P-155

A Multilateral Scale for Measuring Dementia Knowledge: A Review of the Literature

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Abstract

Background/Objectives: The purpose of the present study is a literature review of multilateral scales of knowledge pertaining to dementia, to understand what the general population and specialists know about dementia and clarify the factors that affect dementia.

Methods: The literature search was limited to original articles published in English, Japanese or Chinese. We searched for “dementia”, “knowledge” and “scale” in PubMed (Western literature) and ICHUSHI-Web (Japanese literature). For Chinese literature, these keywords did not turn up any documents on CNKI-Web, so a search was conducted with “dementia” and “ADKS”.

Results: There were 18 articles retrieved from PubMed, 4 from ICHUSHI-Web, and 3 from CNKI-Web. Of these 25 articles, we excluded 5 articles that were limited to scale reliability and validity, and 2 that measured knowledge that was not about dementia, leaving 18 articles that were considered. The articles were published between 2011 and 2019, with the greatest number being 4 from China (2011, 2017: two articles, and 2018), 3 from the USA (2013, 2014, and 2016) and 3 from Japan (2011, 2013, and 2018). Subjects were medical professionals for 8 articles (44.4%), students for 7 articles (38.9%) and adults for 3 articles (16.7%). In terms of content, 9 articles had only measurement of knowledge (50.0%), 8 articles had measurement of knowledge and attitude (44.4%), and 1 article had improvement of knowledge and attitude(5.6%). Many articles described inadequate dementia knowledge. Factors related to knowledge about dementia included age, educational background, gender, experience with dementia.

Conclusions: Japan and China have done considerable research on scales for measuring dementia knowledge in recent years, suggesting increased interest in the aging of society. The number of dementia patients is expected to continue to grow. It is therefore important to broaden dementia knowledge both among medical professionals and general population, facilitating early diagnosis, prognosis and attitudes about dementia patients.

Keywords: Dementia, Knowledge, Scale



Zone 6: Life Course Health

P-156

Pre-conception Counselling is Associated with Behavior Changes in Pregnant Women and their Partners: A Cross-sectional Survey

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Abstract

Background/Objectives: Increasing evidence suggests that health behavior before conception can affect pregnancy outcomes. Pre-conception care can offer an opportunity to minimize risk factors of morbidity and mortality for women and offspring. This study aimed to assess the associations of pre-conception counselling and behavior changes in pregnant women and their partners.

Methods: In this cross-sectional survey, pregnant women were invited to complete a self-report questionnaire in three maternal and child health hospitals in Shanghai, China between 2017 and 2018. Multiple binary and multinomial logistic regressions were performed to assess whether pre-conception counselling was associated with health behavior changes in pregnant women and their partners.

Results: In total, 983 pregnant women were recruited (mean age 29 years). Among them 77.3% had tertiary education and 75.5% were employed. Just over forty percent (41.3%, 406/983) had pre-conception counselling. Women who participated in pre-conception counselling were more likely to start taking folic acid supplements before conception (Adjusted OR 1.85, 95%CI 1.02-3.36, P=0.04); and to have significantly longer period of preparation for pregnancy > 3 months (aOR 7.19, 95%CI 5.12-10.09, P<0.0001), and < 3months (aOR 2.97, 95%CI 2.06-4.30, P<0.0001), respectively, compared with those who did not prepare for this pregnancy. The partners of pregnant women who had pre-conception counselling were more likely to stop smoking before conception (aOR 3.06, 95%CI 1.56-6.00, P=0.01).

Conclusions: Pre-conception counselling was associated with positive health behavior changes in pregnant women and their partners.

Keywords: Pre-conception counselling, Behavior change



Zone 6: Life Course Health

P-157

Coping Pattern and Related Selected Factors Among Parents of Children with Autism Attending to a Special School in Northern Sri Lanka

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Abstract

Background/Objectives: In Sri Lanka 1 in 93 children is affected by Autism Spectrum Disorder (ASD) and this reflects high level of prevalence in Sri Lanka compared to global median ASD prevalence which is 1 child out of 160. Parents of children with ASD experience greater levels of stress, anxiety, and depression than parents of children without ASD. And this psychological impact is multifactorial. Study objective of this study was to assess the coping responses among parents of autism children, and to identify the relationship between the coping mechanism and the socio demographic factors.

Methods: A cross-sectional descriptive study was carried out in 91 parents of ASD children who attended to Mathavam, a centre for neuro developmental disorders in Jaffna of Northern Sri Lanka. An Interviewer administered questionnaire which contained socio demographic and economic details, brief COPE inventory scales were used for data collection and the data analysis was performed by using Statistical Package for Social Sciences (SPSS-21). Ethical approval obtained from local Ethics Review committee.

Results: Mean age of the study participants was 39.1 (SD 6.6) years and the mean age the kids was 6.3 years. Among the coping strategies, frequent involvement with religious activities, acceptance of the condition, venting, making instrumental support, and emotional support, were the common coping mechanisms. Use of self-distraction, substance use, behavioural disengagement, and humour and self-blame were observed as less practiced coping practices in this study.

The identified main coping strategies were not influenced by neither sex of the parent or child. There was no statistical significance identified with these coping mechanisms and religion of the parent or with severity of the disease condition.

Conclusions: This study results highlighted the different mechanisms of coping adapted by parents which were not related to their socio demographic characteristics.

Keywords: Autism, Coping, Parents of ASD children, Northern Sri Lanka



Zone 6: Life Course Health

P-158

Influence of Socio-demographic Factors on Emotional Quotient of 1st Year Undergraduates in University of Jaffna, Sri Lanka

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Abstract

Background/Objectives: The concept of Emotional Intelligence (EI) has become an emerging topic in the field of clinical psychology in recent years, especially in relation to adolescents. Adolescents encounter numerous emotional challenges in an overly competitive academic environment. While emotional coaching by parents being supportive in early years of life, similar coaching by teachers at schools is equally essential during adolescence in the later stages of development. Although many studies have been conducted globally, limited evidence is available in Sri Lanka on its magnitude and person-related factors affecting it in university undergraduates. The objective of this study was to assess the relationship between Emotional Quotient (EQ) and Socio demographic factors amongst 1st year Undergraduate students in the University of Jaffna.

Methods: An institutional based descriptive cross-sectional study was conducted among 1st year undergraduates of University of Jaffna during Spetember – December 2018. The EQ was assessed with self-administered Genos Emotional Intelligence consise version (7 domains; 31 questions equally weighted; total score 155). Socio-demographic data were obtained using a self-administered questionnaire. The study instrument was designed in English, Tamil and Sinhala languages. Ethical approval was obtained from local Ethics Review Committee.

Results: Of 436 students 312 responded (response rate-71.7%); 60% were females; mean age was 21.4 ± 1 years. Mean total EI score was 102.9 (females-103.1, males-102.8). Multiple linear regression analysis indicated that having good family support, well-educated father, taking part in sports and aesthetics and socializing well in university, were independent predictors of EI. Nearly 50% of students demonstrated an “average” level of EI. Female students were emotionally more intelligent than their male counterparts. Several sociodemographic factors were found to be independent predictors of EI.

Conclusions: These results suggest that emotional skills might be associated with socio demographic factors of undergraduates in Sri Lanka. Further research is needed in this underexplored area.

Keywords: Emotional quotient, Undergraduate, Jaffna



Zone 6: Life Course Health

P-159

Long Term Care Planning for the Future Living Arrangement of Middle Age and Elder Persons in Taiwan

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Abstract

Background/Objectives: There are three aims of this study: (1) to under the long term care planning for the future of middle age and elder persons in Taiwan. (2) to examine the difference of LTC planning in gender. (3) to examine the difference of LTC planning in birth cohort.

Methods: It was a cross-sectional study. Using convenient sampling, 376 persons aged over 45 years in south of Taiwan were selected for the study. Data were compiled through questionnaire interviews. Chi-square test were used to examine the difference in gender and birth cohort.

Results: 50.5% of all the samples expected to remain at home without modifications and 47.1% remain home with modifications; 60.6% of the sample expected to continue to live in their own homes with home care; 51.9% would hire a domestic helper at home; 41.6% expected live in assisted living; 29.5% would live in their adult children's homes; 51.3 would live in a nursing home. The women's expectations of living in assisted living were higher than men. The middle age adult's expectations of living in assisted living and nursing home were higher than elder cohort.

Conclusions: Most responds (61.9%) anticipated to stay at their home for the future living arrangement. Women and middle age cohort were more likely than men and elderly to anticipate living in assistant living and nursing home.

Keywords: Long term care, Planning



Zone 6: Life Course Health

P-160

Nutritional Status and Factors Associated among Eighteen-month Old Children in Medical Officer of Health Area Gothatuwa, Colombo, Sri Lanka

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Abstract

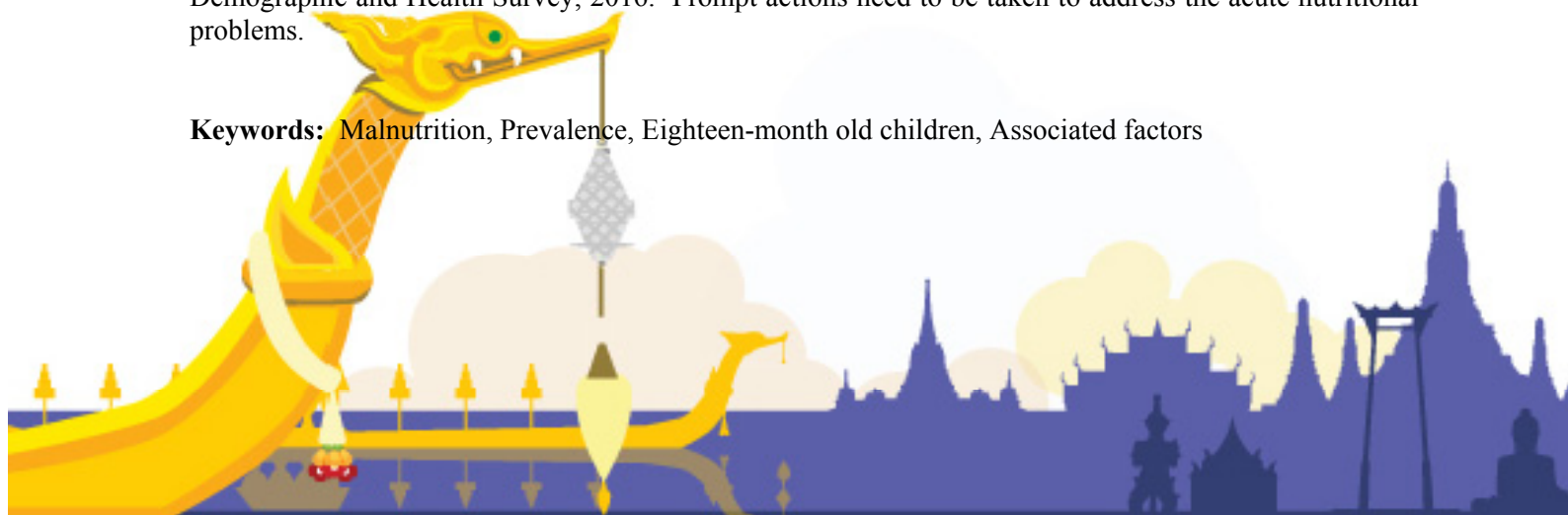
Background/Objectives: Proper nutrition is the keystone of health and development of a child. Nutritional status up to two years of age determines future growth and development as well as the overall health of a child. This study aimed to determine the prevalence of selected nutritional conditions and to describe factors associated, among eighteen-month-old children in Medical Officer of Health area Gothatuwa, Colombo, Sri Lanka.

Methods: A clinic-based cross-sectional study was conducted among all eligible participants of eighteen-month old children attended to child welfare clinics conducted in MOH area Gothatuwa, Colombo from October 2018 to March 2019. Length and weight measurements were taken using the infantometer (length measuring board) and the spring balance and those were interpreted according to the WHO growth standards included in the Child Health Development Record. Pre-tested interviewer-administered questionnaire with two components on personal and socio-demographic characteristics and health related information was used to assess associated factors. Prevalences of under-weight, stunting, wasting, overweight & obesity were calculated with 95% confidence interval. Associations between socio-demographic characteristics and health related characteristics and prevalence of nutritional indices was assessed using Chi square test at 5% significance level.

Results: Prevalence of under-weight was 21% (n=47, 95% CI 15.6%-26.3%) while overweight was reported in 0.4% (n=1, 95% CI 0%-1.3%). 9.8% (n=22, 95% CI 6.3%-13.8%) was stunted and 15.2 % (n=34, 95% CI 10.7%-20.1%) was wasted. Number of children in the family, Number of children less than 5 years of age, number of main meals, size of main meal is significantly associated with underweight while Number of children in the family, number of main meals, absence of current breast feeding is significantly associated with wasting. Number of children less than 5 years of age and not having exclusive breast feeding were significantly associated with stunting.

Conclusions: Underweight and wasting were high and stunting was low compared to the Sri Lanka Demographic and Health Survey, 2016. Prompt actions need to be taken to address the acute nutritional problems.

Keywords: Malnutrition, Prevalence, Eighteen-month old children, Associated factors



Zone 6: Life Course Health

P-161

Association between Social Media Networks Usage and Sleep Quality among 12th Grade School Students in an Educational Zone in Jaffna Northern Sri Lanka

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Abstract

Background: Nowadays social media usage has been increasing among adolescents as increased internet facilities. Among adolescents a very little is known about the potential association between usage of social media and sleeping quality of school students especially among secondary grade students

Objective: To assess the influence of social media networks usage on sleep quality among 12th grade school students in an educational zone in Jaffna Northern Sri Lanka.

Methods: It was an institutional based, descriptive cross-sectional study among 525 students. Two tools were adapted, “Sleep-quality questionnaire” to assess sleep quality and for “Social Media Addiction Scale” for social media usage. Data was collected through self-administered questionnaire. Data was analyzed with the help of statistical package for social studies (SPSS 21). ANOVA, t-test. $P \leq 0.001$ was considered statistically significant. Ethical clearance was obtained from Ethical Review Committee.

Results: Mean age among participants was of 17.02 years, 199 (37.9%) were males. Most were from Arts stream (301, 57.3%). Most of the students were having normal sleep quality 375 (71.4%) and only 7 (1.3%) students were reported to have severe sleep problems. In social media usage, 197 (37.5%) students agreed that they are eager to use. Mean and median of social media usage scores were 73.32 and 73 respectively for the score out of 100. Sleep quality mean value difference between male and female students was statistically not significant. Social media usage score had a negative correlation with quality of sleep and it was statistically significant (<0.001). The study stream and gender did not show statistically significance on the relationship between sleep quality and social media usage.

Conclusion: Social media networks usage influence on sleep quality among this study population.

Keywords: Sleep quality, Social media usage, Adolescent, Jaffna



Zone 6: Life Course Health

P-162

Influence of Socio Demographic, Health and Economic Factors on Health Seeking Behavior among Secondary Sub Fertile Mothers in a Health Division of Northern Sri Lanka

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Abstract

Background/Objective: Secondary subfertility is a less recognized entity among Sri Lankan community compared to primary subfertility. Many socio demographic, health and economic factors are influencing the health seeking behavior of the secondary sub fertile mothers.

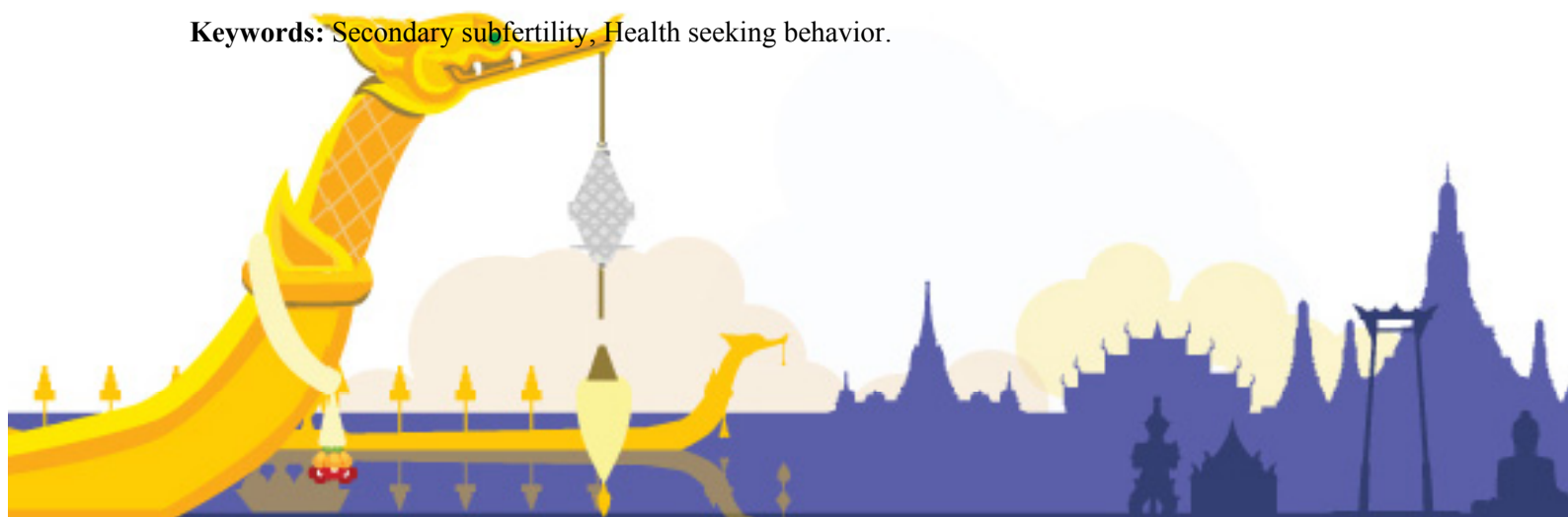
Objectives: To describe the influence of socio demographic, health and economic factors in the pattern of health seeking behavior among secondary sub fertile mothers in a health division of Northern Sri Lanka.

Methodology: Seventy two secondary sub fertile mothers in the Nallur MOH area Jaffna district were included in this community based descriptive cross sectional study. Data was collected using interviewer administered questionnaire at the study participants' household. The data were then analyzed with SPSS 21 and the statistical tests were used to analyze the association between variables includes t-test, Chi squared test, Pearson correlation and fishers exact test. Differences at $p < 0.05$ were considered significant. Ethical approval obtained from Ethics Review Committee of Jaffna Medical Faculty.

Results: Mean age of the study participants was 36.1 years (SD 6.8). Among them 22 participants (30.6%) had been taken treatment for subfertility. Most of the participants (81.8%) were approached allopathic treatment as their 1st choice of treatment. Most of the treatment seekers took their treatment only up to one year. Main reason for withdrawal of the treatment is ignorance (59.1%), no outcome from the treatment (27.3%). Among those who never sought any treatment, 72% of the participants were waited for natural conception and 48% of the participants not sought treatment because of their ignorance. Among the socio demographic characteristics, the type of the family influenced in health seeking behavior of these couples (p -value 0.003). Most of the secondary sub fertile mothers got to know about the treatment options from the neighbors and from family members.

Conclusion: Type of the family influenced in health seeking behavior of the secondary sub fertile mothers. The main reason for not seeking treatment was waiting for natural conception followed by ignorance and presence of kids

Keywords: Secondary subfertility, Health seeking behavior.



Zone 6: Life Course Health

P-163

Development of T-CBT Model to Improve the Competence of Midwives in Prevention of Depression in Victims of Child Sexual Violence

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Abstract

Backgrounds/Objectives: Sexual contact or violence of sexual acts experienced by female child throughout the world. Of the 28 countries that have experienced sexual coercion, 90% of them occurs in female child and said the perpetrators of the first incident were people they knew. This literature review aims to identify and explain empirical facts about research on sexual violence in children, early detection and prevention of ongoing depression. This study also explained the application of the T-CBT model to increase the competency of midwives in depressed services for victims of sexual violence in children.

Methods: Literature searches were taken from online journal databases, PubMed, Proquest, and Google Scholar, and other sources came from the Indonesian Child Protection Commission Report, P2TP2A, Indonesian Midwives Association, and appropriate theses and dissertations. Literature sources were taken from the last 10 years which were carried out manually and systematically from 2009 to 2019.

Results: The results of the review found that the T-CBT model effectively prevented the trauma of depression and the continuing anxiety of victims of child sexual violence as early as possible. From the empirical facts, there are effects of emotional reactivity and depressive symptoms that are shown such as the idea of suicide and attempted suicide, and emotional pressure. The results of other studies are also shown by a moderate correlation between psychopathology and objective characteristics of abuse, such as the number and type of violent events and the duration of abuse. The most common obstacle experienced of adolescents is having parents with a history of mental illness, intimidation, parental divorce or separation or physical, emotional or sexual abuse, neglect of children or traumatic events.

Conclusions: CBT model is a services strategies that strengthens behavioral skills-based interventions, information-based needs, family and parent involvement, and midwife services with a therapist's approach that is patient, understanding and respecting needs will greatly help find solutions to improve midwife competence and service effectiveness for adolescents who are experiencing ongoing trauma.

Keywords: Depression, Sexual violence, T-CBT





November 22, 2019

Venue: Banglampoo Room, Floor 6

Time: 13.00 – 13.30 hrs

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P-165	Exploring the effects of different zodiac sign attributes on the development of metabolic syndrome among workers with sedentary occupations <i>Ming-Shu Chen, Ya-Ru Yang, Kuan-Ting Wu, Yi-Hui Dong, Tsou-Chi Chen</i>
P-166	Musculoskeletal symptoms and related health-seeking behavior among health activity assistants in operating theatres of teaching hospitals in Colombo <i>Shermi Jayasumana, Dulani Samaranyake</i>
P-167	The association between meteorological factors and the incidence of hand foot mouth disease in Wuhan, China from 2013 to 2017 <i>Jiayuan Hao, Suyang Liu</i>
P-168	Health impact of meteorological conditions and air pollution on acute myocardial infarction <i>Arim Kim, Jinwook Hong, Jaehun Jung, Seok-Jun Yoon</i>
P-169	Study on nurses' burden feeling in mixed hospital ward <i>Misaki Sato, Eiji Satoh, Maki Murakawa, Asuka Yamada</i>
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P-173	A scoping review on risk factors associated with mental health issues among maritime industry workers <i>Woraluk Jonglertmontree, Orawan Kaewboonchoo, Ikuharu Morioka, Nik Anni Afiqah Tuah</i>
P-174	Approach to management of employees in the corporate social responsibility report: From the view of occupational safety and health, and employee-friendly workplace environment <i>Yoko Aiba, Kuharu Morioka</i>
P-175	Exploring the public attention to policies changes and social events related to overwork prevention: An application of popularity of search volume <i>Yan-Cheng Jiang, Ro-Ting Lin</i>
P-176	Rapid weather changes and risk of stroke: A case-crossover study in Taiwan <i>Bing-Chen Wu, Pei-Chun Chen</i>
P-177	Childhood health outcomes associated with toxic chemicals: A comprehensive review of meta-analyses and systematic reviews <i>Hye Won Choi, Eun Il Lee, Yang Hee Kim, Ka Young Kim, Joo Hyun Lee</i>
P-178	Adverse effects of air pollutants on semen concentration in Wuhan city <i>Jiayi Zhou, Xiaochen Wang, Xiaojia Tian, Lu Ma</i>



November 22, 2019

Venue: Banglampoo Room, Floor 6

Time: 13.00 – 13.30 hrs

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P-183	Should benzoic acid and sodium nitrite be restricted from food additives? effects of preservatives on <i>daphnia magna</i> embryo <i>Shih-Hsien Chang, Cheng-Yih Liaw, Ken K.S. Wang</i>
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November 22, 2019

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P-164

A Pilot Study to Assess the Occupational Stress of Field Epidemiologists among the Countries in South Asia and the Western-Pacific Regions

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Abstract

Background/Objectives: Occupational stress is harmful physical and emotional responses and it affect the work performance of public health professionals who response unexpected public health problem in time-constrained situation in field.

Methods: For a survey of occupational stress of trainee in field epidemiology training programs (FETPs), we recruited participants voluntarily during the Southeast Asia and Western Pacific regional scientific conference at Vientiane, Laos in November 2018. The number of year of training, and type of training program were collected. Furthermore, the level of burnout which affect the stress-coping strategies, and the level occupational stress which includes 6 subscales for Role Overload (RO), Role Insufficiency (RI), Role Ambiguity (RA), Role Boundary (RB), Responsibility (R), and Physical Environment (PE) were measured. Chi-square tests and multivariate logistic regression were used to examine the associations between occupational stress, burnout, the number of year training, and type of training program.

Results: From 5 to 9 November 2018, a total of 62 trainee from 14 different countries in FETPs had data for analysis. 19% satisfied the criterion for overall burnout; however, there was no significant difference between the burnout, the number of working year, and the type of training program. 65.8% of second year, 66.7% of first year, and 66.6% of less than one-year trainee had the burden of stress in RO, RA, and PE, respectively. 60% and 64% of trainee affiliated at the training program by government has occupational stress in RO and RE, respectively. The occupational stress in R and PE of trainee affiliated at training program by the university has significantly lower than the trainee ($p=0.01$, and $p<0.01$, respectively). Furthermore, the burden of occupational stress on R and PE lower in the trainee affiliated at the training program by the university (odds ratio=-0.42 (95% CI -0.74--0.11) and -0.62(95% CI, -0.94--0.31)).

Conclusions: It is concerning that more than a half of trainee in FETPs has a occupational stress in RO and PE; however, trainee university affiliated training program has lower occupational stress in R and PE. Additional studies to identify.

Keywords: Field epidemiologist, Occupational stress, Burn out, South Asia



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P-165

Exploring the Effects of Different Zodiac Sign Attributes on the Development of Metabolic Syndrome among Workers with Sedentary Occupations

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Abstract

Background/Objectives: Recent findings indicate that metabolic syndrome (MetS) is more prevalent among workers in jobs requiring prolonged sitting. Taxi drivers have a high risk of developing MetS as they tend to having poor lifestyles due to prolonged sitting and irregular diets. This study aimed to investigate the effect of zodiac traits on MetS morbidity.

Methods: This study used raw data drawn from the Annual Taxi Driver Health Examination Survey conducted by the New Taipei City, Taiwan Government. The subjects were taxi driver who resided in the Taipei area and had voluntarily received health screenings (2012–2017) at Far Eastern Memorial Hospital (major tertiary hospital in New Taipei, Taiwan). After excluding female drivers, data covering a total of 1521 male subjects were collected. A chi-squared exact test was performed to identify differences among categorical variables. The SPSS version 12.0 (Chicago, IL, USA) was used to perform statistical analyses.

Results: The results showed that 713 subjects (46.88%) were diagnosed with MetS. In this study, the 12 zodiac signs were grouped under four elements which include wind, fire, water, and earth. The statistical results from the chi-square test showed that there were no statistically significant differences ($P = 0.312$) between the four zodiac elements and MetS diagnoses. MetS morbidity in terms of the zodiac elements are as follows: earth (50.3%) > water (47.0%) > fire (46.3%) > wind (43.5%), with the morbidity for Taurus (57.3%) being the highest among all the zodiac signs, Virgo (55.4%) ranked second.

Conclusions: An individual's zodiac sign may be associated with disease due to associations between personality and disease. For example, heart disease and other chronic diseases may be closely related with an individual's psychological state. In this study, it was hypothesized that the MetS diagnosis rate might be higher among individuals with fire element signs, but the results showed that the MetS diagnosis rate of individuals with earth element signs was higher compared to the other zodiac signs. The higher MetS, diabetes, and high blood pressure diagnosis rates of individuals with earth element signs (Taurus & Virgo) indicate the need for further exploration in subsequent studies.

Keywords: Metabolic syndrome, Sedentary, Zodiac sign



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P-166

Musculoskeletal Symptoms and Related Health-seeking Behavior among Health Activity Assistants in Operating Theatres of Teaching Hospitals in Colombo

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Abstract

Background/Objectives: Musculoskeletal disorders (MSDs) are gaining importance worldwide, causing high morbidity, disability and poor quality of life. This study aimed to determine the prevalence and factors associated with musculoskeletal symptoms (MSSs) and to describe health seeking behaviour (HSB) among health activity assistants (HAAs) attached to operating theatres of teaching hospitals (OT-TH) in Colombo district.

Methods: A workplace-based cross-sectional study was conducted among 378 HAAs attached to OT-TH in Colombo district, selected by simple random sampling. MSSs were assessed using Cornell Musculoskeletal Discomfort Questionnaire. Prevalence of MSSs was calculated for preceding three months and one week. Associations were analyzed using odds ratio (with 95% CI) and Chi-square test with p value at 5% significance level.

Results: The prevalence of MSSs at least in one anatomical region during preceding three months and work week were 59.7% (n=226, 95%CI 54.77-64.63) and 52.9% (n=200, 95% CI 47.98-58.02) respectively. Lower back was the most affected body region (32.5% n=123) during preceding three months followed by foot (28.6% n=108) and knee (19% n=72). Same pattern was observed during preceding work week. Transferring 15 patients or more a day (OR=4.47,95%CI=2.80-7.16;p<0.0001), pushing and/or pulling 15 trollies or more a day with patients (OR=2.65, 95%CI=1.40-5.01;p=0.002), cleaning surgical instruments one hour or more per day (OR=1.83, 95%CI=1.20-2.78;p=0.004), excessive work load (OR=3.79,95%CI=2.42-5.92; p<0.0001), fast pace of work (OR=2.77,95%CI=1.47-5.22; p<0.0001), too many different tasks (OR=5.58,95%CI=3.22-9.67; p<0.0001) were significantly associated with developing MSSs during preceding three months. Over 60% of subjects with MSSs had sought health care. Over half of the subjects who did not seek health care believed any medication would not resolve the symptoms.

Conclusions: Prevalence of MSSs among HAAs was high. HSB was satisfactory, but deficiencies in understanding the illness were observed.

Keywords: Musculoskeletal symptoms, Prevalence, Health seeking behaviour, Health activity assistants



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P-167

The Association between Meteorological Factors and the Incidence of Hand Foot Mouth Disease in Wuhan, China from 2013 to 2017

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Abstract

Background/Objectives: Hand foot mouth disease (HFMD) is a highly contagious disease that threatens children's health and brings much burden to society in China. Recent years, many studies have indicated that the incidence of HFMD was associated with meteorological factors. We aimed to assess the effects of meteorological factors on HFMD to confirm the association proposed previously.

Methods: Daily HFMD cases were retrieved from Hubei Provincial Center for Disease Control and Prevention (CDC) from 1st February, 2013 to 31st January, 2017. Daily meteorological data including 24-h average temperature, relative humidity, wind velocity, atmospheric pressure was obtained from Hubei Meteorological Bureau. Air pollution data was collected from 10 national air quality monitoring stations in Wuhan. We adopted a distributed lag non-linear model (DLNM) to estimate the effects of temperature and relative humidity on HFMD incidence. Delayed effects were also estimated in our study.

Results: We found the association between temperature and HFMD morbidity presented an approximate 'M' shape with 2 peaks at 2.3°C (RR=1.760, 95%CI: 1.218-2.542) and 27.9°C (RR=1.945, 95%CI: 1.570-2.408). We observed an inverted 'V' shape for relative humidity, reaching the maximum RR at 89.2% (RR=1.553, 95%CI: 1.322-1.824). The largest delayed cumulative effects lay at lag6 with -4.3°C for temperature and lag13 with 89.2% for relative humidity.

Conclusions: The non-linear relationship between meteorological factors and HFMD incidence with several lag days could be comprehensively used in the early targeted warning system of infectious diseases, reducing the possible outbreaks and burden of HFMD among children.

Keywords: Temperature, Relative humidity, HFMD



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P-168

Health Impact of Meteorological Conditions and Air Pollution on Acute Myocardial Infarction

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Abstract

Background/Objectives: To overcome methodological challenges in previous studies, we assessed the association between multiple meteorological factors, including air pollution and a number of acute myocardial infarction (AMI) cases through stepwise approach.

Methods: We analyzed counts of daily AMI hospitalization that matched with sixteen meteorological factors in seven metropolitan provinces of the Republic of Korea from 2002 to 2017. Our study consists of five analysis phases. First, we estimated the effects of single factor on AMI with a time series design using generalized additive model (GAM) with cubic spline. Second, to avoid the spurious regression problem in a multifactorial model, we conducted Granger causality test. Third step is variable selection, using backward elimination algorithm of selected factors from the previous steps and then we chose the best model according to an AIC. In the fourth step, we examined the daily lag time effect to peak response in the orthogonalized impulse response functions. To define dose-response relationships, we analyzed the final model using GAM considering lag-time as the final step.

Results: The analysis showed that a 1 m/s increase in wind speed was associated with a 7.8% (95% confidence interval (CI): 1.07–1.09) increase and a 1 ppm rise in CO was associated with a 14.2% (95% CI: 1.08–1.20) increase in AMI with a 4-day lag. Vapor pressure showed negative effects in all lags, and its 1 unit decrease was associated with a 0.5% (95% CI: 0.99–1.00) increase of AMI at lag 4. In summer, a 1 m/s increase in wind speed was associated with a 10~11.2% increase, a 1 ppm rise in CO was associated with an 18.8~27.3% increase and 1 hPa decrease in vapor pressure was associated with a 0.7~0.8% increase in AMI after lags 0~4. In winter, a 1 m/s increase in wind speed was associated with a 6.3~7.4% increase, a 1 ppm rise in CO was associated with a 23.0~30.3% increase and 1 hPa decrease in vapor pressure was associated with a 2.5~3.0% increase in AMI after lags 0~4.

Conclusions: This multi-step time series analysis found that CO is the most important factors on AMI hospitalization, specifically in winter.

Keywords: Stepwise approach, Weather, AMI



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P-169

Study on Nurses' Burden Feeling in Mixed Hospital Ward

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Abstract

Background/Objectives: Regarding the building of hospital ward, it was not sufficiently verified whether these hospital wards were efficient plans from the viewpoint of nursing. Additionally, not only efficiency in the field site of nursing, based on that also mental overflows were a problem, it was considered necessary to grasp that volume of nursing and burden feeling from the standpoint of nursing workers. Therefore, in this research, the objective was to clarify the relationship between the hospital ward plan and nurses' burden feeling which was psychological burden on nursing such as efficiency of movement.

Methods: This study was conducted in cooperation with one hospital. The survey was conducted on medical staff belonging to a specific ward in the hospital by questionnaires which were the nursing work burden questionnaire and the environmental evaluation questionnaire of the building. From these, indicator of mental stresses on working and environment of staffs were obtained. Further, the measurement of volume of activity of nurses in the ward showed exercise strength and consumption calories etc. of each nurses.

Results: Among the staff who work in the same ward, the difference in years of service showed a tendency of different mental stress. As for hospital rooms, the badness of the view from the staff station affected the difficulty of watching and care. Further, there was a correlation between the volume of nurse traffic and the burden feeling.

Conclusions: Knowledge was obtained for the derivation of architectural planning guidelines for hospital wards which considered the ease of nursing.

Keywords: Hospital ward planning, Nurses' burden-feeling, Volume of activity



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P-170

Analysis of Potential Hazard and Risks Assessment in Quarry Area (MINING) PT.Semen Bosowa Maros, Indonesia

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Abstract

Background/Objectives: The cases of occupational accidents on national scale are relatively high and increasing every year. PT. Semen Bosowa Maros is an industry for workplace has a variety of potential hazards, because of many groove production process flow contained in this industry. Starting from mining limestone to packaging. The purpose of this research was to analyze the potential hazards and assess risks in the area of Quarry (mine) PT. Semen Bosowa Maros.

Methods: The type of this research is a descriptive survey research in 2015, using methods of risk analysis based on ISO 31000: 2009 on Risk Management regarding Risk Management, using HIRA worksheet (Hazard Identification AND Risk Assessment) to determine risk analysis. The population is all workers in the area Quarry (Mining Limestone) PT. Semen Bosowa Maros has about 74 workers and a sample taken by total sampling, the sample in this study amounted to 74 workers, Planning unit consists of 24 workers, the production unit amounted to 30 workers, and the Hauling unit owned to 20 workers.

Results: The results showed that in the department of planning unit quarry at the highest risk level is high at 40% with the potential danger of the high intensity of dust and dozer rolled, while the lowest risk level is low at 20% with the potential danger of not using a safety belt. At highest risk level production unit is an extreme of 11.1% with a potential fire hazard on the drilling tools, while the lowest risk is medium level of 66.7% with the potential hazard is, heat rash, drum truck rolled, hanging material, the operator does not use earplug and earmuff, and so on. Furthermore, At unit Hauling, the highest risk is the extreme level of 12.5% with the potential hazard of the operator not using a helmet, while the lowest risk is medium level of 75% with potential dangers, namely heat rash, and so on. Expected for further research needs to be done further research on the analysis of potential hazards and risk assessment, to continue to next steps risk management is risk assessment and risk control.

Keywords: Analysis of potential hazards, Risk assessment, Work accident



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P-171

Relationship between Work Stress, Social Support and Health Risk Behaviors among Domestic and Migrant Thai Workers

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Abstract

Background/Objectives: Thailand has been a migration crossroads in South East Asia for centuries, but there are deficiencies between Thailand and Taiwan in international research collaboration and research networks involving countries of origin and reception. Based on protecting the health status of migrant workers from foreign countries, the relationship between the ill-health factors of workers in both areas and their occupational health was studied to help understand the health workplace follow-up involvement. This study's main objective is to compare Thai workers' work stress, interpersonal support and health risk behaviors in distinct environments to determine the correlation and trend between Taiwan and Thailand.

Methods: The questionnaire will be used by convenience sampling in both countries in a standardized, majority-closed survey to find relevant factory workers in the manufacturing industry. After collecting the self-reported survey, the cross-sectional will be used to determine the connection between work stress, social support and health risk behaviors.

Results: The expected results will verify the hypothesis that there is a significant difference in social support and health risk behaviors between Thai domestic workers and migrant workers.

Conclusions: Understanding the work stress coping with social support and health behaviors in the context of can provide new avenues for targeted interventions through distinct settings.

Keywords: Migrant worker, Occupational health, Work stress, Health risk behavior, Social support



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P-172

Near Misses and Presenteeism among Paramedics

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Abstract

Background/Objectives: Paramedics need to be in good physical health to be able to respond to emergencies. We hypothesized that near misses by paramedics and unanticipated incidents that cause no harm may be associated with presenteeism during emergency rescues. Therefore, the objective of this study is to examine the association between presenteeism and near misses among paramedics.

Methods: A cross-sectional study was conducted among 254 paramedics using a self-administered questionnaire. Presenteeism was measured using the work functioning impairment scale (WFun).

Results: Twelve percent of respondents experienced high work function impairment indicating presenteeism. The rate of near miss experiences steadily increased with increasing work function impairment among paramedics (WFun score category: middle, odds ratio (OR) 3.62, 95% confidence interval (CI) 1.62–8.11; high, OR 4.36, 95% CI 1.37–13.84; very high, OR 8.62, 95% CI 2.09–35.48).

Conclusions: This study demonstrated a positive relationship between impaired work function indicating presenteeism and near misses among paramedics. This suggests that presenteeism may be associated with errors that have the potential to cause serious accidents. Improved access to treatment for frequent health problems may reduce the number of incidents among paramedics.

Keywords: Paramedics, Presenteeism, Medical-error, Near-misses



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A Scoping Review on Risk Factors Associated with Mental Health Issues among Maritime Industry Workers

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Abstract

Background and Objectives: Mental health problems are the most important causes of illness and contributors to the burden of disease and disability worldwide. Especially, maritime workers are exposed to risk of social isolation, lack of social support, inconsistency work schedule, long duration of work which may effect on mental health outcomes. However, those risk factors should be concerned in term of maritime environment condition (i.e. sea environment, confined environment) that are different from any workplace. Therefore, this study aims to identify and synthesize the knowledge of which risk factors, may effect on mental health outcomes among maritime industry worker.

Methods: A scoping review was conducted by determining inclusion criteria, which were used for searching primary research, an exposure; risk factor (i.e. psychosocial factor, shift working, duration on sea) associated with mental health outcomes among maritime worker population via the database MEDLINE, PubMed, Embase, Academic Search Complete, and grey literature in English or Thai full paper in 2009-2019. Then, selecting primary research by PRISMA process, evaluating primary research, analyzing data, and discussing the result.

Results: Quantitative fifteen studies, of which meet inclusion criteria, were included. Individual factors (age of maritime worker, dispositional resilience, psychological capital, and coping style) and occupational factors (work support, shift working, duration on sea > 6 months, experience on seafaring) were found to relate with mental health (stress, anxiety, depression, fatigue, burnout, sleep quality) among maritime industry workers. Additionally, those factors were found in association with each other.

Conclusion: Individual factors and occupational factors were related with mental health outcome among maritime industry workers. To prevent the development of mental health symptom to mental health illness among maritime worker should be realize both factors.

Keywords: Risk factor, Meatal health, Maritime worker



Zone 7: Occupational and Environmental Health

P-174

Approach to Management of Employees in the Corporate Social Responsibility Report: From the View of Occupational Safety and Health, and Employee-friendly Workplace Environment

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Abstract

Background/Objectives: In recent years, responsibility for companies to contribute to society voluntarily through business activities (Corporate Social Responsibility, CSR) has attracted attention. In carrying out business activities, companies take responsible actions with stakeholders (customers, shareholders, investors, business partners, the environment, local communities, society, employees, etc.), and report on their activities has been published. As CSR for employees among stakeholders, there are various issues such as working condition problems and employment problems. Protecting employee safety and health is also considered as one of its elements. Approaches to the management on occupational safety and health (OSH) that companies actively initiate, are often described in the CSR reports. The purpose of this study was to clarify the approaches to the management of employees in the CSR reports from the view of the OSH and an employee-friendly workplace environment.

Methods: The CSR reports published by 187 companies listed on the first section of Tokyo Stock Exchange Inc. in 2016 were served: 3 companies (1.6%) in the primary sector, 40 companies (21.4%) in the secondary sector, and 144 companies (77.0%) in the tertiary sector. The description extracted by the first authors was classified into two categories: items related to the OSH, and those related to the employee-friendly workplace environment from the viewpoint of promoting work style reforms.

Results: The report describing the OSH was 161 (86.1%). In the individual contents, health management was the most among items on the OSH. Descriptions on the OSH in the secondary sector of industries were more than that in the tertiary sectors. There were 183 (97.9%) reports that described the employee-friendly workplace environment. The number of descriptions on it was more than that on the OSH. Among its items, the promotion of women's participation and advancement in the workplace was most. The description on the employee-friendly workplace environment showed no difference among the industrial sectors.

Conclusions: These finding suggest that the companies take the matter seriously on the employee-friendly workplace environment for employees.

Keywords: Corporate social responsibility, Health management, Women's participation



Zone 7: Occupational and Environmental Health

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Exploring the Public Attention to Policies Changes and Social Events Related to Overwork Prevention: An Application of Popularity of Search Volume

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Abstract

Background/Objectives: Overwork-related events raise societal concern in recent years in Taiwan. To prevent overwork, Taiwanese government amended regulations regarding hours of working, overtime work, and rest day. If policy changes and events could increase public attention, we can expect the general public will have a better understanding of overwork prevention. Therefore, we aim to investigate whether public attention on overwork-related topics increases as a result of policy changes.

Methods: We searched overwork-related policies and events during 2004-2019 from internet, government reports, and news. We collected them with a following up of 15 years, and then identified three working conditions (*overwork*, *working hours*, and *job stress*). After that, we transformed the three working conditions into 3 keywords. Then, we used these keywords as search terms to obtain the search volume on Google Trends. We calculated the average percent change per month using Joinpoint Regression Program.

Results: We observed most of the peaks gather in two periods: the first from 2010 to 2012 and the second from 2015 to 2018. There were four peaks of overwork and working hours in the first periods, which caused by the amended and implemented of the new guideline of overwork, and the frequent overwork-related events, especially on engineers, doctors, and security; For the second periods, four peaks appeared on working hours when the government amended or implemented the three times amendment of Labor Standard Laws. As for the search volume on job stress, it was relatively stable than overwork and working hours. We also observed that search volume of working hours significantly increased by 0.2% per month from January 2014-January 2017 and a significantly drastic increase of overwork during July 2010-March 2011.

Conclusions: This study demonstrates that both policy changes and events related to overwork prevention could attract public attention and lead search volume peaks, particularly on *working hours* and *overwork*. A higher attention on overwork-related topics, a better understanding of overwork prevention among the general public is expected. Our findings also underscore that job stress might be under-acknowledged by the general public because there was no obvious peak on it since 2004.

Keywords: Overwork, Working hours, Policy



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P-176

Rapid Weather Changes and Risk of Stroke: A Case-crossover Study in Taiwan

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Abstract

Background/Objectives: Stroke is one of the top three leading causes of death and disability worldwide. Numerous studies have shown that absolute values of weather parameters such as mean temperatures were associated with occurrence of stroke, but findings of studies relating weather changes to stroke were inconsistent. Even less is known about the associations with hemorrhagic stroke. We examined whether weather changes are associated with risk of stroke in Taiwan.

Methods: We carried out a time-stratified case-crossover analysis using claims data of Taiwan National Health Insurance program. Study subjects were patients aged 18 years and older with a first stroke hospitalization identified by primary discharge diagnosis from January 1, 1999 to December 31, 2013. Hourly temperature, relative humidity, and atmospheric pressure were taken from the Central Weather Bureau of Taiwan, and the 24-hour differences were calculated. For each patient, we used day 0 to -1 (the same day and the preceding day) of the hospitalization as the case period matched to 3 to 4 control periods, which were the same day of the week from the same month as each case period. We used conditional logistic regression to assess risk of intracerebral hemorrhage (ICH), ischemic stroke (IS), and subarachnoid hemorrhage (SAH) in relation to weather changes.

Results: During the 15-year period, we identified 5,737 patients with SAH, 32,919 patients with ICH, and 104,176 patients with IS. The mean daily temperature and 24-hour changes was 22.80°C and 1.27°C, respectively. The corresponding values of relative humidity was 77.61% and 5.08%. Larger 24-hour changes of temperature and relative humidity were associated with increased risk of ICH; the odds ratio (95% confidence interval) was 1.05 (1.01-1.09) for the 5th vs. 1st quintile of temperature (2.04°C vs. 0.30°C) and 1.06 (1.02-1.10) for that of relative humidity (8.08% vs. 1.30%). However, we did not observe associations between changes in temperatures and relative humidity and risk of SAH and IS. Changes in atmospheric pressure were not associated with all the three types of stroke.

Conclusions: This study suggested that larger changes of temperature and relative humidity are associated with ICH but not IS or SAH.

Keywords: Hemorrhagic stroke, Ischemic stroke, Weather changes, Taiwan



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Childhood Health Outcomes Associated with Toxic Chemicals: A Comprehensive Review of Meta-Analyses and Systematic Reviews

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Abstract

Background/Objectives: There is an increasing number of studies on the associations between toxic chemicals and childhood health problems. However there are few studies that show the full spectrum of various environmental diseases of children associated with toxic chemicals. It has been reported that there was a broad variability of childhood health problems affected by diverse toxic chemicals. Therefore it is needed to review environmental diseases of children based on meta-analysis papers or systemic reviews for listing childhood environmental diseases (CED).

Methods: We selected the studies for CED published in 1994-2018 by searching key words using chemicals or diseases for childhood in EMBASE, Pubmed, and Cochrane Library database. The list of chemicals consisted of lead, mercury, phenols, phthalates, bisphenol A, triclosan and paraben. And five diseases were chosen including cognitive dysfunction, autism, ADHD, asthma, atopic dermatitis. We found 169 papers among meta-analyses and systematic reviews and we included only 38 studies which are associated between toxic chemicals and childhood health outcomes by deleting duplicated papers and not-associated with CED.

Results: These studies shows that Pb is associated with low IQ, decrease of cognitive function, ADHD, and autism. Mercury is also associated with autism and ADHD. Bisphenol A exposure is related to nerurobehavioral problems including ADHD or intellectual disability with asthma. Phthalate is associated with adverse cognitive outcomes and asthma.

Conclusions: Our study showed positive associations between only 4 toxic chemicals and children's disease. Future studies are warranted to identify the further evidence between various environmental toxic chemicals and childhood health outcomes.

Keywords Childhood, Environmental health, Chemicals



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Adverse Effects of Air Pollutants on Semen Concentration in Wuhan City

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Abstract

Background/Objectives: To investigate the association between semen concentration and air pollutants within different exposure periods.

Methods: A cross-sectional study was conducted in 1852 subjects attending the Reproductive Medicine Center of Renmin Hospital between January 1, 2013 and August 3, 2015. Their socio-demographic information and semen concentration were recorded for analysis. Air pollutants data (PM_{2.5}, PM₁₀, SO₂ and NO₂) were collected during the entire period (lag 0-90 days) and key periods (lag 0-9, 10-14, 70-90 days) of semen development. A generalized additive model was employed to assess the relationship between each air pollutant and sperm concentration in different exposure periods. Then we estimated the stability of the ambient air pollutants by fitting two-pollutant models.

Results: In single-pollutant models, PM_{2.5} exposure in lag 0-90 days was associated with decreased sperm concentration ($\beta = -0.397$; 95%CI: -0.593, 0.201). Moreover, among three key periods, the inverse relationships between PM_{2.5} exposure and sperm concentration were more evident in the early phase of sperm development (lag 70-90 days) ($\beta = -0.153$; 95%CI: -0.261, 0.045). Similar to PM_{2.5}, SO₂ and NO₂ exposure in lag 0-90 days was observed an negative association with sperm concentration. The association between SO₂, NO₂ exposure and sperm concentration was indicated to be stronger during lag 70-90 days. In two-pollutant models, the effect of PM_{2.5} still remained significant after adjusting for PM₁₀, SO₂ and NO₂. No significant relationship between PM₁₀ exposure and sperm concentration was observed.

Conclusions: This study suggested that air pollutants had an adverse effect on semen concentration during the development of sperm, particularly in the initial phase of spermatogenesis.

Keywords: Air pollutants, Sperm concentration, Generalized additive model



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The Impact of Exposure to Carbonaceous Components in Particulate Matter on Respiratory Function among Healthy Adults

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Abstract

Background/Objectives: This study aims to explore the association between carbonaceous compositions in PM_{2.5} and lung function among healthy adults.

Methods: 37 healthy students aged in 21-23 years old including 18 male and 19 female were recruited from Wuhan University. In each season of one year, we measured all participants' daily peak expiratory flow (PEF) at 7:30 a.m. and 22:00 p.m. every day for two weeks. The mass concentrations of OC and EC in PM_{2.5} were measured by a thermal-optical transmittance analyzer. In the study, Mixed-effects model was applied to evaluate the associations between carbonaceous components and lung function. Different lags for the carbonaceous components were investigated.

Results: In single-pollutant model, a 10 $\mu\text{g}/\text{m}^3$ increase of outdoor EC and primary organic carbon (POC) were associated with -3.93 (95%CI: -6.89, -0.97) L/min and -7.32 (95%CI: -12.93, -1.71) L/min change of evening PEF at lag 0 day, respectively. In constituent-PM_{2.5} model, negative relations between EC and evening PEF were found in all lag models except lag 1 day and lag 2 day. A 10 $\mu\text{g}/\text{m}^3$ increment of indoor EC and POC were significantly associated with -4.69 (95%CI: -7.72, -1.66) L/min and -10.70 (95%CI: -17.60, -3.79) L/min change of evening PEF at lag 0 day.

Conclusions: This study suggested a strong adverse effect of carbonaceous components in PM_{2.5}, especially in the evening, on PEF of healthy young adults.

Keywords: Healthy adults, Carbonaceous components, Particulate matter, Peak expiratory flow



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The Evaluation of Toluene and Xylene in Urine and Symptoms Related to Work Ability among the Road Sweepers in Pollution Control Area, Rayong Province, Thailand

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Abstract

Background/Objectives: Road sweepers exposed to the exhausted smoke and carbon deposit from the vehicles which will stimulate the allergic from various chemicals and affected to their health. The objectives were to evaluate toluene and xylene in urine and symptoms and work ability among the road sweepers in pollution control area, Rayong province, Thailand

Methods: The methods used plastic bottles for the collection of urine about 20 cc. (after the work shift) and questionnaires for interview the road sweepers

Results: The mean age of the study group was 44.05 years old. 67.0% graduated from elementary education. 92.0% of the study group worked 8 hours per day; 97.0 % worked, 6-7 days per week. 57.0 % always used respiratory protection; however, most of them used only cotton masks (97.9%). Most of them about work ability had good level (64.0%). Results of urine samples (n=100), after the work shift, showed average of toluene to be 0.001 (\pm 0.002) μ g/l and xylene was 0.038 (\pm 0.082) μ g/l. More than 50 % showed symptoms of adverse health effects including headache, body fatigue, fatigue only in the arms and legs, sore knees, dizziness and cough. The average comparison of concentration of toluene and xylene in urine was significantly different between the study and comparison groups at level 0.05 ($p=0.018$ and $p<0.001$, respectively). However, the relationship between toluene and xylene in the urine and work ability of study group were not significant.

Conclusions: Based on the results of this study, toluene and xylene in the urine and symptoms among road sweepers were detected. We should be concerned about the training in order to gain the knowledge and understanding the hazard environment in working place and the protection. Respiration protective equipment should also be provided.

Keywords: Toluene, Xylene, Symptom, Urine



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Association between Night Shift Work, Obesity and Physical Activity Barrier among Nurses

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Abstract

Background/Objectives: Prolonged exposure to shift work, particularly to irregular night shifts, has been associated with higher risks of obesity, metabolic syndrome, cardiovascular diseases. [1] Shift-working is common for nurses which were suspected to have higher risk. However, only handful studies in Asia addressed the issue. The aim of the current study was to explore the association between night shift work, obesity and physical activity barrier among nurses.

Methods: A cross-section e-survey was conducted in Singapore from Aug 2016 to Jan 2017 and the target population was full time nurses, aged 21 to 65, graduated from a nursing school in Singapore. The questionnaire included several sections: (i) Exposure to Shift Work Scale [2], (ii) Physical Activity Barriers Scale (PAB) [3], and (iii) Demographic information including age, gender, height, weight, etc. The e-questionnaire was created using the eSurevy platform developed by the Information Technology Centre of the University. Descriptive statistics were used to summarize the demographic information of the respondents. Independent samples t-test and Chi-square test were used to examine if there is any difference of the continuous and categorical outcomes respectively between those exposed and not exposed to night shift work. Ethics approval was granted by the University IRB.

Results: 176 nurses completed the questionnaire and 128 (72.7%) were aged 30 or below. 149 (84.7%) were Chinese, 119 (67.6%) were single, and 120 (68.2%) had Bachelor degree as their highest qualification. 111 (63.1%) needed to do night-shift and majority of them (85.6%) took night shift duty 3 to 7 times per month. No significant difference of the body mass index was observed between those who needed and did not need to take night shift duty but significant higher scores for PAB scale were observed for those who needed to take night shift ($p < 0.001$). The Personal and Environment component of the PAB scale were also significant higher ($p < 0.001$) but not the Family component.

Conclusions: The night shift duty was found to be associated with larger barrier in doing physical activity but not affect the BMI. The barriers mainly due to personal or environmental factors.

Keywords: Shift work, Obesity, Physical activity barriers, Nurses



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Association between Short-term Exposure to Air Pollution and the Incidence of Hand, Foot, Mouth Disease in Wuhan, China: A Time-series Study

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Abstract

Background/Objectives: Previous studies have shown a relationship between O₃, PM₁₀, SO₂ and hand, foot and mouth disease, of which only SO₂ has seasonal analysis. However, no studies have been shown on the relationship between HFMD and other pollutants, such as NO₂ and PM_{2.5}, as well as seasonal analysis of the five pollutants mentioned above, nor did they indicated the interaction of these pollutants. Therefore, our study was designed to explore the relationship between these types of air pollutants and hand, foot and mouth disease (HFMD) during different seasons and interaction of these pollutants in Wuhan, China.

Methods: Generalized additive model (GAM) was used to the association between short-term exposure to ambient air pollution and the incidence of HFMD. The single-day lag models (from lag0 to lag14), the moving average lag models (lag10-11), seasonal analysis and single- and multi-pollutant models are used to reveal the effect of air pollutants.

Results: The associations between five types of air pollutants and HFMD are all significant, reaching the highest in lag10 or lag11. In cold season, SO₂, NO₂, PM₁₀ and PM_{2.5} showed a higher risk of HFMD, compared to warm season. In the multi-pollutant model, the effect of NO₂, O₃ and PM_{2.5} was lower, or even insignificant when the other pollutants were included, but the effects of SO₂ and PM₁₀ are still significant.

Conclusions: This study shows significant relationships between air pollutants and HFMD, especially for SO₂, NO₂, PM₁₀ and PM_{2.5} during cold season and for O₃ during warm season. Our study provides more evidence related to air pollution and HFMD, contributing to prevention and control of HFMD. All these findings are valuable for taking actions and provide methods to prevent and control HFMD outbreaks.

Keywords: Hand foot and mouth disease, Air pollution, Cold season, Generalized additive model



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Should Benzoic Acid and Sodium Nitrite Be Restricted from Food Additives? Effects of Preservatives on *Daphnia magna* Embryo

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Abstract

Background/Purpose: An assay system using *D. magna* embryos was applied to investigate the adverse effects of food additives and data were compared with those of preservatives in the literatures.

Methods: Daphnid embryo teratogenic effects were used to detect the toxicity of food additives. Immobilization test and embryonic development assay procedures were utilized to evaluate the toxicity of benzoic acid and sodium nitrite to *D. magna* according to US EPA procedure. The 48h-EC₅₀ values and 95% confidence limits were calculated by Probit analysis, based on nominal concentrations.

Results: The present study clearly demonstrated that benzoic acid and sodium nitrite may cause both acute toxicity and teratogenic effects in neonates and embryo of *D. magna*, respectively. Long-term exposure of *D. magna* to preservatives leads to delayed maternal have first embryo days, maternal hatched eggs numbers, offspring sex ratio, offspring I hatched eggs number, living generations, and survival rate. The impact of sodium nitrite on embryo of *D. magna* is more than benzoic acid ($p < 0.001$).

Conclusion: *Daphnia* embryos were markedly more sensitive to benzoic acid and sodium nitrite than juveniles were. In addition, sodium nitrite had higher toxicity to *Daphnia* embryos than benzoic acid. Sodium nitrite effects on reproduction, offspring, malformation, and other adverse effects suggest that a chronic generational exposure can be harmful to *D. magna*.

Keywords: Preservatives, *Daphnia magna*, Embryo toxicity, Teratogenics



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Acute and Chronic Toxicity of Low Level Anticancer Drug Exposures in *Daphnia magna*

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Abstract

Background/Objectives: The use of anticancer drugs in chemotherapy is increasing, leading to growing environmental concentrations of capecitabine (CAP) and imatinib mesylate (IMA) in aquatic systems. In this study, the potential impact of anticancer drugs on aquatic environment was investigated.

Methods: The effects of capecitabine and imatinib mesylate on heart, growth, reproduction, and embryonic development of laboratory batches of *D. magna* were examined. Immobilization test and embryonic development assay procedures were utilized to evaluate the toxicity of capecitabine and imatinib mesylate to *D. magna* according to US EPA procedure. The 48h-EC₅₀ values and 95% confidence limits were calculated by Probit analysis, based on nominal concentrations.

Results: The present study clearly demonstrated that capecitabine and imatinib mesylate may cause both slight of acute toxic and cardiac effects in neonates and adult of *D. magna*, respectively. Long-term exposure of *D. magna* to these two anticancer drugs leads to delayed maternal have first embryo days, maternal hatched eggs numbers, offspring sex ratio, offspring I hatched eggs number, living generations, and survival rate.

Conclusions: *Daphnia* neonates were markedly more sensitive to capecitabine and imatinib mesylate than adults were. In addition, both capecitabine and imatinib mesylate are slight effect on heart rate, reproduction, offspring, malformation, and survival. Suggest that a chronic generational exposure may slight harm to *D. magna*.

Keywords: Anticancer drugs, *D. magna*, Chronic toxicity, Teratogenics



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Blood Cholinesterase Activity and Associated Factors among Pesticide-exposed Vegetable Family Farmers in Sabah Malaysia

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Abstract

Background/Objectives: Chemical pesticide is commonly used among vegetable family farmers in Sabah. There is no system to monitor adverse health effects. This study is to determine the blood cholinesterase activity and associated factors among vegetable family farmers.

Methods: A cross sectional study has involved 163 farmers aged 18-60 years old. Validated questionnaire was used to assess the associated factors. Lovibond AF267 Cholinesterase Kit was used to determine the blood cholinesterase activity. Chi square test was used to determine the association between blood cholinesterase activity and socio demographic factors and work practices.

Results: 35 out of 163 farmers have low blood cholinesterase activity. There were significant associations between low blood cholinesterase activity with older age group ($p < 0.001$), lower educational level ($p < 0.05$), longer duration of pesticide exposure ($p < 0.05$), did not attend pesticide safety training, use single pesticide ($p < 0.05$), no specific storage place of pesticide ($p < 0.05$) and not wearing PPE ($p < 0.05$).

Conclusions: 23.3% of farmers have low blood cholinesterase activity which is associated with older age, lower educational level, prolonged exposure to pesticide, lack of training and unsafe work practices. There is a need to monitor blood cholinesterase activity and do training on safe and proper handling of pesticide to protect the health of the farmers and their families.

Keywords: Pesticide, Organophosphates, Cholinesterase, Farmers



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Kinetic Parameters Estimation of Dermal Absorption in Different Characteristic Chemicals by In-vitro Skin Sequential Exposure Model

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Abstract

Background: Skin is one of the important ways of exposed route of chemicals into the human body. Definition of sequential exposure is different chemicals exposure in a sequential manner at different times. Previous researches show lipophilic substances are more easily absorbed by the skin compared with hydrophilic substances under a single exposure situation, but in case of sequential exposure, chemicals of different characteristics may affect skin absorption and the parameters of skin absorption kinetics.

Objectives: The objective of the study is to evaluate the kinetics parameters of skin penetration and absorption chemicals with different characteristics by the sequential exposure model.

Methods: We studied the effect of two lipophilic (Linalool, salicylic acid) and one hydrophilic chemicals (caffeine) in a flow through in vitro porcine skin diffusion system. The pre-exposure time was 2 and 18 hours, respectively. Total sample collection time was 24 hours. All samples were analyzed by high performance liquid chromatography-ultraviolet detector, HPLC-UV.

Results: In linalool pre-exposure of 2 hours, the mean of flux was $31.51 \pm 11.43 \mu\text{g}/\text{cm}^2/\text{h}$ and permeability coefficient was $0.0151 \pm 0.0087 \text{ cm}/\text{h}$ in salicylic acid. The mean of flux was $757.81 \pm 174.56 \mu\text{g}/\text{cm}^2/\text{h}$ and permeability coefficient was $0.022 \pm 0.00036 \text{ cm}/\text{h}$ in caffeine. In linalool pre-exposure of 18 hours, the mean of flux was $25.02 \pm 13.58 \mu\text{g}/\text{cm}^2/\text{h}$ and permeability coefficient was $0.0201 \pm 0.0000 \text{ cm}/\text{h}$ in salicylic acid. The mean of flux was $406.98 \pm 97.41 \mu\text{g}/\text{cm}^2/\text{h}$ and permeability coefficient was $0.0309 \pm 0.00132 \text{ cm}/\text{h}$ in caffeine.

Conclusions: After 2 hours and 18 hours of pre-exposure to linalool, the absorption of caffeine was higher than that of salicylic acid. It is speculated that the pre-exposed exposure of lipophilic substances may cause the absorption of hydrophilic substances to be higher than that of lipophilic substances. The mechanism of skin absorption status of aforementioned phenomenon should be further studied and discussed in the future.

Keywords: Skin absorption, Skin penetration, Sequential exposure, Chemicals



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Behaviors Using Pesticides of Rice Farmer in Nakhon Ratchasima Province, Thailand

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Abstract

Background/Objectives: This study aims 1) to examine knowledge of pesticide use of farmers in Nakhon Ratchasima province, Thailand 2) to examine attitude of pesticide use of the studied farmers, 3) to examine health behaviors of the studied farmers, and 4) to study relationship between the knowledge, attitude and the health behaviors of the studied farmers.

Methods: The data were collected by questionnaires of 301 sampled farmers. Descriptive statistics were analyzed with frequency distribution, percentage, arithmetic mean and standard deviation and the Chi-square test at confident interval level of 95%.

Results: The results indicated that the majority of farmers were male (57.81%), their aged between 50 - 59 years (34.55%), married (88.37 %), graduated in primary school (71.43%). Their average experience in rice-farming was more than 20 years (74.09%). Most of farmers used pesticidel for rice-cultivating 89.04% and the most of chemical were chemical fertirizer 99.25% and herbicide 75.75%. Results found the farmers, after using pesticide, got symptoms 12.31% such as dizziness, headache and nausea. The majority of farmer had receiving the GAP standard training (51.16%), receiving the using of pesticides safety information (90.30%). Most of farmer had blood tests 63.79% and level of toxins in their blood, about 16.67% of the samples were in risk group and about 4.96 % were in unsafe group. There was a good level of knowledge for 99.00%, good attitudes for 96.35% and good health behaviors for 98.01%.

Conclusions: In addition, knowledge and attitude were related with health behaviors among farmers at statistically significant level of 0.05

Keywords: Knowledge, Farmer, Pesticide behaviors



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Parasite Evaluation in Vegetables Eaten Raw (Lalapan) Served in Indonesian Traditional Food Stalls (Warung Tenda) in Palu City, Indonesia, 2019

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Abstract

Background: Warung Tenda (Indonesian Traditional Food Stalls) is a typical street food widely spread in Indonesia and globally distributed with many forms of diversity. Warung Tenda serving raw vegetables with minimal food processing. Personal, handling and Warung Tenda's hygiene also determine the viability of parasites contamination.

Objectives: To evaluate parasite contamination in raw vegetables and hygiene aspects in Warung Tenda among Palu City, Indonesia.

Methods: Cross-sectional study was carried out among 86 participants in Palu City, Indonesia in March and April 2019. Warung Tenda's sampling was done by purposive sampling. 4 different vegetable species of Cabbage (*Brassica oleracea* var *capitata* L), Holy basil (*Ocimum sanctum* L), Cowpea (*Vigna sinensis* L), and Cucumber (*Cucumis sativus* L) was tested for parasites.

Results: The study found that *T.gondii* was the most prevalent parasite 15 (17.4%), followed *A.lumbricoides* 8 (9.3%), *Hookworm* 3 (3.5%), *T.trichiura* and *E.histolytica* 1 (1.2%). Parasite prevalence was higher in Holy Basil, Cabbage Cowpea, and Cucumber (17.4%; 9.5%; 3.36%; 3.36% respectively). Personal hygiene mostly with medium quality compared with good and lack (55.8% vs 20.9%). Handling hygiene was higher in medium quality, good, and lack (55.8%; 29.1%; 15.1%). Warung tenda's hygiene most prevalent with good quality, moderate and lack (69.8%; 27.9%; 2.3%).

Conclusions: Non-GI parasites were more prevalent than GI parasites. Even though mostly Warung Tenda in Palu had a good quality for place setting; Sold raw vegetables still need improvement in handling processing and handler hygiene to eliminate parasite existence.



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The Formation, Release, and Health Impacts of Dioxins and Furans from the Cement Manufacturing: A Review

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Abstract

Background/Objectives: Dioxins and furans are persistent organic pollutants which are difficult to decompose in the environment with the half-life that can reach months to years. Cement plants are a source of harmful pollutants in the air, including polychlorinated dibenzo-p-dioxins and polychlorinated dibenzofurans (PCDD/Fs). PCDD/Fs can result from a combination of formation mechanisms, depending on a kiln process configuration, process and combustion conditions, feed characteristics, and type and operation of the air pollution control devices (APCD).

Methods: The present review discusses the current views on the formation mechanisms of PCDD/Fs in the cement kilns and their health effects, and later it discusses about an effective method to reduce the formation of PCDD/Fs. The process of identifying and appraising all published reviews allows researchers to describe the quality of this evidence base, summarize and compare the review's conclusions and discuss the strength of these conclusions.

Results: The majority of findings agreed that exposure of dioxins and furans to humans occur through food, especially meat and dairy products, fish, and shellfish. The previous findings revealed the significance of the increasing risk of cancer with a positive dose-response relationship. Exposure to dioxins via the ingestion route also related to the changes in the immune system, glucose metabolism, incidence of chloracne and affects the enzyme level of the liver.

Conclusions: The findings of these articles will help the decision-making process of the stakeholders in setting up a better and innovative research in addressing the problem.

Keywords: PCDD/Fs, Cement kilns, Sources, Persistent organic pollutants (POPs)



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Leptospirosis among Urban Service Workers in Sabah, Malaysia Borneo 2017

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Abstract

Background/Objectives: Urban service workers are likely to contract leptospirosis due to job descriptions that deals with water supply, drains and drainage, sewers, garbage collection, and road sweeping. The incidence is still underestimated and probably due to misdiagnosis and lack of surveillance data. To determine the prevalence and risk factors of positive leptospirae among the urban service workers.

Methods: A cross sectional study among 133 workers in Kota Kinabalu City Sabah from Feb-Mar 2017. Data on personal information, occupational exposures and environmental factors was carried out using modified validated questionnaires. Microscopic agglutination test (MAT) and Polymerase Chain Reaction (PCR) were used to determine the prevalence of positive leptospirae.

Results: The mean age of respondents was 43.7 (SD 9.6) and 75.2% were male. The overall positive leptospirae was 27.8% [95%CI: 20.6 - 36.4] with mean duration of employment of 15.4 (SD 11.4) years. Urban sweeper and garbage collector contributes the highest proportion among the positive leptospirae respondents with 40.5% and 24.3% respectively. Workers whose age less than 50 years old OR 0.46, [95%CI: 0.21 – 0.99] and had working less than 15 years OR 0.33 [95%CI: 0.15 – 0.72] had protective effect towards positive leptospirae.

Conclusions: High positive leptospirae infection prevalence among healthy urban service workers is likely from their risky working activities. There were no association between environmental factors with positive leptospirae. Periodic medical examination and occupational health measures needed to protect from developing advance leptospirosis disease.

Keywords: Leptospirosis, Workers, Occupational determinants



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Residential Radon and Histological Types of Lung Cancer: A Meta-Analysis of Case-control Studies

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Abstract

Background/Objectives: Although radon has been identified as the second leading cause of lung cancer, the strength of association with different histologic types is not well understood. The aim of this meta-analysis was to assess the effect of residential radon on the risk of lung cancer and histologic types.

Methods: We searched the Cochrane Library, Embase, PubMed, Web of Science, and Chinese National Knowledge Infrastructure (CNKI) databases published up to Nov 13, 2018. The pooled odds ratio (OR) and 95% confidence intervals (CI) were calculated using fixed and random effect models. Subgroup and dose-response analyses were also conducted. This study was registered with PROSPERO, number CRD42019127761.

Results: A total of 28 studies including 13748 lung cancer cases and 23112 controls were used for this meta-analysis. The pooled OR indicated that the highest residential radon exposure was significantly associated with an increased risk of lung cancer (OR = 1.48, 95% CI = 1.26-1.73). Furthermore, all histologic types of lung cancer were associated with residential radon. The association with small-cell lung carcinoma (OR = 2.03, 95% CI = 1.52-2.71) was strongest, followed by adenocarcinoma (OR = 1.58, 95% CI = 1.31-1.91), other histological types (OR = 1.54, 95% CI = 1.11-2.15) and squamous-cell carcinoma (OR = 1.43, 95% CI = 1.18-1.74). With increasing radon levels per 100 Bq/m³, the risk of lung cancer, small-cell lung carcinoma and adenocarcinoma increased by 11%, 19% and 13%, respectively.

Conclusions: This meta-analysis provides new evidence for a potential relationship between residential radon and all histologic types of lung cancer.

Keywords: Residential radon, Lung cancer, Histology, Meta-analysis, Case-control study



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Analysis on Relationship between Bacillus and Enterobacter Bacteria in Air and Hospital Acquired Infections Potential in Intensive Care Unit Rooms of Dr. Wahidin Sudirohusodo Hospital

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Abstract

Background/Objectives: Poor hospital building environment quality is due to presence of potential sources of airborne microbes and may lead to HAIs (Hospital Acquired Infections). The research aimed to find out the relationship between the Bacillus sp. and Enterobacter sp. bacterium in the air and HAIs incident potential.

Methods: This research was conducted in Dr. Wahidin Sudirohusodo hospital. This was an analytic observational research with the cross-sectional study design. Samples taken were human samples based on the criteria of the research as many as 61 patients, and the environmental samples were as many as 8 rooms. The data were analyzed using the Chi-square test.

Results: The research result indicates that the air quality related to the bacterium pollution in the air in intensive care unit room does not qualify. The result of the microorganism culture and identification is found the HAIs causing bacteria namely Bacillus sp. and Enterobacter sp. Based on the statistic test, the value of $p=0.014$ (95% confidence intervals) is obtained, so there is the relationship between Bacillus sp. and the hospital acquired infections incident potential. The Enterobacter sp. bacterium indicates the value of $p=0.437$ (95% confidence intervals), so there is not have the relationship between the Enterobacter sp. bacterium and the hospital acquired infections incident potential.

Conclusions: Aspects of hygiene and sanitation appeared to be important factor in maintaining low microbial load in the air and further research is needed related to fungi and viruses in the air because of the potential source of HAIs.

Keywords: Bacillus, Enterobacter, Hospital acquired infections, Intensive care unit



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The Impact of Air Pollution Control Measures for the Beijing Olympics in 2008 on Reducing Respiratory and Cardiovascular Disease

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Abstract

Background/Objectives: Regarding to improving air quality to hold a Green Olympics in 2008. The Beijing government achieved the fourteenth-stage Air Pollution Control Measures (APCM). The objective of this study was to investigate the extent of the implementation of the APCM for the 2008 Olympics on respiratory and cardiovascular disease.

Methods: First, we identified publications related to air pollution and Olympics. Second, we excluded duplicated publications and screened by titles and abstracts. Third, we excluded irrelevant publications. After that, we reviewed the full-text and qualified 12 publications as relevant to our study objective for systematic review. To our study objective, we included 8 publications, calculated and compared 24 kinds of respiratory and cardiovascular disease/indicator for the reduction rate during the APCM implementation.

Results: Previous study groups for indicators for respiratory and cardiovascular diseases were mainly focused on midlife and mature adulthood. Our finding showed the APCM resulted in the highest reduction rate in the daily number of outpatient asthma visits by approximately 40%–55% during the Olympics. As for cardiovascular-related indicators, the implementation of APCM had a stronger effect on the reduction in mortality rate in females and the elderly, followed by the number of emergency room visits (ERVs). However, the elderly have a higher reduction rate of cardiovascular ERVs than females. We also found the reduction rate of respiratory and cardiovascular disease/indicators were all back nearly to the pre-Olympic levels within one month.

Conclusions: When the 14th-stage APCM was implemented, the ambient air pollution reduced significantly, which is associated with the morbidity and mortality of respiratory and cardiovascular disease. Because of policy relaxing, the levels could not persistent after the Olympics and rebounded nearly to the levels in the pre - Olympic period. Therefore, we suggested that policy enforcement should be implemented persistently in order to decrease air pollution and increase long-term health benefits.

Keywords: Policy, Air pollution, Olympics



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Phthalate Dust and their Exposure from PVC Floor Material**Kamonwan Promtes^a, Bunyarit Panyapinyopol^a, Suphaphat Kwonpongsagoon^a, Toshio Kawai^b, Kazuhisa Miyashita^c, Shigeki Takemura^c, Orawan Kaewboonchoo^{d,*}**^a Department of Sanitary Engineering, Faculty of Public Health, Mahidol University, Bangkok, Thailand,^b Osaka Occupational Health Service Center, Japan Industrial Safety and Health Association, Osaka, Japan,^c Department of Hygiene, School of Medicine, Wakayama Medical University, Wakayama, Japan,^d Department of Public Health Nursing, Faculty of Public Health, Mahidol University, Bangkok, Thailand*Corresponding Author: orawan.kae@mahidol.ac.th**Abstract**

Background/Objectives: Phthalates are used as additive in polyvinyl chloride (PVC) plastic products and are applied in hundreds of products such as, food packaging, pharmaceuticals, home care products and personal care products. Phthalates are semi-volatile organic compound where as their structure resemble to human hormone, hence, their exposure may interrupt hormonal function and cause of disease or malfunction of reproductive system, developmental system and metabolic system, etc. The emission of phthalate due to they are not bound with other matrixes, so, they emit into ambient environment then caught and sediment with dust. This study aimed to investigate phthalates in house dust from 99 houses in Bangkok, Thailand which divided into multi-family apartments with PVC floor material (n: 34), multi-family apartments without PVC floor material (n: 55) and single-family houses without PVC floor material (n: 10). Moreover, resident exposure from phthalates via dust ingestion were calculated.

Methods: Phthalate dust were collected from floor by portable vacuum cleaner with paper filter bags and 10 phthalates (dimethylphthalate, diethylphthalate, dipropylphthalate, diisobutylphthalate, dibutylphthalate, dipentylphthalate, benzylbutylphthalate, dihexylphthalate, di-2-hexylphthalate and diisononylphthalate) were analyzed by gas chromatography with mass spectrometry.

Results: Median of each phthalates in house dust were as follows di-2-hexylphthalate (1,739.3 $\mu\text{g g}^{-1}$) was the most concentration of phthalates in house dust, diisononylphthalate (611.1 $\mu\text{g g}^{-1}$), dibutylphthalate (32.4 $\mu\text{g g}^{-1}$), diisobutylphthalate (17.3 $\mu\text{g g}^{-1}$), benzylbutylphthalate (8.5 $\mu\text{g g}^{-1}$), dimethylphthalate (1.6 $\mu\text{g g}^{-1}$), diethylphthalate (1.4 $\mu\text{g g}^{-1}$), dihexylphthalate (1.0 $\mu\text{g g}^{-1}$), dipentylphthalate (0.4 $\mu\text{g g}^{-1}$), dipropylphthalate (0.2 $\mu\text{g g}^{-1}$) respectively. Multi-family apartments with PVC floor material had significant high of total phthalates 5,886.1 $\mu\text{g g}^{-1}$ than those multi-family apartments without PVC floor material (2,253.1 $\mu\text{g g}^{-1}$) and single family houses without PVC floor material (1,702.8 $\mu\text{g g}^{-1}$). The median and 95th percentile of total phthalate exposure in multi-family apartments with PVC flooring in preschool children were 98,100 and 180,400 and adult were 5,100 and 9,380 ng kg^{-1} body weight day⁻¹ respectively.

Conclusions: PVC floor material was associated abundant phthalates in house dust. Importance thing to reduce the phthalate exposure was substitution PVC flooring by use free-phthalate flooring particularly home and other environments which close to preschool children.

Keywords: Phthalates, House dust, Polyvinyl chloride, Dust ingestion

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Haze Impacts on Health: Direct Medical Cost of Haze-related Respiratory Illnesses in Public Healthcare Facilities

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Abstract

Background/Objectives: Haze imposes a substantial disease burden on populations, especially those in the Southeast Asian region. This study aims to understand the haze impacts on health and to determine healthcare utilization and healthcare costs incurred by public healthcare providers.

Methods: A cross-sectional study was conducted using secondary data from 2012 to 2015 on air pollutants and ecological factors obtained from the Department of Environment and healthcare utilization data retrieved from the Ministry of Health Malaysia and the University Malaya Medical Centre. The calculation of costs associated with managing haze-related respiratory illnesses was based on the unit cost derived from other studies. This was used to compare the direct medical cost for treatment of haze-related respiratory illnesses during haze and non-haze episodes.

Results: The average numbers of inpatient and outpatient visits during haze episodes were 74 (± 62.1) and 320 (± 650.1), respectively, compared to 34 (± 16.5) and 146 (± 170.5), respectively, during non-haze episodes. The four-year cumulative direct medical cost differences between haze and non-haze episodes were RM 13.4 million for inpatient cases and RM1.4 million for outpatient cases.

Conclusions: The deterioration in air quality due to haze episodes creates a significant financial burden for the public healthcare system as the result of increased utilization. It is essential to ensure that adequate financial and human resources are available in the relevant healthcare facilities to minimize the health and financial impacts of haze.

Keywords: Haze, Healthcare utilization, Respiratory illnesses, Financial implications



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Photocatalytic oxidation process using synthesized TiO₂- in PLA/PBAT/PBS composite film for VOCs degradation

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Abstract

Biodegradable poly(lactic acid) (PLA), poly(butylene adipate-co-terephthalate) (PBAT) and poly(butylene succinate) (PBS), which are biodegradable aliphatic polyesters, which is stationary phase for composite films were coated with titanium dioxide (TiO₂) to evaluate the photocatalytic activity of biodegradable composite films for toluene removal. The compatibilized blend of PLA/PBAT at 45/55 ratio was obtained from BASF. The synthesized TiO₂ was prepared by sol-gel method between titanium isopropoxide with acetic acid. To form the anatase structure, it was calcined at 500°C. TiO₂ were added to PLA/PBAT/PBS blend at 0, 5 and 10% wt. The biodegradable composite films were fabricated via cast film technique to produce 50 μm films. Photocatalytic activity efficiency of TiO₂/ PLA/PBAT/PBS composite films was performed in an annular closed system under UVR. Since the amount of TiO₂ affected the efficiency of the photocatalytic activity, this work was mainly concentrated on the effort to embed the high amount of TiO₂ in the PLA/PBAT/PBS matrix. The developed photocatalyst was characterized by XRD, UV-Vis spectrophotometer and SEM. The SEM images revealed the high homogeneity of the deposition of TiO₂ on the PLA/PBAT/PBS matrix. The X-ray diffraction (XRD) ensures the deposition of TiO₂ as crystalline anatase phase. In addition, the photocatalytic results show that the VOCs as dichloromethane removal efficiencies increased when using the catalyst loading at 0%, 5%, and 10% (wt. cat./wt. film), respectively.

Keywords: VOCs, Photo catalytic oxidation, PLA/PBAT/PBS , Composite film, Biopolymer



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The Distribution and Determinant of Carpal Tunnel Syndrome on Bamboo Craftsmen in Dlingo District Bantul Regency Indonesia

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Abstract

Background/Objectives: Repetitive Strain Injury (RSI) is the most burdening problem among workers particularly bamboo craftsmen. One of disease that related RSI is carpal tunnel syndrome (CTS). Several risk factors had identified to reduce morbidity among workers. Objective this study is to identify distribution and determinant CTS on woven bamboo craftsmen in Dlingo district Bantul Regency Indonesia.

Methods: A cross-sectional study was performed as a statistic method with accidental sampling to collect respondents. Phalen test is used to diagnosis CTS. The bivariate analysis used Chi-square meanwhile logistic regression for multivariate analysis.

Results: The Distribution of CTS from 129 sample found, women 50 people (38,8%), length of work > 1 years 72 people (55,8%), ages > 35 years 70 people (54,3%) and duration of work > 6 hours 64 people (49,6%). According logistic regression obtained factors that caused CTS were woman (OR: 2,780, 95% CI 1,243-6,219) and length of work > 1 years (OR: 4,879, 95% CI 1,618-14,714). Duration of work and ages > 35 years did not cause CTS on woven bamboo craftsmen in Dlingo district, Bantul regency.

Conclusions: Women and length of work statistically correlated with CTS on woven bamboo craftsmen in Dlingo district Bantul regency. This research suggested a preventive program to reduce prevalence CTS on the risky groups.

Keywords: Carpal tunnel syndrome, Woven bamboo craftsmen, Repetitive strain injury.

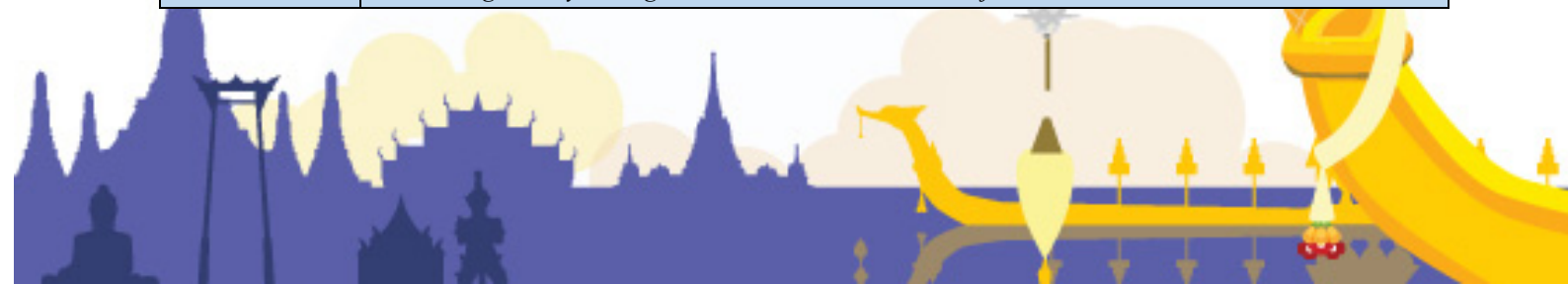


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The Implementation of Mental Health in Schools Policy/Programs: Perspectives of Social Determinant of Health

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Abstract

Background/Objectives: From 2014 until 2017, mental health in schools as a policy and program has been supported by legal aspect or laws. But During that time, DKI Jakarta as capital state and center of government still have students with mental health problems, particularly at public secondary schools than private schools. This paper aims to describe the implementation outcome of mental health in school programs and factors contributed by using SDH framework.

Methods: This paper described the driving forces behind the implementation of mental health in school programs to tackle the students with emotional mental health problems and support positive mental health by using qualitative descriptive method and study documents technique.

Results&Discussions: Socio-economic and political context serve as modifiers or buffers influencing the effects of inequality social class of students and schools on the mental health of students, then impact to inequality distributions of power and access to material resources in schools as well as the pattern of social class relations existing in schools society. This linkage is possible to address the effects of the structural determinants of mental health in school implementation inequities through purposive action on contextual features, particularly the policy dimension. The students and schools with low socioeconomic have risk living in less favorable material circumstance and risk the student drop out, repeated/suspended class and student violence. The unequal distribution of these intermediary factors constitutes the primary mechanism. The health system affected problems through priority programs, particularly mental health promotion and prevention through school-based, for example, the program budget, and collaboration with others sectors.

Conclusions: Finally, all factors of structural determinant and intermediary determinant give impact to the inequity of the implementation outcome of policy/programs mental health in school and impact to inequity students mental health.

Keywords: Implementation, Mental health in school, Policy/Programs, SDH



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Impact of Storage Conditions on the Quality of Medicines at Public Hospitals in Matara District, Sri Lanka

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Abstract

Background/Objectives: Factors including storage condition and mode of transport can be challenged to the quality of medicines. In Sri Lankan public hospitals due to not having air-conditioned stores medicines that should be stored under 25°C are exposing to high temperatures. This study aimed to investigate the impact of storage conditions of amoxicillin capsules and famotidine tablets in Sri Lankan public hospitals towards their stability.

Methods: Samples of amoxicillin BP 250mg capsules and famotidine USP 20mg tablets were collected from six public hospitals in Matara District. Identical stability samples were obtained from manufacturer as standards which were stored at temperature 30°C \pm 2, relative humidity 75% in the manufacturer's facility. According to BP/USP specifications samples were subjected to quality assurance tests including weight variation, disintegration, dissolution and assay. Friability and hardness tests were performed only for famotidine tablets. All the tests were conducted twice.

Results: Two hospitals had air-conditioned drug stores. All the samples and standards had a 100% compliance with BP/USP specifications. There was no significant difference between hospital and stability samples for each assay and disintegration results (independent t test, $p < 0.05$). Two hospitals showed significant difference in dissolution test results compared to stability samples but according to mean difference (MD) between hospital and stability sample, hospital sample had better dissolution profile compared to stability sample ($p = 0.010$, MD = 4.344, $p = 0.003$, MD = 3.594).

Conclusions: The results of this study indicate that quality of amoxicillin and famotidine medicines in the hospitals in Matara District were in line with the BP/USP specifications despite of resource limited storage condition specifically absence of air-conditioning in the tropical warm weather.

Keywords: Storage condition, Quality, Amoxicillin, Famotidine





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A Mathematical Model of Human Papillomavirus (HPV) in Taiwan and its Impact on Cervical Cancer

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Abstract

Background/Objectives: Cervical cancer was once one of the leading causes of death among women in Taiwan. However, since the introduction of the Papanicolaou test (Pap test) and prevention programs in 1995, screening rate increased from 35.3% to 82.1% between 1997 and 2017 in Taiwan. Moreover, incidence of cervical cancer in women above 30 y/o declined by 70.5% from 1996 to 2016. The main objective is to develop a mathematical model of HPV for women in Taiwan to obtain quantitative insights into current Taiwan prevention and mitigation against cervical cancer.

Methods: A compartmental model for HPV is developed that includes the choice individuals make once they become infected; on whether to receive treatment or not. Using this mathematical model we evaluate the impact of HPV on a population and determine whether treatment could contribute to decreasing the rate at which women in Taiwan become infected.

Results: The basic reproduction number, R_0 , is defined as the expected number of secondary cases produced by a single infection in a completely susceptible population. We compute the R_0 to be 0.88.

Conclusions: We find the current reproduction number of HPV is less than one, thus affirming the decreasing trend of HPV in Taiwan. More importantly, adopting a HPV vaccination policy and promotion of cancer screening is needed to further lower R_0 and the number of HPV infections.

Keywords: Cervical cancer, Mathematical model, Human papillomavirus (HPV)



Zone 8: Health for All and Health in All Policies

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The Comprehensive Impact of the Reform of Medical Insurance Payment Mode on Public Hospitals in China and its Countermeasures-Text Analysis Based on Health Information

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Abstract

Background/Objectives: To analyze the related articles on the impact of health insurance payment reform on public hospitals in the largest health policy information platform in China, summarize the views of various parties, and understand its impact on public hospitals and the countermeasures taken by public hospitals.

Methods: Payment and hospital were searched in health information database, articles were obtained by crawler technology, and relevant information was analyzed by text analysis method.

Results: The impact can be divided into three aspects: cost control, quality improvement and value guidance; and hospital response measures can be divided into three levels: concept, system and behavior.

Conclusions: The reform of payment mode will bring pressure to the hospital's economic operation in the short term and help to enhance its capacity building in the long term.

Keywords: Payment method, Public hospitals, Text analysis method





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Development of China's Medical Security System in the Ten Years of New Healthcare Reform: Ideas, Experiences and Prospects

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Abstract

Background/Objectives: To understand the development of China's health insurance system since the new healthcare reform in 2009, and to predict the key work direction of health insurance system construction in next stage.

Methods: Text analysis and descriptive statistics were used to analyze systematically the policy documents and related data of medical security system reform since the new healthcare reform in China through Nvivo 11 and SPSS 21.0 software.

Results: China's medical insurance has basically achieved the goal of universal coverage, but the development of medical assistance and commercial health insurance is still lagging behind. **Conclusions:** China has established a multi-level medical security system with basic medical security as the main body and other forms of insurance as the supplement, but it still relies heavily on the basic medical insurance system to provide security. There are problems such as unbalanced development, single security model and overlapping repetition at all levels.

Keywords: New healthcare reform, Medical security, Multi-level



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**A Study of the Consolidation of Childcare Facilities in The Depopulated Area
-A Case of Nikko City, Tochigi Prefecture, Japan-**

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Abstract

Background/Objectives: Currently, Japan is faced with a declining population, and along with that, the number of various public facilities will decrease. Particularly, in provincial areas where the population is small, the declining birthrate are remarkable. If public childcare facilities were unified according to the rate of population decline, the facilities would disappear and the area would become that where it is not possible to raise children. In this research, therefore, we decide how to leave these childcare services and facilities.

Methods: The target area of this research is Nikko City, Tochigi Prefecture, Japan. Nikko is composed of 5 area including 2 depopulated areas; Kuriyama and Ashio, and the third largest city in Japan but the declining birthrate is progressing. Because each central area of 5 areas are far away, minimum childcare services need to be left in each area even if the population is shrinking.

Results: In depopulated areas, elementary schools, nursery schools, and administrative facilities are gradually being consolidated in one place. The childcare facilities have been abandoned in order from the oldest, and the capacity has been decreasing according to decrement of children. In Imaichi area, there are 4 public nurseries and 40 years have passed since they had been built.

Conclusions: In the area where people still relatively remain such as Imaichi, it is effective to consolidate various type of childcare facilities (public/private, nursery / kindergartens) and build some new nursery schools to maintain its certain capacity, based on the lifetime of existing facilities. Meanwhile, in other areas where the childcare needs are extremely small, there is a few consolidated childcare facilities. So, it is necessary to provide non-facilities services (ex. Babysitters) that individuals can use in order not to narrow the selection range of childcare services.

Keywords: Childcare nursery, Consolidation, Japan



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Establishment of Health Management System in Screening and Managing Children Development in New Taipei City

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Abstract

Background/Objectives: The screening and assessment of children development have been focused on early detection and diagnosis while it was difficult to perform the follow-up activities. Therefore, a health management system including children 0-6 years old was established to smoothly tie to social welfare resources and special education system in order to effectively integrate inter-agency case management.

Methods: Subjects: children 0-6 years old. Diagnosis: developmental delay. Intervention: Through *New Taipei City Developmental Checklist for Preschoolers*, children with suspected developmental delay would be referred to hospital for further evaluation. Statistics: Descriptive statistics in number of children who received the assessment with negative and positive results as well as the average waiting period to reach the conclusion. Inferential statistics focused on hit and miss rate.

Results: From 2015 the system was established to 2018, the screening rate of children was 80%. Among 194,145 children who received the screening, 4,964 showed positive results, 2.6% of abnormal rate. Among the children who showed positive results, 96% of them was diagnosed with developmental delay after further evaluation who reached 99.5% in later follow-ups. The average waiting time to reach the definite conclusion was 27.7 days.

Conclusions: The results showed the management system can effectively screen abnormality of children development with low false positive rate. *New Taipei City Developmental Checklist for Preschoolers* can screen abnormality of children development especially around 4 years old. It can facilitate early detection and diagnosis in kindergarten-age children to benefit from social welfare and special education system earlier.

Keywords: Children developmental delay, Assessment and evaluation, Health management system, Case management



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Clinical Pathway as a Quality and Cost Control Tool

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Abstract

Background/Objectives The system of quality control of health services to date has not been clearly defined and detailed in the rules of health insurance. In general, various regulations have explained quality control which consists of health facilities (inputs), ensuring that the health service process runs according to established standards (processes) based on clinical guidelines, but the implementation has not gone well. Objective: This study reviews the implementation of clinical pathways as a means of control and costs in hospitals.

Methods: This literature review conducted through searching scientific publication articles using several databases including Pubmed, cochrane, and Google scholarly. The search keywords are "clinical pathway management, hospital cost, long stay, and quality improvement". There were 326 articles were obtained, after being filtered based on the year of publication (2015-2018), the language (English) obtained 13 articles (pubmed), 11 articles (Cochrane), 4 articles (Google Scholarly).

Result: One model of clinical guidelines in hospitals is the clinical pathway (CP) which is the optimal treatment process, sequence and timing of interventions by doctors, nurses and other health care professionals for certain diagnoses or procedures as an effort to improve the quality of health services. The application of CP can reduce the length of treatment (LOS), inpatient medical costs and improve the quality of health services. Compliance with the application of CP that is widely and strictly followed will improve overall hospital medical care. It shows that CP has the potential to reduce unnecessary variations in services so as to improve clinical outcomes and also reduce the use of resources (finance).

Conclusions: CP is an effective quality control and cost control tool in hospitals.

Keywords: Clinical pathway, Quality, Cost



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Variance Analysis of Financial Structures Indicators of Tertiary Hospitals in Taiwan

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Abstract

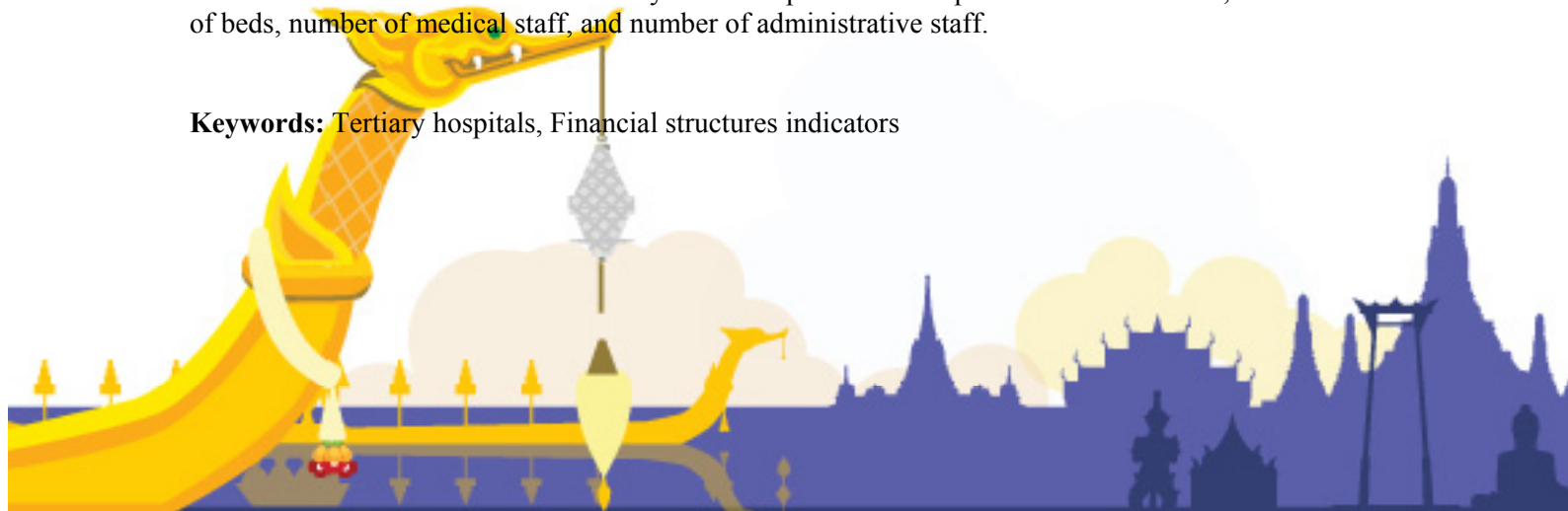
Background/Objectives: In Taiwan, public or private medical institutions are often regarded as non-profit organizations (NPO). A NPO's financial structure is an important basis for assessing its operating performance. Since 2005, the Ministry of Health and Welfare (MOHW) of Taiwan has declared and ordered hospitals to publicly disclose their financial statements achieve financial transparency. This study aimed to investigate the differences between the financial structures of tertiary hospitals.

Methods: In this study, the open data from the website of the MOHW were used in indicator analysis. The Kruskal-Wallis test, a nonparametric statistical method, was adopted to perform an analysis of 16 tertiary hospitals that fall under the jurisdiction of six different local governmental insurance departments in Taiwan. The hospitals, which had different ownership structures, were sorted and calculations were performed to check for statistically significant differences (in terms of the financial structures indicators) across hospitals that had different ownership structures and fell under different regional jurisdictions.

Results: The results revealed statistically significant differences ($P < 0.05$) with respect to the debt ratio, debt-to-net value, and operating profit ratio of hospitals with different ownership structures. However, there were no statistically significant differences among hospitals that fell under the jurisdictions of different regional National Health Insurance (NHI) branches. Even though statistically significant differences were not observed in the results, the non-NHI-reimbursed pay (patients' self-pay) revenue ratios were observed to be higher in foundation-funded hospitals than hospitals with other ownership structures. Furthermore, the self-pay revenue ratios of foundation-funded hospitals and hospitals with other ownership structures were found to be 22.9% and 20.6%.

Conclusions: In Taiwan, differences in operating performance exist among hospitals with different ownership structures. Self-pay treatment revenue was higher in foundation-funded hospitals, which could be due to the various debt types and specific regulatory guidelines, while non-foundation-funded hospitals (government/national university hospitals) have an allocated government budget and, thus, tend to have less debt concept. It is suggested that the scope of research in subsequent studies can be broadened to include indicators that may affect hospital financial performance indicators, such as number of beds, number of medical staff, and number of administrative staff.

Keywords: Tertiary hospitals, Financial structures indicators



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Perceived Feasibility and Potential Impacts of the WHO “Best Buys” Alcohol Harms Reduction Strategies among Alcohol Industry Stakeholders in Hong Kong

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Abstract

Background/Objectives: To counter the public health costs of excessive alcohol use, the WHO outlined a set of “Best Buys” alcohol harms reduction strategies, including increased taxation, alcohol availability restriction, and comprehensive advertisement bans. Hong Kong has adopted few alcohol control policies despite its increasing drinking prevalence and alcohol-related problems. Alcohol industry has been increasingly involved in the alcohol policy making process globally. Building upon a 2018 population-based survey that examines the public acceptability of the WHO “Best Buys” in Hong Kong, this study aims to obtain alcohol industry stakeholder’s view on feasibility and impacts of the publicly supported alcohol policies in Hong Kong.

Methods: Based on the results from a population-based survey, semi-structured interviews were conducted with 8 stakeholders from Hong Kong’s alcohol industry in early 2019. Interviewees included food and beverage workers and alcohol retailers. Given the five most publicly endorsed policies from the survey, qualitative content analysis was used to identify consensus on the most and least feasible policies and contextualized interpretations underneath such consensus.

Results: Among the most publicly endorsed policies, ID checks for alcohol purchases were perceived as the most feasible policies given its ease of implementation. Restriction on alcohol serving hours in bars was considered the least feasible, because it might induce public backlash, counterproductive effects, and harm local business and tourism. Interviewees differed in their opinions most on whether to introduce moderate (5-10%) beer and wine taxes. Apart from the given policies, education was constantly mentioned as an alternative strategy. Freedom of choice was foregrounded to oppose the policy options focusing on restricting sales.

Conclusions: ID checks for alcohol purchases should be strictly enforced to lessen alcohol harms among young drinkers. Alcohol availability restriction and taxation, which have been widely adopted in many other regions, may encounter barriers if implemented in Hong Kong, especially among alcohol industry workers. Future qualitative studies are needed to explore the views of consumers as well.

Keywords: Alcohol policy, Feasibility, Stakeholders, Qualitative research



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A Study on the Future Arrangement of Ophthalmology Facilities that Paid Attention to Population Change of Elderly People in Japan

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Abstract

Background/Objectives: In recent years under declining population in Japan, there is extreme population concentration in urban areas where population is slightly increasing, and remarkable population decline in rural areas. It is necessary to locate the medical facilities appropriately by capturing the detailed population transition of the area. In this study, we aim to measure the accessibility of medical care according to regional characteristics based on the population estimation results in a small area. In particular, we analyze ophthalmology as a medical treatment for increasing the number of elderly people.

Methods: The target was Japan's Kanto region. The Kanto region includes Tokyo, Kanagawa, Saitama, Chiba, Tochigi, Gunma and Ibaraki prefectures. As of March 2019, there are 295 municipalities and 67 medical planning areas in the target area. The current number of ophthalmology facility is 3,097 and its accessibility was measured. Future predictions were simulated up to 2050. To measure accessibility, we measure the physical distance from the residence to the ophthalmologic facility. We calculated the road distance from the center point of the 500m mesh (the assumed place of residence) to the ophthalmologic facilities. For all meshes in the target area (total number 74,508 meshes), the nearest ophthalmologic facility by road distance from the mesh was calculated. At this time, a set of meshes having the same facility closest to the same facility was used as a medical treatment area of that facility, and future changes in population within the medical treatment area were analyzed.

Results: Four patterns were extracted from the analysis of population transition and accessibility to ophthalmology. They were also judged from the combination of urban and rural areas, and the increase and decrease of elderly people. Also, in the medical planning area, areas where ophthalmology facilities will disappear and areas that increase are observed.

Conclusions: From detailed population estimation for each small area, it is necessary to consider how to arrange facilities in the medical planning area. Although the overall population declines, there are areas where the population grows locally, focusing on the elderly population. In such areas, new medical facilities need to be established.

Keywords: Ophthalmology, Elderly people, Population



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Developing a Maternal and Child Health Handbook that Addresses a Country'S Health Challenges: Framework of Editing Procedure under International Collaboration

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Abstract

Background/Objectives: Maternal, newborn, and child health remains one of the primary public health challenges in the world. The improvement in their health and quality of life has been stagnated in many countries, including countries with relatively well-developed health systems. To overcome such stagnation, maternal and child health handbook has been developed and used in approximately 40 countries in the world. This study proposes a framework of editing procedure of maternal and child health handbook under the international collaboration.

Methods: This study conducted 1) the literature review related to the programs or projects of editing maternal and child health handbook and related home-based record and 2) the formulation of a framework on the editing procedure based on the literature review. Since organizations from Japan had extensive experiences in international collaborations in this area, literature review included materials in English and Japanese. This study also introduced the ongoing editing procedure in Russia.

Results: From the literature review, health administrators should consider various contexts, including a country's health systems, disease burden, and social and cultural contexts regarding pregnancy and childbirth. International collaboration was potentially effective in elaborating a handbook based on previous experiences in other countries and a country's specific context. Key success factors included involvement by users and providers, collaboration between health promotion experts and health service providers, pre-testing in the field, and integration of disseminating handbooks into routine pregnancy care provision. Consequently, the framework included the following components: 1) identifying stakeholders, 2) examining health systems and disease burden, 3) developing a prototype, 4) holding consultation among stakeholders, 5) conducting a pilot implementation, 6) disseminating a handbook, and 7) conducting an impact evaluation. In Russia, such a framework contributed to sharing a common understanding about the procedure among various stakeholders.

Conclusions: No universally applicable maternal and child health handbook exists. Maternal and child health handbook should be tailored by reflecting a country's health, social, and cultural contexts so that the handbook is accepted and adopted by users and health providers.

Keywords: Maternal, newborn, and child health; Home-based record; Maternal and child health handbook; Health service provision; Health promotion



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The Optimum Location of District Hubs Providing Public Services

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Abstract

Background/Objectives: In provincial cities of Japan that have formed an urban structure dependent on automobile traffics, the difficulty in sustainable accessibility to urban functions is unavoidable with the declining population and aging society. As a solution to such a situation, there has been an effort to promote the formation of an urban structure by combination of hubs and public transport's axes though implementing a compact city policy. The operation of city/district hubs is units of several public services such as medical services, welfare services, shopping for daily necessities. However, it lacks the objective and quantitative basis of accessibility to a city/district hub in current location plans of many city. The purpose of this study is to reveal the optimum location of district hubs in the target city.

Methods: The research target city designated one city hub and 16 district hubs, and the public transport between the hubs in March 2017. In addition, there has been the effort to promote the residential induction in the areas around them. This poster focused on the association between population dynamics and behavior of cities in houses and other buildings, so as to improve the efficiency of the policy. Therefore, this poster used the registration information as an evidence to describe the actual condition of buildings that were constructed in the past. Next, the suitable candidate points of district hubs were identified. Finally, the optimum location of district hubs was calculated by mathematical programming.

Results: We grasped the relationship between the spatial distribution of urban facilities and that of residential areas, the area where rapid population decline is expected due to the old building accumulation. Based on the results, the optimum location of district hubs was revealed.

Conclusions: The optimum location of district hubs was demonstrated in a quantitative way. For the formation of sustainable system of public services in the future, utilization of the analysis results such as for development induction and regulations is expected.

Keywords: Living environment, Public services, District center, Public transportation



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On The Promotion of Long-term Care Insurance for Elderly Care in China

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Abstract

Background/Objectives: By 2050, the aging rate (ratio of population ≥ 65 years) in China is expected to reach 34.9%. To help manage this situation, long-term care insurance is being developed. By contrast, in Japan, the government developed a public long-term care insurance system to prepare for the rapidly aging population in 2000. The present study aims to clarify the disincentives of structuring long-term care insurance in China and to gain a better understanding of elderly care topics through a comparison with Japan.

Methods: A search of the China National Knowledge Infrastructure database was conducted in July 2018 with a focus on “long-term care insurance” and “China” to identify studies on the situation after implementing a long-term care insurance system.

Results: Overall, 15 articles published from 2008 to 2017 were selected. Four difficulties regarding long-term care insurance in China were found: 1) five articles reported that the social security system, financial revenue, and expenditures in China are currently unstable; 2) two articles reported large regional disparities in the aging rate; 3) two articles reported regional disparities in the advent of the aging society between the economically developed eastern and the underdeveloped central and western regions; and 4) six articles reported that medical services in China are limited to public need, and the service quantity, quality, and attitudes cannot compare with Japan and other developed countries.

Conclusions: Due to China’s vast territory, regional disparities in the aging rate, wealth gap, and medical level may influence the elderly care system. However, Japan, which has already established a long-term care insurance system, also faces problems in terms of regional disparities in care service. Urban and rural areas in Japan face problems similar to those in China. Enhancing the abilities of and cultivating talent for service providers could enrich community care services in both China and Japan.

Keywords: Long-term care insurance, China, Japan





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Gender and Eye Health Disparity

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Abstract

Background/Objectives: Gender inequality weakens females' eye health through many direct and indirect pathways. United Nations Development Program has developed a Gender Inequality Index to measure the multidimensional nature of gender inequality. The goal of this presentation is to investigate the association between eye health disparity between genders and described inequality measure.

Methods: An ecological study was employed to investigate the association between eye health disparity by gender and Gender Inequality Indices across 181 countries in the world. The difference of the burden (DALYs per 100,000 population) due to all eye diseases/conditions between females and males was estimated by using the data from the global burden of disease study2015. Considering economic status as a potential confounder, all countries were divided into 4 groups (high, upper-middle, lower-middle, and low) by the World Bank income classification. Multivariate regression analysis was employed to know the relationship among these variables.

Results: Females had a greater visual impairment burden for 177 countries. In multivariate model, a Gender Inequality Index was positively associated with the eye health disparity between females and males ($\beta = 199.6$; 95% CI 39.9 -359.3), however economic status was not associated with described difference.

Conclusions: Our results suggest that the initiatives to curtail eye health disparity by gender should extend beyond economic interventions and should prioritize women's rights and empowerment.

Keywords: Eye health, Gender inequality index



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Research on Available Range of after School Day Service in Tochigi Prefecture

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Abstract

Background/Objectives: In recent years in Japan, the number of disabled children has increased due to the development of medical technology. With that, various support facilities are increasing, the number of facilities of after school day service (ADS) has increased sharply in recent years. ADS is facilities for disabled children at after school. The purpose of this study is to grasp the installation situation of ADS facility, then to grasp whether ADS is available in any region.

Methods: The target of this study is Tochigi prefecture which is provincial city. Postulated the life model (home → school → ADS → home) of elementary school student, junior high school student and high school student, and a period of time spent moving in a day was calculated. In addition, postulated the case of moving on foot and the case of moving by taking bus. It was grasped that whether the life model to be able formed by analyzing calculated time.

Results: In the case of moving by taking bus, almost elementary school student can use ADS. However, in the case of junior high school student and high school student, some area was not contained by available range. In the case of moving on foot, high school student only who live in high population area can use ADS. Elementary school student and junior high school student who live in some high population area can use ADS. However, there are many area where ADS cannot be used.

Conclusions: Grasped installation situation and revealed that available range of ADS.

Keywords: Disabled children, After school day service, Installation situation



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The Policy of Baby Friendly Hospital Initiative at Hospitals in 3 Provinces in Indonesia

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Abstract

Background/Objectives: Exclusive breastfeeding is associated with the greatest reduction in risk of infectious disease. In Indonesia, rates of morbidity and mortality from infectious disease are high, and although 96% of infants are breastfed, less than 40% are breastfed exclusively as recommended. The objective of this research is to have a picture how the policy situation and progress in Baby Friendly Hospital Initiative including exclusive breastfeeding.

Methods: A qualitative team from Indonesia were doing depth-interview to the national and local stakeholder including public health officials, hospital administrators, and health care professionals regarding policy of BFHI in Indonesian hospitals. The total of key informants were about 33 persons from national and local stakeholder (three unit of MoH representatives; 1 Family health unit, 1 Nutrition unit and 1 refer all services unit, 2 Provincial Health Office, 13 District Health Office and 18 Hospitals). The information were classified and analyzed to explore current policy situation, policy on formulation and policy recommendation regarding BFHI implementation.

Results and Discussions: Policy Identification and Policy Formulation. At national, there is Regulation no. 33 2012 for implementation to ensure that hospitals do 10 ten steps to breastfeeding. At province level: Local regulations have not yet existed (in the process), the operational guidelines and technical guidelines are not yet available. Policy Socialization. At the MoH, at every meetings with provincial leaders. Banten Health Office Meeting with all hospitals and clinics for BFHI, but not all hospitals joined. Adoption Policy. All provinces were following the national level regulation. No local regulation. SOP was at the Hospital. The PHO and DHO people do not know about the SOP for breastfeeding in hospitals. The MoH can only monitor programs in central hospitals. There was no special monitoring and evaluation to the hospital. Banten Health Office was conducted Monev only at the puskesmas, not yet at the clinic/hospital. Coordination among sector mostly just started.

Conclusions: The sub national refer to central regulation, however, the socialization to health facilities did not go down. Sub national and Private hospitals not monitored yet.

Keywords: Policy-baby, Friendly-hospital-Indonesia



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Maternal and Child Health Handbook as a Potential Plug to the Quality Gap in Myanmar

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Abstract

Background/Objectives: Access to maternal and newborn care has been improving in many countries. However, whether they receive quality care during the contact is unknown. Maternal and child health (MCH) Handbook potentially works as a tool to ensure that mothers and newborns receive quality care, according to our project experiences in Ghana, Myanmar, Nepal, and Russia. We assessed adequate contact of mothers and newborns with healthcare providers, and their reception of quality care during antenatal (ANC), peripartum (PPC), and postnatal care (PNC) in Myanmar, by comparing those received MCH Handbook or not.

Methods: We conducted a cross-sectional study in a predominantly rural and urban areas in March 2016, and interviewed 1,500 mothers in 1.5-12 months postpartum. We collected data on adequate contact and quality of care during ANC, PPC, and PNC. Using multilevel logistic regression analysis, we assessed the associations of possession of MCH Handbook with adequate contact and high-quality ANC, PPC, and PNC.

Results: The adequate contact rates were 60.9% for ANC, 61.3% for PPC, and 11.5% for PNC. However, the quality-adjusted contact rates were 14.6% for ANC, 15.2% for PPC, and 3.6% for PNC. Further analysis showed that mothers having received MCH Handbook were more likely to have adequate contact at ANC and PPC, and receive quality care during ANC, PPC, and PNC.

Conclusions: Mothers and their newborns did not necessarily receive quality care during the routine contacts. The universal coverage and effective use of MCH Handbook will be a key to filling the gap in Myanmar.

Keywords: Maternal, newborn, and child health; Continuum of care; Quality of care



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Measuring and Decomposing Changes in Income-related Health Inequality in Korea, 1998-2015

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Abstract

Background/Objectives: Previous studies suggested that individual's socioeconomic status and the respective social, economic and political contexts of a country are important determinants of health as both individual and country level factors influence on health. Korea has experienced a rapid social, economic and political changes since 1997 such as the 1997 Asian financial crisis and welfare regime changes. However, existing evidence on changes in health inequalities over the past 15 years is scarce.

Methods: Using a nationally representative survey data, Korea National Health and Nutrition Survey (KNHANES) 1998-2013, this study aims to analyze how income-related health inequalities changes in the contexts of social, economic and politics in Korea, and to identify factors contributing the observed income-related inequalities over the past 15 years. The Concentration Index (CI) and decomposition of the CI are used to measure health inequalities and assess contributors to the observed income-related health inequalities, respectively.

Results: The results show that the CIs in 1998 and 2015 are consistently a pro-poor pattern, suggesting worse self-rated health is more concentrated in the poorer. However, the age-sex adjusted CIs indicated that the magnitude of the CIs slightly increased over the same period. The decomposition results indicate lower income and lower educational attainment are the major contributors to worsen the inequalities over the past 15 years.

Conclusions: This study finds that income-related health inequalities in Korea has not decreased despite rapid economic and political changes, implying the need of active policy interventions to facilitate decreasing health inequalities.

Keywords: Inequality, SES, Korea, Concentration index, Self-rated health



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Do Thai Public Health Students Prefer to Work at Long-Term Care Facilities in Japan? A Result from a Labeled Discrete Choice Experiment

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Abstract

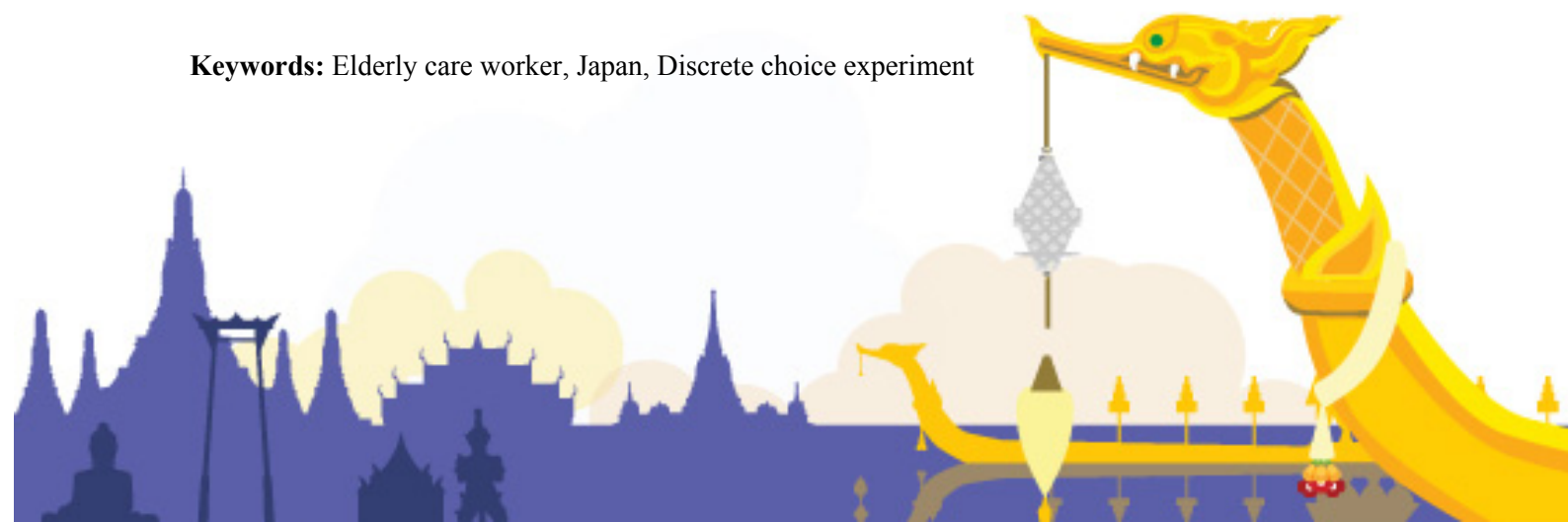
Background/Objectives: The Japanese Ministry of Health forecasted that the shortage in long term care (LTC) workers would exceed 340,000 in 2025. The Government of Japan is launching a new policy to accept more foreign workers from April 2019. Meanwhile, in Thailand, there is an issue of overproduction of public health graduates whose knowledge and skills may be suitable to provide LTC services. The finding of this study may be useful to formulate a policy of international migration and development of LTC workers for both countries.

Methods: We conducted a labeled discrete choice experiment with the 3rd year public health students at 16 colleges and universities in Thailand. They were asked to choose three alternative jobs after graduation: (1) public health worker in Thailand, (2) LTC worker in Japan, or (3) neither of them. Job (1) and (2) differed in four attributes: 1) monthly income, 2) type of employment (permanent vs. annual contract), 3) housing (own house vs. employers' house vs. a rental apartment), 4) training opportunities (supported by employer vs. self-supporting). The sample consists of 688 participants providing a total of 24,768 observations. Data were analyzed using a conditional logistic regression model.

Results: All attributes were significant in their decision to choose LTC worker in Japan. Compared with the current situations in Thailand where public health workers earn US\$600 monthly with annual contract, live in their own house, and their training is provided by employers, 50% of them prefer to work at LTC facilities in Japan if they can earn US\$2,200 monthly with annual contract, live in a rental apartment, and their training is supported by employers.

Conclusions: This study showed that public health students prefer to work at LTC facilities in Japan, but their preference largely varied depending on monthly income and type of employment. Such information would be useful when two governments formulate a policy of international labor migration for LTC workers.

Keywords: Elderly care worker, Japan, Discrete choice experiment



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Do Lower Medication Costs Increase the Incentive for Smokers' Quit Attempts after Relapse?

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Abstract

Background: Smokers usually experience relapses before quitting permanently. In 2012, Taiwan's government inaugurated the Second Generation Cessation Services Payment Scheme (SGCSPS), increasing smoking cessation medications subsidies.

Objectives: To examine SGCSPS's effect on the utilization of smoking cessation services among smokers who relapsed after their first quit attempt.

Methods: We identified 8,570 adult smokers who relapsed after their first quit attempt where they took smoking cessation medication during June 2009 to November 2014, 4,356 were before-SGCSPS and 4,214 were after-SGCSPS. Patients were classified into two medication groups: high-priced medication (varenicline) and low-priced medication (NRT or bupropion). Multivariate logistic regression models were used to examine the SGCSPS's effects on increasing the likelihood of second quit attempts during 1.5 years after relapse, and Cox proportional hazard models were used to examine the SGCSPS's effects on time to the second quit attempt after relapse. We also examined whether the policy effects differed across medication groups.

Results: After SGCSPS, 12.3% of the after-SGCSPS cases had their second quit attempts via medication, which was higher than the prevalence of the before-SGCSPS cases (9.6%). SGCSPS's implementation was positively associated with an increase in second quit attempts (AOR =1.27, 95% CI=1.08-1.49). The Cox proportional hazard model showed that the SGCSPS was positively associated with a shorter time period between quit attempts (AHR=1.42, 95% CI= 1.25-1.62). Both models showed insignificant interaction effects between SGCSPS and medication-priced groups.

Conclusions: The implementation of the Second Generation Smoking Cessation Services was effective in increasing second quit attempts among unsuccessful quitters.

Keywords: Quit attempts, Smoking cessation, Reimbursement of cessation services



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Towards Understanding Socioeconomic Inequalities in Unmet Health Care Needs in Korea

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Abstract

Background/Objectives: Timely access to health care is of great concern to the general public, who anticipate no barriers to essential health services regardless of individual's socioeconomic status. However, a growing body of literature highlights that individuals with lower socioeconomic status (SES), particularly lower income and educational levels, have more difficulties accessing basic health care services irrespective of health status. Despite the achievement of universal health coverage through the National Health Insurance (NHI) in Korea, an inverse relationship between SES and unmet health care need is reported. This study aimed to assess socioeconomic inequalities in unmet health care needs among Korean adults over the past 10 years, and to identify major contributors to the existing inequalities in unmet health care need.

Methods: To examine inequalities in unmet health care need, the Concentration Index (CI) was used. After the CI was calculated, a decomposition method was applied to identify major contributors of socio-demographic factors to the observed inequalities between 2005 and 2013-2015 using data from Korea National Health and Nutrition Examination Survey (KNHANES). For these analyses, the outcome variable was individual's self-reported experience of unmet health care need within the past 12 months. As a main indicator of SES, annual household income was used for the CI analyses. For the decomposition models, socio-demographic factors were selected based on Andersen's Health Behavior Model.

Results: The CIs for unmet health care needs consistently shows negative value, showing individuals with lower income tend to experience more unmet health care need, but the magnitude of the CIs has decreased from -0.236 in 2005 and -0.153 in 2013-2015 over the past 10 years. The decomposition of the CIs revealed lower income and educational level as major contributors to the existing inequalities in unmet need in Korea.

Conclusions: While the magnitude of the inequalities in unmet health care need has shrunk over the last decade, socioeconomic inequalities in unmet need under the current National Health Insurance system exist. A decrease in unmet need-related inequality can be a consequence of ongoing changes in services changes and user fees that ultimately reduce economic barriers to necessary health services. To alleviate the existing inequalities in unmet need in Korea, expanding services coverage and improving accessibility to essential care at the community level needs to be considered as policy options.

Keywords: Unmet need, Inequality, SES, Korea, Concentration Index



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Trend in Mortality of Viral Hepatitis Associated with Economic and Healthcare Policy Development in China: An Age-cohort-period Characteristic Analysis

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Abstract

Background/Objectives: This study aimed to distinguish the age, period, and cohort effects on the mortality of viral hepatitis in China using age-period-cohort method, as well as to explore the quantitative relationship between the economic development and viral hepatitis.

Methods: Viral hepatitis mortality rates (1991–2015) of urban and rural residents were derived from the *China Health Statistical Yearbook*. The trends were analyzed with age-period-cohort (APC) model and age-cohort-period characteristic (ACPC) model based on constrained regression method.

Results: Based on APC analysis, viral hepatitis mortality increased exponentially with age. The risk of death for both urban and rural residents first decreased and then increased with period. Overall, later birth cohorts experienced lower viral hepatitis mortality risk. ACPC model indicated that with the per capita disposable income increasing by 1.00%, the viral hepatitis mortality would increase by 0.337% for urban residents, but the mortality would decrease by 0.704% for rural residents. In addition, once the hepatitis b vaccine was included in the national immunization plan, the mortality from viral hepatitis of urban residents was reduced by 2.009%, while the risk for rural residents reduced by 8.622%.

Conclusions: The rise of period effects after 2005 hints the re-emergence of viral hepatitis mortality risk. There is a significant correlation between economic and viral hepatitis mortality. As economic increasing, China's public health is faced with new challenges and measures should be taken to control the viral hepatitis, such as attaching great importance to elderly, continuing to develop the rural economy.

Keywords: Viral hepatitis mortality, Economy, Healthcare policy, ACPC model, Urban-rural inequality



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**Continuity of Care in Maternal Comprehensive Health Services:
A Literature Review**

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Abstract

Background/Objectives: The continuity model of care is the interaction of antenatal care, labor, and puerperium. This is a shared responsibility between women (mother), family (husband) and midwives. Midwifery practices focus on women as partners who are holistic, including their physical, psychological, emotional, social, cultural, spiritual and reproductive health. The purpose of this study, exploring the core elements of Continuity of Care (CoC) antenatal, intranatal and postnatal is to get the benefits, coverage, and effectiveness of maternal health services on an ongoing basis.

Methods: The design of this study uses an electronic bibliographic database. Search was carried out systematically on PubMed, Proquest, and directives from 2009 to 2019. Selecting 761 qualitative and quantitative studies was identified by the keywords of continuity of pregnancy, delivery, after birth and maternity services, then synthesized as many as 30 selected articles according to the inclusion criteria. Articles divided into groups are analyzed inductively to findings.

Results: Continuity care midwives-led, obtained three aspects are benefits for midwives and students, coverages and effectiveness of CoC. Benefits to high satisfaction and professionalism in CoC midwives compared to midwives without CoC, although CoC midwives experience high caseload and burnout. Understanding the concept and the context of better CoC skills, high concern for mother's shown by clinical practice students is supported by learning methods and reliable mentoring. The coverage of ANC is at the highest percentage level compared to INC and PNC, a large dropout occurs between INCs to PNC, so that comprehensive figures are only shown at the 5% level. While the highest service effectiveness was obtained from home visit service satisfaction, maternal self-evaluation, and their high expectations.

Conclusions: Complete service coverage and providing benefits depend on supporting factors and constraints such as the characteristics of each mother, health systems and management, and the development of continuing professionalism. The authorities also need to establish policies and strengthen collaboration in other cross-professional practices.

Keywords: Continuity of care, Comprehensive, Maternal, Health services, Literature review



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Perceived Benefit, Perceived Barrier and Self-medication Practice among Rural People in Nepal

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Abstract

Background/Objectives: Inappropriate self-medication is one of the leading causes of growing antibiotic resistance in developing nations which poses a major public health threat worldwide. Hence the objective of the study was to assess perceived benefits, perceived barrier and its relationship on self-medication among rural people in Nepal.

Methods: This was a cross sectional study which was conducted in rural Rolpa Nepal. Total sample size was 720 randomly selected among 18 to 70 years by using the probability proportional to size for ward selection and then used the systematic random sampling for selection of household. Data collection was done by using structured questionnaire. Chi square and simple logistic regression was done to find the association between perceived benefit, perceived barrier and self-medication practice.

Results: 54.6% of rural people practiced regular self-medication in the last three. 63.7% of the respondents have low level of perceived benefits. Almost two-third (60.8%) of the respondents have low level of perceived barrier. There was statistically significant relationship between perceived benefit ($p < 0.001$), perceived barrier ($p < 0.042$) and self-medication practice. The use of self-medication by females is 2 times higher than male. Age with 30-49 have 4 times higher chance to use of self-medication compare with < 30 years ($p < 0.001$). People who have national health insurance have 2 times higher chance to use self-medication ($p < 0.001$).

Conclusion: To reduce the high regular self-medication practice require health promotional strategy for adult age female population. Awareness campaign in Hindu religion will help to reduce the high regular use of self-medication practice

Keywords: Self-medication, Perceived benefits, Perceived barrier, Rural Nepal



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The Religion Quality Improvement for Primary Health Care Character in South Sulawesi

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Abstract

Background/Objectives: Measurement of service quality with accreditation method is one of the tools to ensure the quality of service for community health center, but from several models of quality improvement it is considered to have weaknesses because no one pays attention to religion, so that the model is not properly used in Indonesia. The aims of this study was to analyze the effect of religious character on the continuous improvement of the quality of primary health services in South Sulawesi.

Methods: This research is a qualitative study with a case study approach. The data collection technique was carried out by *Focus Group Discussion (FGD)*. The informants in this study were 10 people consisting of surveyors, religious leaders, community health center heads, non-governmental organizations, lecturer and academics. Data analysis was done by *content analysis* method.

Results: The results of the study state that there were 10 religious characters that should be owned by health center officers, namely discipline, fair, honest, clean, trustworthy, good at communicating, patient, friendly, committed and wise.

Conclusions: It is recommended to community health center officers to apply this religious character so that service quality can be improved and sustainable.

Keywords: Service quality, Religious character, Community



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Satisfaction Evaluation of National Health Insurance Patient; Upgrade of Care Class at Lasinrang Pinrang General Hospital

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Abstract

Background/Objectives: Hospitals are expected to provide effective, efficient services and provide health information that is appropriate for the community, which is influenced by technological advances and the public socio-economic life. Efforts to improve the quality of hospital services continue to be improved to achieve patient satisfaction as one of the quality indicators, and expected to reduce the number of patient complaints. This study aims to determine the level patient satisfaction of National Health Insurance users who upgrade their care class at Lasinrang Pinrang General Hospital.

Methods: This study is a quantitative research with descriptive analytical approach conducted at Lasinrang Pinrang General Hospital in 2018 with a population of 22,254 patients.

Results: This study showed that out of 227 respondents, class improvement satisfaction in patients in class 3 users were 64.4% dissatisfied and 35.6% were satisfied. class 2 users were 58.1% dissatisfied and 41.9% were satisfied. class 1 users were 42.3% dissatisfied and 57.7% were satisfied.

Conclusions: Satisfaction of upgrade class in national health insurance patients at Lasinrang Pinrang General Hospital, especially Class 3 and Class 2, still needs to be improved. In general, the complaint is about costs to be paid by the patient, so it is recommended to conduct a socialization of the cost of upgrade the Class for participants of the National Health Insurance.

Keywords: Patient satisfaction, JKN-participants, Nursing classes



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Barriers for Underutilization of Maternal and Child Health Services in Indonesia: A Qualitative Perspective

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Abstract:

Background/Objectives: Maternal and neonatal mortality are the major global health problem among low and middle income countries including Indonesia. The target of Sustainable Development Goals (SDGs) goal three is to reduce maternal and neonatal mortality by 2030. The mortality related to underutilization of maternal and child health (MCH) services. This paper aimed to explore the barriers for underutilization of MCH services in Indonesia.

Methods: A qualitative data collection method was used with 12 head of communities, 12 head of MCH programs, and 24 mothers with babies under one year among three provincial income levels of Indonesia. The participants were selected using convenience sampling, and performed in depth interview. Then, thematic analysis was used for qualitative data analysis.

Results: Several consistent themes was found such as home delivery by traditional birth attendance (TBA), post-partum mothers may not going out from house within 42 days after delivery, lack of knowledge on minimum ante natal care (ANC) visits in each trimester, insufficiency of MCH services information, long distance from house to health facility, lack of public transportation, experiences being treated unequally by health care providers, and low ability to pay cost for MCH services, medicine, and transportation.

Conclusions: Minimize barriers for underutilization much needed by developing policies to improve knowledge of mothers in terms of minimum ANC visits in each trimester, institutional delivery, and post-partum visits. While trained the TBA, home visits and mobile health services are required to improve utilization of MCH services.

Keywords: Barriers, Underutilization, MCH services, Indonesia



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Does the Health Insurance Governance System Support Health Care Programs?

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Abstract

Background/Objectives: Good governance principles used to arrange management of the health insurance system in the NHI era. To ensure the sustainability of this program, an evaluation of the implementation policies of NHI is needed. The research aimed to measured implementation good governance of NHI in Makassar.

Methods: This was a qualitative research with phenomenology design study. The research was conducted in health care system in Makassar (Hospital, PHC, General Clinic and Public Health Office). This study collected data using in depth interview from each leader and manager.

Results: BPJS as the manager of health insurance is not effective in managing health services openly, efficiently and accountably in the ease of access to data that can be used in the preparation of health planning and budgeting programs.

In the context of regulatory quality variables, BPJS has not been maximized for all policies made, where coordination and collaboration functions have not been carried out properly.

The resulting policy will be difficult to implement because of the discrepancy between policies and local conditions so that implementation becomes not optimal in some policies made centralized

Conclusions: Policies relating to governance should be made transparently by involving local governments and communities to accommodate every need of each party to support health care programs for improve the quality of health services.

Keywords: Health insurance, Good governance



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A Long-term Care Policy and Smart Care Solution in Taiwan

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Abstract

Background/Objectives: Currently, Taiwan has officially entered the stage of an aged society. In 2019, 14.05 % of Taiwanese people aged over 65 years old. By 2026, Taiwan will become a super-aged society. According to aged society, long-term care for older adults has been a priority for the past decade in Taiwan. The primary challenge confronting the long-term care system is the lack of both family and paid caregivers and their lack of professional training. Currently, the primary policy is the Long-Term Care Program 2.0. The policy goal is older in place. While, Thailand will be an aged society in a few years coming.

Methods: This documentation review aims to compared the long-term care policy between Taiwan and Thailand and study the smart care solution for older care in Taiwan.

Results: Our finding shown that long-term care policy between Taiwan and Thailand quite similar. Currently, Taiwan was running the second long-term care plan (2017-2026) or “long-term care plan 2.0”. This plan targeted young adults with dementia and disability. They integrated the healthcare information between the city and country care management center. They paid professional care managers to assess needs of care, determine level of care, plan with multidisciplinary term and assess an outcome of caring. LTC 2.0 is increased 7 innovative and integrated services plan included community comprehensive care services system by integrate long-term services for support an older with disability within 30 minutes. Smart healthcare composed of stipendiary (caregiving management), Tashi-unitech (face recognition of older in health facility and their home), and AUO care (healthcare monitoring system in healthcare facility). Moreover, the further vital signs monitor has been mentioned. It consists of Comdek (non-invasive monitoring medical devices such as oxygen saturation), smart eCare (monitoring and patients information records in health facility), and Ching luan international (vital signs monitoring device for individual).

Conclusions: Modern technology will be the best solution for healthcare system in the 21th century or common era. Sharing patient’s data will improve the quality of life in older people and support healthcare professional provide a safety and good quality of care.

Keywords: Older, Healthcare policy, Long-term care, Healthcare innovation



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Electronic Media and Early Childhood Social Emotional Development

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Abstract

Background/Objectives: The way children live, learn and interact have changed over the years as childhood is progressively saturated by advancement of technology. From television to mobile devices, breakthroughs have been revolutionizing families. The American Academy of Paediatrics and World Health Organization call for limitation of screen time to not more than an hour in children between age of two to five and children below two-year old are urged not be exposed to any screen time at all. This study is aimed to investigate the association between screen time, parental media behaviour and home media environment with early childhood social emotional development.

Methods: This cross-sectional study would be conducted in government health clinics located at district of Gombak, Selangor. Data collection is through interviewer-assisted questionnaire administration among parents of children aged 18 and 36 months old. Child's screen time is calculated using the Global Time Estimate method; gathering information on average time spent for watching television, using computer, laptop, mobile devices or video consoles on a typical day. Parental media behaviour is assessed using "Parent Problematic Digital Technology Use" and "Media and Technology Usage and Attitudes Scale"; whereas home media environment is assessed using the "Technology Related Parenting Scale". Child social emotional development is measured using "Ages and Stages Questionnaires: Social-emotional", 2nd edition (ASQ:SE-2). The research is currently at the stage of pilot study. Multiple logistic regression method is planned for data analysis.

Results: Prevalence of excessive screen time among young children and factors associated with it can be identified through this study. Types of media content that toddlers are exposed to would also serve as a vital finding. The association between child screen time, parental media behaviour and home media environment with early childhood social emotional development can be ascertained.

Conclusions: This study would assist in understanding the influences of techno-subsystem on early childhood social emotional development. Findings of the study would pave the way to develop public policies that would help to create a safe media environment and enabling atmosphere for young children to grow up in.

Keywords: Electronic media, Early childhood development



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Pattern of Drug Management in Dental Patient Related - Adverse Drug Reaction

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Abstract

Background/Objectives: To explore the adverse drug reactions (ADRs) and pattern of drug management that used to treat the dental patient related - ADRs in a hospital of dentistry in Thailand.

Methods: This was a retrospective descriptive study. The data were collected from a review of patient's ADRs reports and analyzed with the aid of a checklist containing: patient characteristic (gender and age), WHO-UMC causality Assessment Scale, Classification of type of reaction and drug associated with ADRs and drug management that used to treat in 4-year period.

Results: Almost of the ADRs were found in female, 20-60 years old with mean aged 37.63. According to WHO-UMC causality Assessment Scale, the most scale in 2014 to 2017 was "unlikely drug-related". The skin rash was the most reported as Classification of type of reaction. The most commonly drug associated with ADRs was Analgesics, followed by Analgesics combined with Antibiotics, Antibiotics, Anesthetics and Steroids. The most of drug management that used to treat was Chlorpheniramine (CPM), followed by CPM combined with Dexamethasone, Ondansetron, Dimenhydrinate and Metoclopramide.

Conclusions: This study was aimed to explore the features of ADRs data and drug management pattern in a hospital of dentistry, which can be benefit for reporting and managing the ADRs situations, not only used as the trigger tools to early detection, but also used for further developing system in hospital of dentistry, from initial diagnosis to the end process of drug management by dental professionals, pharmacists and nurses.

Keywords: Drug management, Dental Patient, ADRs system





November 22, 2019

Venue: Banglampoo Room, Floor 6

Time: 13.00 – 13.30 hrs

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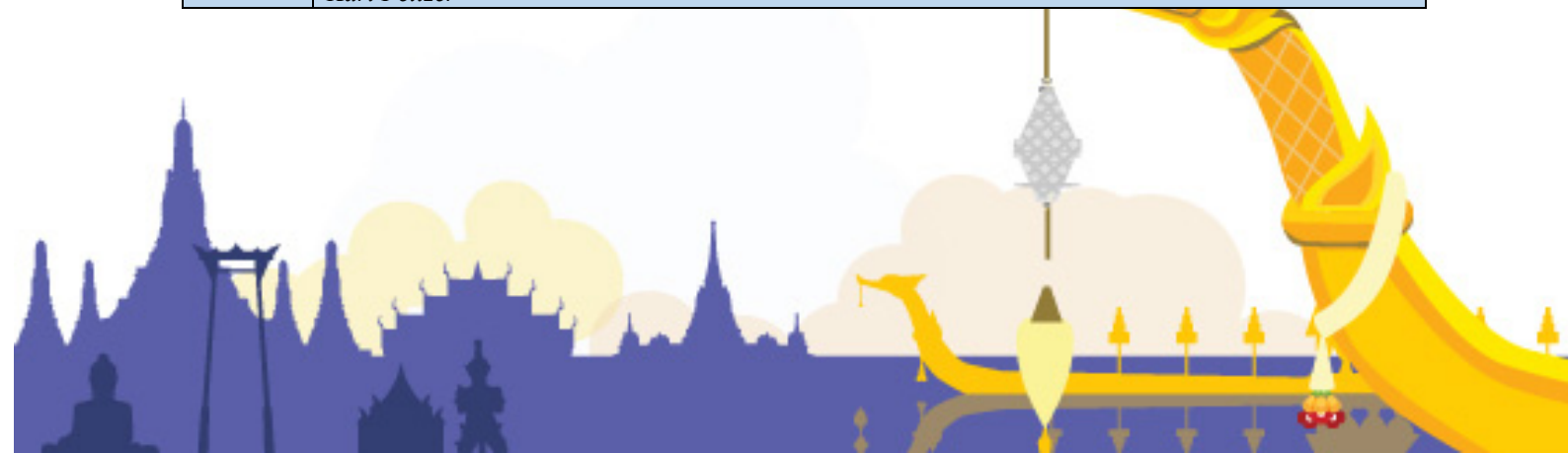


November 22, 2019

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Zone 9: Health in Marginalized Population

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Prevalence of Self-reported Non-communicable Diseases in a Socio-economic Deprived Community in Kedah, Malaysia

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Abstract

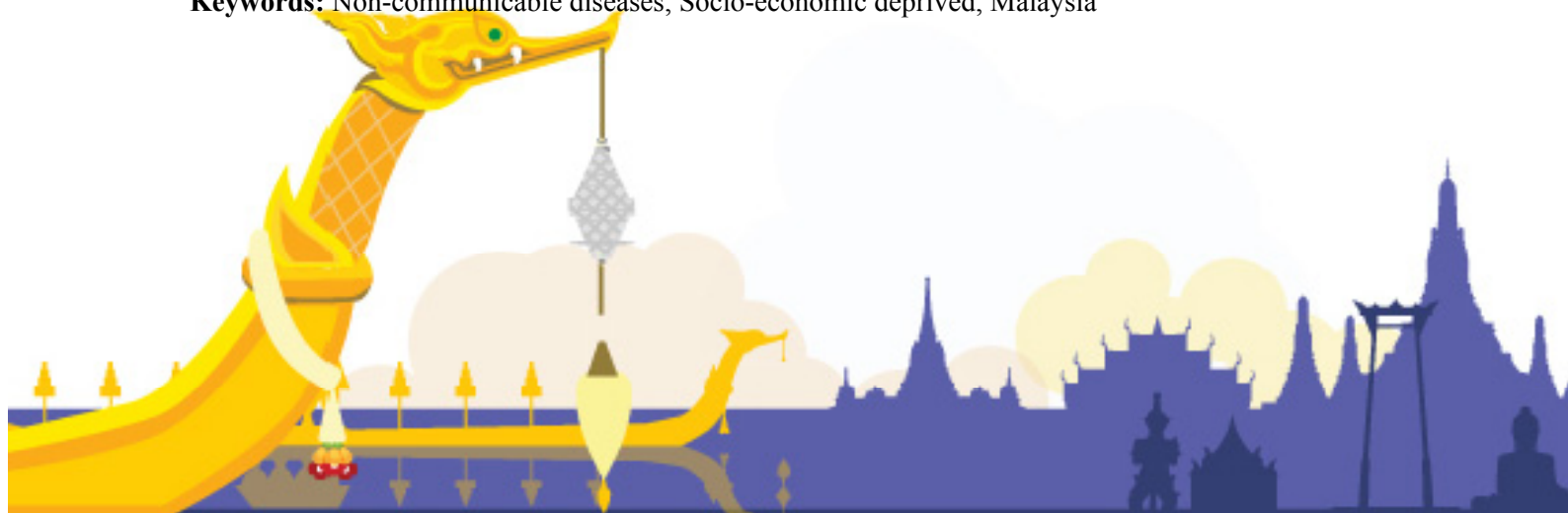
Background/Objectives: Non-communicable diseases (NCDs) are emerging as the leading cause of death globally, including Malaysia. Changes in a socio-economic status have increased at risk population with NCDs. This study aims to describe the prevalence of self-reported NCDs and its associated factors in a socio-economic deprived community.

Methods: A cross-sectional study with self-administered questionnaire was conducted in April 2019 among convenience sampled of adult age ≥ 18 years, who attended the community health program held in Paya Nahu Kedah.

Results: Among 139 respondents with a mean (SD) age 48.5 (13.1), there were 40.3% of respondents reported to have chronic illnesses with a prevalence of hypertension (24.5%), diabetes mellitus (21.6%), chronic respiratory diseases (3.6%), heart disease (2.9%) and stroke (1.4%). Majority of them (92.1%) were Malays, 82.7% had income below RM1000, 71.2% were married, 67.6% had secondary school education, 58.3% were non-working individuals and 53.8% of male respondents were smoking. The significant associated factors of NCDs by multiple logistic regression were age, working and marital status. A person with an increase in 1 year of age has 1.05 times the odds to have NCDs (95% CI: 1.01 to 1.09, p-value=0.007). Non-working individual has 2.27 times the odds compared to working individual to have NCDs (95% CI: 1.03 to 5.01, p-value=0.042). Divorcee has 3.55 times the odds compared to married person to have NCDs (95% CI: 1.28 to 9.31, p-value=0.015).

Conclusions: Prevalence of NCDs are high in this socio-economic deprived community, therefore it is important for the higher authority to look into their needs to reduce NCDs among them.

Keywords: Non-communicable diseases, Socio-economic deprived, Malaysia



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The Needs of International Migrants in Santiago, Chile: A Photovoice Study

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Abstract

Background: As with many countries, Chile has recently witnessed a large influx of immigrants, largely from other Latin American countries. While they may have access to social services such as education and health care, immigrants may face discrimination, marginality, and other immigration-associated challenges that can negatively impact health—both directly and indirectly.

Objectives: The study objectives were to: 1) explore migration as a social determinant of health, 2) identify the needs of immigrants in Chile, and 3) assess the impact of photovoice as an advocacy and empowerment tool.

Methods: In photovoice, participants take photos of their lives relating to a research question. Through individual and group meetings, participants then collectively select the most meaningful photos and provide narratives to help explain their significance. Eleven immigrants from six countries and diverse backgrounds participated in this six-month project. IRB approval and informed consent were obtained.

Results: Interesting and compelling photos and narratives will be presented to illustrate each of the eight major themes identified: health care, basic needs, adaptation as a migrant and social integration, social relationships and support networks, stigma and discrimination, social vulnerability, environment, and aspirations. Vulnerability to exploitation, discrimination, chronic psychosocial stress, lack of adaptation in Chile, and daily life uncertainty often contribute to poor physical and mental health outcomes.

Conclusions: Immigration becomes a complex social determinant of health when considered in the context of individual and collective experiences which are influenced by a number of social, cultural, economic, political, and environmental factors. A multi-faceted approach is necessary to address immigrants' health needs, with information and support networks being critical. We provide recommendations on how governments can better respond to the unique needs of migrant communities, including dissemination of information about rights and services available to migrant communities, implementation of educational programs in schools and communities to sensitize people to language and cultural differences and promote inclusive societies, creation of immigrant offices to facilitate immigrant integration and adaptation, and the inclusion of community members in the development and implementation of relevant policies and programs for migrant communities.



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Challenge of Achieving Sustainable Development Goal 6 in Marginalized Communities: A Sri Lankan Experience

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Abstract

Background/Objectives: Availability of clean water and sanitation is a key to achieve good health as identified by sixth Sustainable Development Goal. Water and sanitation is a major issue when resettling a community displaced due to natural or human activity. Most of the time the locations available for those communities to resettle are places that lack basic facilities and resources. This study was conducted in a remote village situated 22km inside the jungle in Eastern province of Sri Lanka where a marginalized community had self-chosen to settle more than a decade ago due to the civil conflict. The objective of this study was to identify the access and practices related to water and sanitation in this community for a development project.

Methods: A census was conducted in the village using an interview administered pre tested questionnaire. The questionnaire included sections on access, treatment of water and on sanitary facilities. Head of the household was the respondent.

Results: The total population of the village was 256 residing in 72 households. Of them 86.1% and 83.3% used protected dug wells as the source of water for drinking and cooking. 76.4% of households took less than 30 minutes to collect water and in 69.4% an adult male was responsible for the task. Straining through a cloth to make water safe for drinking was used in 59.7% households and only 8.3% practiced boiling. Of the households 69.4% felt protected dug well is a safe water source and 70.8% were satisfied about the current quality of water. Only 75% used a toilet for sanitary facilities and of them 44.4% shared toilets. 25% claimed open defecation. Only 55.6% households had water available in the place claimed to be used for hand washing.

Conclusions: Even after a decade of resetting basic needs of water and sanitation of this community has not been adequately met. Although national indicators of basic health needs are progressing, it was found that equity of distribution is still a challenge, particularly in marginalized communities. The findings justified the need for a water and sanitation project for this village.

Keywords: Water and sanitation, Marginalized community



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The Situation and Influencing Factors of Fertility Intentions among Migrant Female Workers in Pingshan District, Shenzhen City

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Abstract

Background/Objectives: To understand the situation and influencing factors of fertility intentions among migrant female workers in Pingshan District, Shenzhen City, so as to provide evidence for improving the reproductive services and policies of migrant women.

Methods: Using a cross-sectional survey, women from six female-dominated factories in Pingshan District were investigated. Self-administered questionnaires were filled by female workers who met the inclusion criteria and volunteered to participate in the study.

Results: A total of 661 migrant women were included, 149 (23.9%) had a willingness to give birth to at least one child in the next three years. In the analysis of fertility willingness, 333 respondents who were had one or no child were included. Univariate analysis shows that age, time spent with partner, partner's willingness to have children, gender of previous children, number of children are influencing factors of migrant workers women's fertility intentions($p < 0.05$). In the multi-factor analysis stage, while not including two factors "partner's willingness to have children" and "the number of existing children", age and the gender of the existing child are associated with the fertility willingness in the next three years. Fertility willingness for women aged 30 years and older is less than women who aged 25 to 29 ($OR = 0.42$, $95\%CI: 0.24 \sim 0.75$). Compared with women who already had a boy, women who had none or one girl were more likely to give birth to a child in the next three years ($OR = 2.58$, $95\%CI: 1.18 \sim 5.63$). After factor "partner's willingness to bear" and "the number of existing children" were included in the regression model, results show that when partner has a willingness to have children, women are more willing to give birth ($OR = 86.2$, $95\%CI: 36.22 \sim 205.33$).

Conclusions: Migrant female workers have a certain degree of fertility willingness. Son preference still exists. More attention should be paid to the influence of partner on the fertility willingness of female migrants, and we advocate the co-mobility of husband and wife. Specific measures should be used to protect women's fertility rights which will probably help to strengthen the birth planning of women of child-bearing age.

Keywords: Migrant workers women, Fertility desire, Present situation, Influencing factor



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Constructing the Mental Health Service Model for Family Caregivers in New Taipei City

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Abstract

Background/Objectives: To prevent family caregivers from being overwhelmed, we attempt to construct a mental health service model to assess and reduce the burden of care.

Methods: Data was collected from 1,156 family caregivers of members with mental illness, who have domestic violence, suicide history, no alternates, care more than 2 members, with the age 65+ or with chronic conditions. We use the Care Loading Scale to assess physical, emotional, time, financial, relationship loading and positive feeling. Descriptive statistics were used.

Results: In 1,156 family caregivers, financial loading accounted most for 39%, followed by 34% of the physical and 29% of the emotional loading. Among them, 230 family caregivers have high loading scores; their relationship loading accounted most for 93%, followed by 84% of the time and 68% of the financial loading.

Conclusions: The statistics showed the relationship and the time have the most impact on high-burden family caregivers. We have been further working on constructing the mental health service model and developing various resources for family caregivers. Our strategies are "Assessment", "Empowerment", "Cooperation" and "Referral".

Keywords: Caregivers, Mental health



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Tribal Integration Care Practice for Aboriginal Health and Long-term Care Equality: Take Wulai District, New Taipei City as an Example

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Abstract

Background/Objectives: Health inequality is an important health issue in WHO. To eliminate the gap of inequality on health and long-term care in the aboriginal areas, Wulai District spontaneously organizes Long-term Care Promotion Committee to develop a long-term care service with culturally sensitive and meets local needs. It combined IDS and tribal health construction, dedicated to the local practice of tribe integrated care.

Methods: Through secondary data analysis and qualitative interviews, explore the impact factors that promote the aboriginal health and the long-term care equality, understand the social impact of Long-term Care Committee's development on the local community.

Results: The long-term care coverage rate in Wulai District has increased from 8.8% in January 2018 to 18.2% in July, and reached 23.2% in December. The district public health center is the base to develop local community healthcare and long-term care services resources. Based on the health and safe communities to facilitate the resource integration, improve the development of integrated care and establish a self-help network in the aboriginal tribes.

Conclusions: Considering the geography of Wulai District, the cultural characteristics of the aboriginal people and the lack of resources, we established "integrated care" and "tribal creation" as the core to promote an integrated care model that meets local culture needs, improving people's health and the integration of medical and long-term care. We also look forward to the development of the care programs, accelerate the deployment of resources, strengthen the reversal of disability to implement government's purpose of establishing an aboriginal long-term care model.

Keywords: Aboriginal, Long-term care, Integrated care, Health inequality



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Associated Factors with the Mental Health of Mothers Taking Care of Children with Disabilities: After the Great East Japan Earthquake and the Kumamoto Earthquake

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Abstract

Background/Objectives: Japan is a nation with various natural disasters such as the 2011 Great East Japan Earthquake and the 2016 Kumamoto Earthquake, which caused tremendous damages and took 15,000 and 270 lives including the related deaths. The present study focused on associated factors with the mental health of mothers who take care of children with disabilities in disaster areas. They are said to be a group of people who were put under substantial stress after the earthquakes.

Methods: With help from 14 special needs schools in Fukushima, Miyagi, and Iwate Prefectures in Tohoku Region and Kumamoto Prefecture, 1,458 self-administrated questionnaires were distributed to parents of children with disabilities in February and collected in March 2019. In total, 475 responses were obtained (return rate = 30.7%) and only mothers, 336 from three Prefectures in Tohoku Region and 139 from Kumamoto Prefecture, were selected for the comparison between the Great East Japan Earthquake and the Kumamoto Earthquake.

Results: Compared to those who are in Kumamoto, mothers in Tohoku Region reported their significantly worse financial situation. They also had significantly poor mental health. In Kumamoto, the mothers' perceptions of social capital in the communities became significantly higher after the earthquake. The result of a multiple regression analysis indicated a significant association of children's behavior problems, financial situation, hesitation of asking help, social capital, and resilience with their mental health in Tohoku and Kumamoto combined. However, the analyses separately performed on the two regions indicated a significant association of children's behavior problems, financial situation, and hesitation of asking help with their mental health only in Tohoku.

Conclusions: Those who live in Tohoku, where 8 years have passed since the earthquake, had worse financial situation and mental health than those who are in Kumamoto, where only 3 years have passed. Further analyses of the data with regard to cultural and regional backgrounds of the two areas will reveal more about the influential factors on their mental health.

This study was supported by the Mitsubishi Foundation and JSPS KAKENHI Grant Number JP 17H02612.

Keywords: Children with disability, Disaster victims, Mental health, Social determinants of health



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Factors Associated with Cervical Cancer Screening among Filipino Women in Aichi Prefecture

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Abstract

Background/Objectives: The aims of this study were to analyze factors associated with cervical cancer screening (pap testing) among Filipino women living in Aichi prefecture, which holds the largest Filipino population in Japan.

Methods: A cross-sectional design was employed. Self-administered questionnaires were distributed to Filipino women at 14 catholic churches and one Philippine festival in Aichi. In total, 342 valid responses were collected. Respondents were asked if they had received a pap test in Japan. Emotional/informational social support scores were categorized into quartiles; low, medium low, medium high and high. Bivariate analyses were carried out between pap test and demographic characteristics, such as age group, husband's nationality, years of living in Japan, and proficiency level in communicating in Japanese as well as emotional/ informational support level. Adjusted odds ratios (AORs) were calculated by logistic regression analyses.

Results: Among participants, 232 women (68%) were married, 113 (33.0%) were married to Japanese men, and 182 (53.2%) had lived in Japan for more than 10 years. AORs of not having a pap test increased with shorter length of time living in Japan. Unmarried women showed the highest AOR among three types of marital status. Emotional/informational support was not significantly associated with pap testing.

Conclusions: Differently from our previous study which suggested that emotional/informational support and husband's nationality were associated with access to healthcare, access to a pap testing was associated with years living in Japan and marital status. To promote cervical cancer screening among Filipino, targeting unmarried women who have recently come to Japan might be effective.

Keywords: Pap-test, Filipino, Japan



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A Threat to SDG 3: Health Infrastructure of Camp-clinics in Non-government Controlled Areas in Kachin State

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Abstract

Background/Objectives: In Myanmar, Ethnic Health Departments uphold and link Sustainable Development Goals (SDG) 3 and 16 by extending healthcare access to communities displaced by the country's ongoing civil war. Since 2011, conflict between the Kachin Independence Organization (KIO) and Myanmar's Military has displaced 98,000 people. 40% reside in IDP camps in non-government controlled areas in Kachin State, where the KIO Health Department (KHD) is the sole healthcare provider because no government facilities exist. After 8 years of conflict and decreasing financial support, camp-clinics have deteriorated and a situational analysis of facilities identified urgent gaps in KHD's service readiness.

Methods: In March 2019, nine trained surveyors assessed 18 camp-based clinics using the WHO's Service Availability and Readiness Assessment (SARA) tool modified for the local context. Using WHO's methodology, composite service readiness scores were calculated based on the availability of tracer indicators for basic amenities, basic equipment, diagnostic capacity, standard precautions for infection prevention, and essential medicines.

Results: Among 18 camps, two had no clinics. For 16 facilities, the average facility scores were 64% (range: 29-86%) for basic amenities, 86% (67-100%) for basic equipment, 53% (0-86%) for diagnostic capacity, 71% (44-100%) for standard precautions for infection prevention, and 53% (15-95%) for essential medicines. In addition to low essential medicine and diagnostic scores, other notable findings included no facilities having audio-visual privacy for patients and hemoglobin tests.

Conclusions: Monitoring and addressing gaps in health service readiness is an important first step to improve communities' access to adequate healthcare, and is especially important when serving communities that face layers of vulnerability due to conflict and displacement. For example, private spaces for service provision are important for patients facing increased exposure to trauma and gender-based violence due to conflict (SDG3.4). For routine care, hemoglobin testing to identify anemia during pregnancy is an important tool to prevent maternal and neonatal mortality and morbidity (SDG3.1-2). These findings highlight that investment in health infrastructure is the backbone to achieving each SDG3 target in conflict-affected settings in Myanmar.

Keywords: Non-government controlled areas, Kachin state, Camp-clinics, Privacy and confidentiality, Health infrastructure



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The Incidence of Stroke among Disabled People in Taiwan: A Nationwide Population-based Study

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Abstract

Background/Objectives: Globally, number of people with disabilities increases every year. Disabled people are more prone to have movement problems and mental health problems. In addition, physical inactivity and emotional stress are important risk factors for stroke. Hence, we aimed to explore the incidence of stroke among disabled people in Taiwan.

Methods: Retrospective cohort study using data from the National Disability Registration Database of Ministry of the Interior, Taiwan and combined with medical record information from National Health Insurance Research Database. Disabled people from 2000 to 2008 were included in this study. Disabled people with persistent vegetative state or stroke history before being disabled were excluded from this study. A total of 614,991 people with disability (aged 35 and above) were included to investigate the incidence density rate (IDR) of stroke which were modeled by Poisson regression.

Results: The IDR of stroke among disabled people was 19.32 per 1,000 person-years, approximately five times the rate of general population (3.87 per 1,000 person-years). The IDR of stroke among disabled people was increased by the following variables; dementia (63.36 per 1,000 person-years), balance disorder (47.49 per 1,000 person-years), multiple disabilities (28.47 per 1,000 person-years), hearing impairment (25.56 per 1,000 person-years), dysfunction of primary organs (25.03 per 1,000 person-years), and visual impairment (21.53 per 1,000 person-years), while physical disability (17.41 per 1,000 person-years) was a reference group. Additionally, the results showed the IDR of stroke was increased by disability level; profound level (25.14 per 1,000 person-years), severe level (22.07 per 1,000 person-years), and moderate level (18.74 per 1,000 person-years), while mild level (16.92 per 1,000 person-years) was a reference group.

Conclusions: Disabled people run a higher rate of stroke than the general population. Health policy makers and government should have great efforts to reduce health inequalities for disabled people.

Keywords: Disabled people, Stroke, Incidence



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Family Planning Services Provided by Ethnic Health Organizations in Hard-to-reach, Post-conflict Areas in Karen State, Myanmar

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Abstract

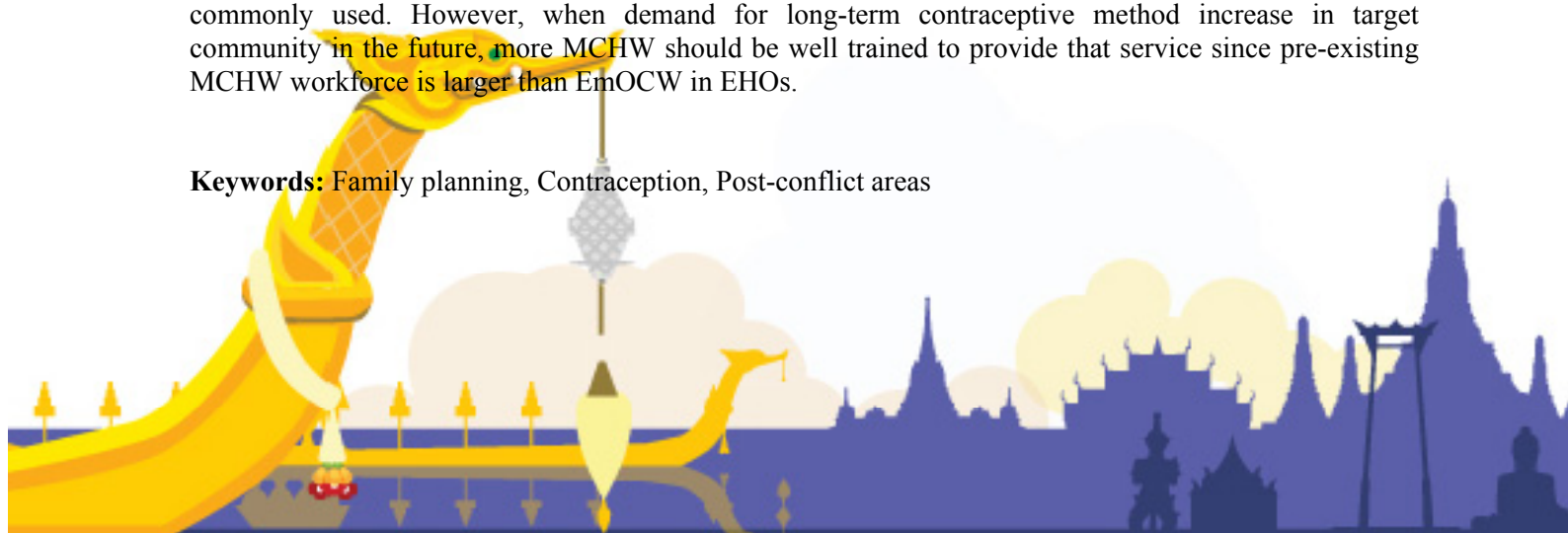
Background/Objectives: Sustainable Development Goal (SDG) targets 3.7 and 5.6 related to expanded and equitable access of family planning are difficult to achieve in post-conflict, ethnic, and underserved areas like Karen State because of limited infrastructure and poor security. According to Myanmar's 2014 census, the fertility rate among married women was high at 4.99, in part due to a low contraceptive prevalence rate of 52.2%. Ethnic and community-based health organizations (EHOs) of eastern Myanmar like the Karen Department of Health and Welfare (KDHW) have skilled staff who provide sexual, reproductive, maternal, neonatal and child health services.

Methods: Program data from January to December 2018 from 13 KDHW clinics were analyzed to understand the utilization of family planning services in remote, ethnic areas in Karen State.

Results: In 2018, KDHW clinics provided family planning services to 414 women, of whom most of them were 21-30 years old (49%) and multipara (42%). Among 414 women, 17 women (4.1%) switched between long-term contraceptive method (implant) and short-term contraceptive methods (condom, COC, POP, Depo injections) while the 9 women (2.2%) switched between different short-term contraceptive methods. Since 64 women (15.5%) visited the clinic more than once within the study period, total clinic visits become 491 visits in 2018. Out of 491 visits, Maternal and child health worker (MCHW) provided services in 225 visits (45.8%) and Emergency Obstetric Care Worker (EmOCW) provided services in 81 visits (16.5%). Maternal and child health workers (MCHWs) were statistically more likely to be the provider for short-term contraceptive methods, and Emergency Obstetric Care Workers (EmOCW) more likely provided long-term contraceptive methods. There was no statistical difference between type of family planning method used by age or parity category, with Depo-Provera injection being the most common method (50.1%).

Conclusions: EHOs improve access to family planning services among women in hard-to-reach post-conflict areas, which promotes the achievement of SDGs in reality. Now, Depo injection is most commonly used. However, when demand for long-term contraceptive method increase in target community in the future, more MCHW should be well trained to provide that service since pre-existing MCHW workforce is larger than EmOCW in EHOs.

Keywords: Family planning, Contraception, Post-conflict areas



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A Literature Review of Rabies Control and Prevention in Sri Lanka: Towards Rabies Elimination

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Abstract

Background/Objectives: Sri Lanka has been targeted zero rabies by the end of 2020. In order to assess current human and animal rabies control and prevention strategies in Sri Lanka, we conducted a systematic review of scientific literatures and data.

Methods: We compiled documents regarding current and previous rabies control and prevention activities implemented in the entire country of Sri Lanka. The documents included both published and unpublished literatures issued between 1946 and 2018. They were obtained mainly from online databases such as Pubmed, Scopus, J-Stage, and Sri Lanka Journal Online. Articles not registered online, particularly including ones published within the country were found from university library in Sri Lanka as hard copies. All the collected literatures were screened based on the PRISMA statement and categorized into several types of rabies control and prevention strategies. The official reports including epidemiological data in Sri Lanka were also filed in order to analyze the current trend of rabies control and prevention in the nation.

Results: As of end March 2019, we found 107 scientific literatures regarding rabies control and prevention in Sri Lanka. Two-thirds of the literatures were studies on either human or animal rabies, and the rest were studies focused on the molecular and genetic epidemiology on rabies virus and several conference reports such as presidential speech which were not related to scientific research and control activities. The most common topic on human rabies control in the literatures was a post-exposure prophylaxis, followed by awareness activities on rabies and dog bites preventions. On the other hands, research on animal rabies control mainly dedicated to dog ecology, dog vaccinations, and sterilization among stray dogs. Geographic areas of the studies were inclined to the locations where the studies were feasibly implemented.

Conclusions: We revealed the history and outcomes of rabies control and prevention activities in Sri Lanka, but the amount of evidence-based information is relatively limited. In order to achieve nationwide rabies elimination, it is highly recommended to implement more effective rabies control and prevention activities and build adequate scientific evidences.

Keywords: Rabies, Sri Lanka, Elimination, Systematic review



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Reproductive, Maternal, Neonatal and Child Health Care Services Provided by Ethnic Health Organizations in Hard-to-reach Post-conflict Areas in Kayin State, Myanmar

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Abstract

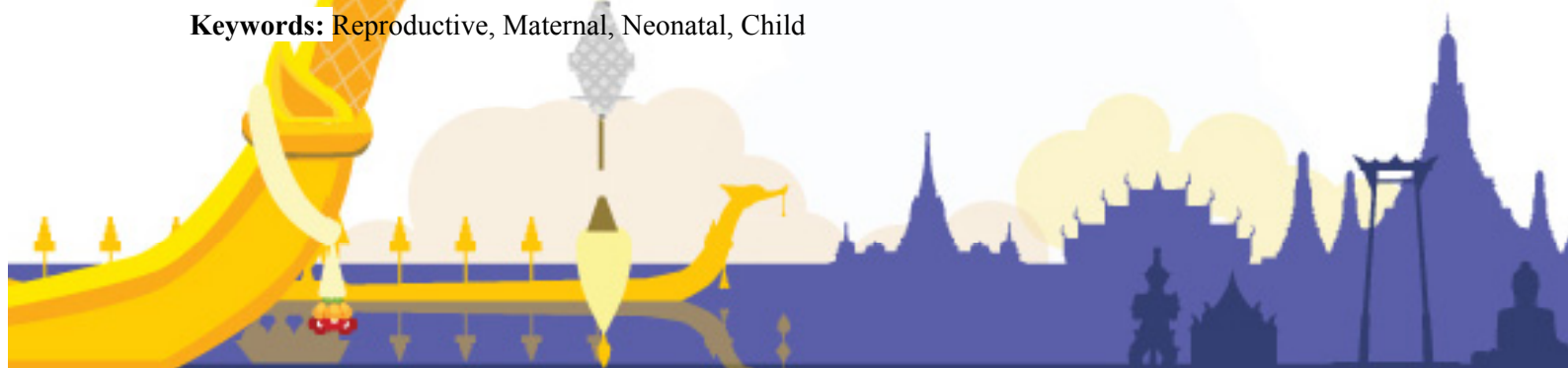
Background/Objectives: Sustainable Development Goal (SDG) targets 3.1, 3.2 and 3.7 related to reduction of maternal mortality ratio, under-five mortality rate and increasing accessibility to family planning services are difficult to achieve in post-conflict, ethnic, and underserved areas like Kayin State because of limited infrastructure and poor security in providing required Reproductive, Maternal, Neonatal and Child Health Care (RMNCH) Services. Thus, with the support of Mae Tao Clinic, ethnic health organizations (EHOs) trained local ethnic community health workers according to International standard guideline to provide RMNCH services and this study will access the services that were given by EHOs in hard-to-reach areas in Myanmar.

Methods: Project data, from January to December 2018, was analyzed which included pregnant women, mothers or children from 538 villages in 4 townships in Kayin State.

Results: In 2018, 12552 pregnant women received at least 1 antenatal care visit from ethnic skilled birth attendants (SBA) of which 14.3% of them received up to 4 antenatal care visits or more and 17.6% of them received iron and folic acid for 90 days. Moreover, 3722 deliveries were recorded among which 26.2% were assisted by ethnic SBA, 7.4% were assisted by TTBA under supervision of ethnic SBA, 52.7% were assisted by TTBA and 13.6% were assisted by other providers. Regarding, postnatal care (PNC), 3525 women received at least PNC visit of which 49.2% were provided by ethnic SBA, 11% were provided by TTBA under guidance of ethnic SBA, 24.1% were provided by TTBA alone and 15.6% were provided by other providers. Regarding accessibility to family planning services, 30246 clinic visits by reproductive women or their partners were noted of which male condom was commonly used (45.9%) followed by oral contraceptive pills (29.1%). Besides, 2010 children under 5 years were treated by well-trained ethnic health care providers according to Integrated Maternal and Childhood Illness (IMCI) guideline of which pneumonia was most common (67.2%) among children in 2018.

Conclusion: EHOs improve access to RMNCH services in hard-to-reach post-conflict areas, which promotes the achievement of SDGs in reality. However, more technical and financial support should be given to empower them for better implementation.

Keywords: Reproductive, Maternal, Neonatal, Child



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Recognise and Value Unpaid Care Provided by the Mothers to their Children with Physical Disability in Bangladesh: A Qualitative Study

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Abstract

Background/Objectives: The aim of this presentation is to discuss the gap between fifth Sustainable Development Goal (SDG) -*achieve gender equality and empower all women and girls*, and the position of mothers of children with physical disability in Bangladesh within that Goal. It is estimated that more than 15% of the population live with a disability in Bangladesh (WHO and World Bank, 2011). Disability service infrastructure is under-developed in Bangladesh; and consequently, the onus of care falls on family, especially on mothers (Nuri, Aldersey, & Ghahari, 2019). As target number 4 of Goal 5 is to recognise and value unpaid care and domestic work of women, this is not the case in Bangladesh (United Nation Development Programme, 2019). The aim of this presentation is to highlight how mothers' care to their children with disability in Bangladesh is valued and recognised.

Methods: The qualitative research was informed by Intersectional theory and employed interpretive phenomenological methodology. The study conducted two sets of in-depth interviews and observation with 23 mothers and one set of in-depth interview with 5 more mothers from five districts of Bangladesh.

Results: This research showed that the role of the mother is being portrayed as the main family carer as well as the primary carer of the children with physical disability in Bangladesh. The mothers compromise their careers and social interaction as they have to stay with their children with physical disability at home, and that has a significant impact on their personal wellbeing, income, and empowerment. As this caring job is unpaid, mothers have limited control over resources. The family pattern of Bangladesh is mostly patriarchal, where men are the main people earning money in the family. As women's work at home is not measured in terms of money, their work is often undervalued and they fail to receive attention in society.

Conclusions: This study explored the lived experience of the mother of the children with physical disability and revealed that mothers' caring job for their children with physical disability is undervalued and not recognised by the family members and service providers in Bangladesh.

Keywords: SDG, Mother, Disability, Care



Zone 9: Health in Marginalized Population

P-244

Exploring Factors Associated with School Absence during Menstruation among Rural Bangladesh School Girls: A Zero-inflated Poisson Regression Analysis

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Abstract

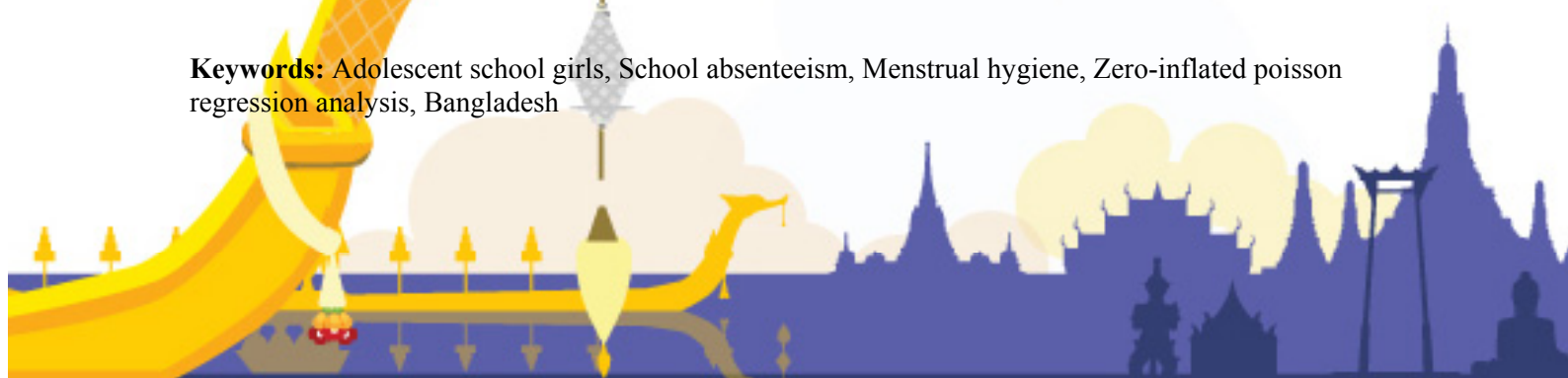
Background/Objectives: Girls' education is a key component in attaining Sustainable Development Goals (SDGs), especially when achieving SDG4 Quality Education and SDG5 Gender Equality. However, it has been reported that girls in low- and middle-income country settings often have limited chance to attend school during menstruation. This study sought to explore factors (both barriers and facilitators) associated with girls' school attendance during menstruation in a rural area (Nalka union, Sirajganj district) of Bangladesh.

Methods: A self-administered survey was conducted to obtain information on the current level of knowledge, attitudes, practices (KAP) related to menstruation and school absence during menstruation among school girls (N=408). Multiple analyses with different research questions were conducted using the data from the survey. The present analysis focused on identifying factors associated with school absence during menstruation and assessing the mean length of school absence, using a zero-inflated poisson model. Dependent variable was the length of menstruation-related school absence reported. Explanatory variables were chosen based on previous evidence or theories from literature review, and included sociodemographic factors, levels of KAP regarding menstruation, environments for menstruation hygiene management, and difficulties during menstruation.

Results: The mean length of school absence due to menstruation was 1.4 days (range: 0-7 days). Factors that showed statistically significant association with decreased days of missing school were higher grade of girls, mother's higher education level, higher level of menstrual knowledge, having discussion with teachers about menstruation, and no experience of any difficulties during menstruation. Not living with mother was associated with increased days of missing school. When the dependent variable was dichotomized into missing vs. no missing, girls who were ever told to skip school during their menstruation were more likely to miss school days.

Conclusions: School absenteeism was associated with girls' sociodemographic factors, menstrual knowledge, experience of any difficulties during menstruation, and discussion with school teachers. This study suggests the need for a more comprehensive approach to ensuring girls' attendance during menstruation, including community-targeted education and advocacy.

Keywords: Adolescent school girls, School absenteeism, Menstrual hygiene, Zero-inflated poisson regression analysis, Bangladesh



Zone 9: Health in Marginalized Population

P-245

Women with Physical Disabilities in Northern Vietnam: Breastfeeding Challenges and Adaptation

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Abstract

Background: Breastfeeding are consistently reported as beneficial to mothers and babies. There is a dearth of research around the experiences of breastfeeding for women with physical disabilities (WWPD) in low-and middle-income countries where 80% of people with disabilities live.

Objectives: To explore WWPD's challenges and adaptation in breastfeeding.

Methods: The study was conducted in Hanoi and Thaibinh, Vietnam. Participants were 29 women with physical disabilities who had given birth in the past three years. In-depth interviews were conducted at two time points with those women. NVivo software was used to support the thematic analysis.

Results: Late breastfeeding initiation was common due to mothers and babies were routinely separated for several hours immediately after birth. During the separation, babies were given the first feeding with formula milk. When babies returned to their mothers, a quarter of the women delayed the initiation of breastfeeding until their milk came in. The majority of WWPD combined breastfeeding with feeding babies with formula milk rather than giving exclusively breastfed for the first six months.

Many disability-related challenges were reported as barriers for breastfeeding, including positions for latching and the pain and discomfort they suffered when giving breastfed. Some women adapted to these by putting their baby on stack of pillows close to them while breastfeeding, and one woman placed her baby on a wood plank that were put over two wheelchair armrests to give breastfed.

Conclusions: The current routine of mother-baby separation after birth delayed the initiation of breastfeeding, and then impacted exclusive breastfeeding during first months of WWPD. The women faced many difficulties in giving breastfed due to their disabling condition. Although some adaptive strategies were applied, the women needed more support to facilitate breastfeeding.

Keywords: Disabilities, Breastfeeding, Challenges, Adaptation, Vietnam



Zone 9: Health in Marginalized Population

P-246

The Analysis of Factors Related to Quality of Life among Women in Childbearing Age after 10 Years Tsunami in Banda Aceh

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Abstract

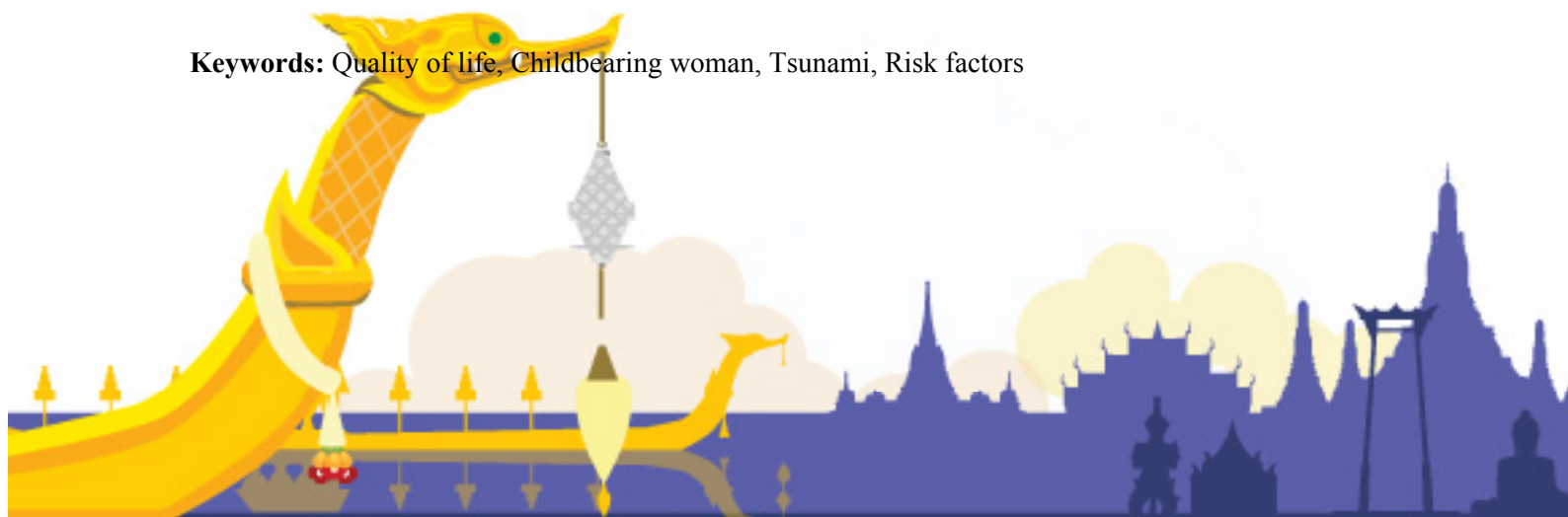
Background/Objectives: Aceh tsunami disaster occurred in the past decade created a major impact on the quality of human life, and the low quality of life (QOL) is more prevalent among women living in disaster areas. QOL will affect the rate of population growth and become a benchmark for a country's progress, it is crucial to find ways in improving QOL of those who are living in disaster areas, especially among women. Therefore, this study was conducted to identify factors that affect the QOL among women of childbearing age after the 10-years tsunami in Banda Aceh.

Methods: The method of the research is using analytical study with case control design. A preliminary survey was conducted to assess the QOL among women in childbearing age with total number of sample is 144 respondents, comprised into 2 groups; low QOL and high QOL group. Data were collected using questionnaires through interviews and analysed using logistic regression-test.

Results: The result of bivariate analysis showed several significant related variables to QOL, these include marital status (OR = 0.34, 95% CI = 0.16-0.74 P-value = 0,007), education level (OR = 4.46 95% CI = 1.55-12.81 P- value = 0.005), employment (OR = 2.8 95% CI = 1.42-5.51 P-value = 0.003), dwelling (OR = 0.38 95% CI = 0.18-0.79 P-value = 0.009), income (OR = 3.1 95% CI = 1.35-7.09 P-value = 0.007), history of depression (OR = 2.25 95% CI = 1.14-4.43 P-value = 0.019) and history of tsunami exposure (OR = 3.5, 95% CI = 1.77-7.11 P- value = 0.001). While, in multivariate analysis, the most related variables are marital status (OR = 0.30 CI = 95% -1.19-2.66) and history of tsunami exposure (OR 0.30 CI 95% -1.17-2.22).

Conclusions: There are several factors that affect the QOL among women in childbearing age after 10 years tsunami disaster in Banda Aceh, including history of tsunami exposure, employment status and education level. These findings show that it is crucial to find solutions through public health intervention in improving mental health counselling for women in reproductive age who are living in tsunami affected areas and local government could provide various trainings to improve life and working skills for women and support them to continue their education.

Keywords: Quality of life, Childbearing woman, Tsunami, Risk factors



Zone 9: Health in Marginalized Population

P-247

Sexual Behaviors and Associated Factors among International Students at Japanese Language Schools in Japan

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Abstract

Background/Objectives: The number of international migrants, particularly students in Japanese language schools, has been rapidly increasing in Japan. Most of them are in sexually active age-group. However, we do not have much information about their sexual behaviors, which is necessary to promote their sexual health in Japan. Thus, the objectives of this study are to examine sexual behaviors and their associated factors among international students in Japanese language schools in Japan.

Methods: We conducted this cross-sectional study among Chinese, Vietnamese, and Nepalese students studying at Japanese language schools in Tokyo and Fukuoka prefectures. Nearly 60% of the students studying at Japanese language school are from these three countries. We visited such Japanese language schools and collected data using an online self-administered questionnaire. The questionnaire included questions about socio-demographic characteristics, health behaviors, and sexual behaviors. We collected data from December 2018 to February 2019. We used descriptive statistics and multivariable logistic regression model for data analysis.

Results: Of 183 participants, there were 77 Chinese, 24 Vietnamese, and 82 Nepalese students. There were 119 males. The average age was 23.0 years (± 3.5). The average duration of stay in Japan was 18.0 months (± 10.0). Thirty-five (19.1%) had alcohol at least once a week (regular drinkers). One hundred nineteen (65.0%) reportedly had sex before, and 71 of them (38.8%) had sex during the last 12 months stay in Japan. Thirteen (18.3%) had more than one sex partners, and 33 (46.5%) used condoms all the time. Five had anal sex with a man, and three of them used a condom all the time. Four out of total students reportedly had sexually transmitted diseases during the last 12 months in Japan. Students' sexual behaviors in Japan were associated with age (AOR 1.1, 95 %CI: 1.01-1.21) and regular alcohol consumption (AOR 3.2, 95% CI: 1.46 - 7.05).

Conclusions: A significant number of students were engaged in risky sexual behaviors such as multiple sexual partners and inconsistent condom use. Such behaviors were associated with their age and regular alcohol consumption. These findings may help to design interventions to promote their sexual health.

Keywords: Migrants, Youth, HIV, Japan



Zone 9: Health in Marginalized Population

P-248

Tracing Migrant Health for SDG Achievement: Maldives

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Abstract

Background/Objectives: According to UN statistics, the Maldives ranks 34th in the world on migration stock as a percentage of its population. The UN 2030 Agenda for Sustainable Development goals addresses the wellbeing of the migrants in goals 1, 3, 5, 8, 10, 11, 16 and 17. This paper aimed to track the health status of migrants living in the Maldives in each of the health related targets of the SDGs.

Methods: Data collected by the International Organization for Migration (IOM) for a baseline migrant health study was used. IOM applied a mixed method approach where by 19 stakeholder institutions were interviewed, a cross section of 381 migrants were surveyed and secondary data from selected stakeholders were analyzed using R software.

Results: twenty-nine regulations, acts and policies ensured social protection for the migrants in general but none of the policies specifically addressed the migrant. Maldives offers two separate health and financial risk protection schemes for locals and foreigners. Knowledge of sexual and reproductive health among migrants was found to be low. In the protection of labour rights, employment contracts are made obligatory and inspection of work places are conducted by the Labour Relations Authority which manages complaints through a hotline and online. The Remittance tax policy, the differential pricing policy of health services for foreigners, lack of a minimum wage policy and an occupational health and safety policy contributes to inequalities.

Conclusions: Maldives attracts the healthy working age population mainly from the SAARC region which permits the potential for multilateral or regional agreements for the safety and health of the migrants. The establishment of an NGO can help Institutionalize migrant health in the Maldives to reduce inequalities and pave the path towards achieving SDGs.

Keywords: SDGs, Health status, Migrants, Maldives



Zone 9: Health in Marginalized Population

P-249

Correlates of Having Multiple Sexual Partners among Young Filipino Women

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Abstract

Background/Objectives: The Philippines is one of the remaining countries having an increasing incidence of HIV cases in the world. A large proportion of its recorded cases come from the young and the MSM demographic where a quarter of MSM also have female sex partners. This then predisposes young women to having HIV infection. Multiple sexual partnership is one of the risk factors of HIV infection. This study investigated the factors associated with having multiple sexual partners among Filipino women aged 15-24 years old who have had sexual initiation.

Methods: Data of 2,864 Filipino women aged 15 to 24 years old who have had sexual intercourse from the nationally-represented 2017 Philippine National Demographic and Health Survey were utilized. Multiple logistic regression using backward elimination method was used to determine if socio-demographic factors, HIV-related knowledge, smoking status, and age at sexual debut were associated with having multiple sex partners.

Results: Being smokers (aOR 2.25; 95% C.I.: 1.32, 3.83); having sexual debut before 15 years old (aOR 2.04; 95% C.I.: 1.20, 3.48); having middle wealth index (aOR 1.77; 95% C.I.: 1.20, 2.62); being 20 to 24 years old (aOR 1.58; 95% C.I.: 1.08, 2.31); and being single (aOR 2.08; 95% C.I.: 1.49, 2.94) were found to be associated with having multiple sexual partners.

Conclusions: Findings have significant implications in the appropriate designing of sexual and reproductive health programs among young Filipino women. Programs should target the susceptible groups such as those in the poor wealth quintiles and those aged 20-24 years old. Health education strategies should also focus on promoting safe sexual practices in these demographics.

Keywords: Youth, Women, Sexual behavior



Zone 9: Health in Marginalized Population

P-250

Understanding Lived Experiences of At-risk Teenage Boys in Taiwan through Photovoice

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Abstract

Background/Objectives: At-risk adolescents often have many unmet health needs and have higher prevalence of negative health outcomes. This study aims to address the lack of research regarding at-risk boys in Taiwan by: 1) identifying common themes about their lived experiences and health needs, 2) generating compelling evidence to better advocate for them, and 3) empowering participants by helping them share their needs and experiences with stakeholders.

Methods: Photovoice is a qualitative research method in which participants use photography and narratives to communicate their perspectives. Thirteen boys from a Taiwan out-of-home placement facility for adolescent boys with backgrounds in foster care or the juvenile court system participated in this yearlong study. Following in-depth training, participants took photos relating to the research question. Then, via both individual and group meetings, the most powerful photos were chosen, and narratives were added. Key themes were identified. The photos best reflecting the group's messages were compiled into an exhibit targeting local stakeholders.

Results: The five themes identified by participants included 1) the lack of and need for companionship, 2) complex relationships with family, 3) the fear of but also benefit of the law, 4) the desire to belong in and be accepted by society, and 5) the impact of activities as a means of encouragement and character development. Post-study surveys showed participant empowerment, including increased self-confidence, self-worth, acceptance of their pasts, problem-solving skills, hope for the future, understanding of the relationship between health and behavior, resilience, and positivity.

Conclusions: Research must keep the perspectives of these youth at the center to make the most well-informed policy decisions. We propose: 1) school programming to guide these youth, 2) mentors as positive, understanding role models, 3) activities for short-term stress relief and those for long-term character development, 4) support these youth to develop positive sources of identity, and 5) judge less, listen more, and give them another chance. With many stressors, removing the youth from the unhealthy environment may be a temporary solution. However, the needs of at-risk youth and the sources of their stress are generally systemic ones that require extensive investment to create real change.

Keywords: At-risk youth, Community-based, Participatory research



Zone 9: Health in Marginalized Population

P-251

Relationship of HIV Prevention and Treatment Services Utilization, Risky Behaviors and HIV Risk among Drug Users in the Border Areas of Yunnan, China: A Latent Class Analysis

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Abstract

Background/Objectives: To explore the latent class of HIV infection-related behaviors among drug users (DUs) and its relationship with HIV infection, and therefore provide decision basis for making targeted intervention measures.

Methods: The study conducted among DUs was a part of an AIDS prevention and control project in Kaiyuan City, China from May to June 2017. Data including demographic information, HIV-related behaviors, and HIV testing result was collected. Latent Class Analysis (LCA) for nine items (four HIV prevention and treatment services utilization and five risky behaviors items) was used to identify and classify patterns of HIV-related behaviors. Univariate analysis and Multiple logistic regression were performed to analyze the relationships between patterns of HIV-related behaviors and HIV infection.

Results: According to the LCA, A three-class model was selected: 1) medium use and low risky behaviors (25.50%), 2) low use and medium risky behaviors (19.50%), and 3) high use and high risky behaviors (55%). HIV infection rates of DUs were 9.90% (5/51) for Class 1, 28.20% (11/39) for Class 2 and 57.30% (63/110) for Class 3, respectively. Male DUs were 10.89 (95% CI= 1.21~98.35) times more likely to infect HIV as compared to female respondents. DUs with hazardous drinking had a higher rate of HIV infection (OR= 2.38; 95% CI= 1.07~ 5.26) than that of non-hazardous drinking participants. Compared with the “medium use and low risky behaviors of HIV infection” class, “high use and high risky behaviors of HIV infection” class had 4.46 (95% CI= 1.41~ 14.21) times higher to infect HIV.

Conclusions: HIV-related behaviors of DUs were divided into three latent classes. DUs with high HIV prevention and treatment service utilization and high risky behaviors were faced with the highest risk of HIV infection. Current HIV prevention and treatment service among DUs didn't effectively change their risky behaviors. It is important to further explore the influence factors of HIV related behaviors patterns and effective behavioral prevention measures targeting at the population.

Keywords: Drug users, Behaviors patterns, HIV infection, Latent class analysis



Zone 9: Health in Marginalized Population

P-252

Women with Physical Disabilities in Northern Vietnam: Impacts of Pregnancy on their Life

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Abstract

Background/Objectives: There is a dearth of research around the experiences of pregnancy and childbirth for women with physical disabilities (WWPD) in low-and middle-income countries where 80% of people with disabilities live. This research aims to contribute in addressing this gap by exploring the experiences of pregnancy and childbirth of WWPD in Vietnam, using an interpretive phenomenological approach. The focus of this abstract will be on the impacts of pregnancy on WWPD's life.

Methods: In-depth interviews were conducted with WWPD who had given birth in the past three years in two Northern provinces in Vietnam. Twenty-nine WWPD participated in a first interview and 27 participated in a follow-up interview. A thematic approach was used for data analysis.

Results: Study findings highlight that many WWPD lived with the anxiety about the transmission of disability throughout their pregnancy. They were led to believe this due to the socio-cultural construction of disability, which was enforced by perceptions and comments from the community. Participants reported several disability-related symptoms during their pregnancy, including extreme pain especially related to their impaired body parts, constipation, heightened risk of falling, and unfit to their usual mobility aid. Their body changes due to pregnancy meant that physical transfers and mobility around their home and surrounding environment became more difficult. Pregnancy also impacted on their income as many WWPD were employed in jobs which relied on some form of manual labour.

Conclusions: Significant impacts of pregnancy on WWPD's lives were reported. A careful pre-pregnancy planning of healthcare, psychology, finance, family support, and house design would be useful in managing these impacts. Counselling services on the actual risk of disability transmission should be made available and accessible for WWPD to reduce their anxiety, as well as more community awareness around disability.

Keywords: Women with physical disabilities, Pregnancy, Impacts, Vietnam.



Zone 9: Health in Marginalized Population

P-253

A Study on Development of Support for Elderly Based on Investigation and Analysis of Personal Network and Health Index in Mountainous Area

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Abstract

Background/Objectives: In mountainous areas of Japan where the population has been increasingly on the decline, social relationships of elderly become fixed and a change in their personal network can put them at risk of social isolation, frailty or malnutrition. In this research, based on individual's personal network and health index, a relationship between the strength of personal network and health index is revealed to discuss a development method of support for elderly.

Methods: The elderly from 5 neighborhood communities in mountainous area were interviewed about their relationships and health index. Based on the information about their relationships obtained from the interview, a network analysis was conducted. An association between the strength of network and health index was also analyzed.

Results: Through the network analysis, a full picture of elderly's network and the current condition of isolation was obtained. Also, a relationship between the network degree and Tokyo Metropolitan Institute of Gerontology Index of Competence (TMIG-IC) score as well as Food Intake Frequency score indicated that people with more social connection tend to have a higher TMIG-IC score and Food Intake Frequency score.

Conclusions: Through a series of investigation and analysis method, it is possible to predict and provide support intervention to elderly who are likely to become isolated in their community with a risk of frailty or malnutrition when a change occurs in their network for some reason.

Keywords: Network Analysis, Health Index, Social Isolation, Mountainous Area



Zone 9: Health in Marginalized Population

P-254

Risk Factors that Influence the Gait, Balance, and Strength Test Results of Elderly: Study In Jakarta, West Java, and Yogyakarta Provinces, Indonesia

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Abstract

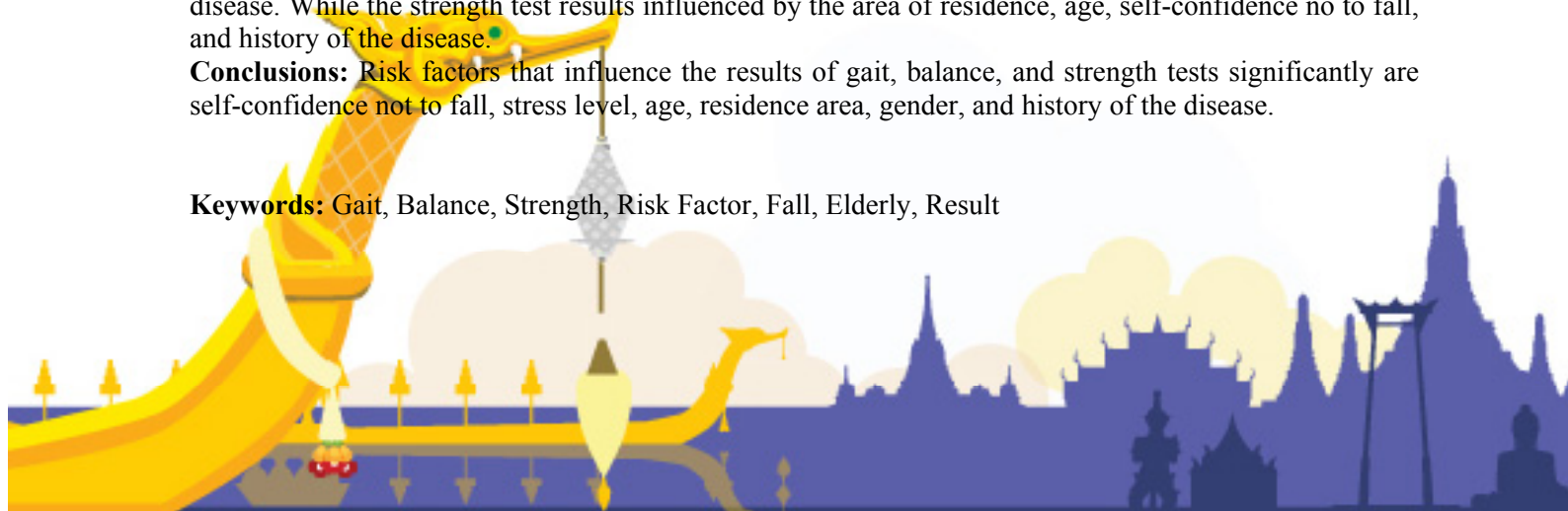
Background/Objectives: Elderly is a risk population group to fall due to their capacity, both physical and physiological had declined. Gait, balance, and strength are closely related to the incidence of falls in the elderly. The study aims to identify the risk factors that affect to gait, balance, and strength test on elderly when they assessed by American Geriatrics Society/ British Geriatric Society (AGS/BGS) Clinical Guidelines.

Methods: Older adults aged 60 years and above (n=512) were recruited via random sampling. Respondents examined for the level of risk falling by STEADI (Stopping Elderly Accidents, Deaths, and Injuries) from CDC (Center for Disease Control and Prevention). Elderly were detected at risk of falling will follow a series of tests which consist of gait, balance, and strength test. Multivariate analysis was determined the factors associated with the test, such as age, sex, disease history, area of residence, type of home, stress level, and the self-confidence no to fall which found in the ABC (Activities Balance Confidence) Scale, STEADI, GDS (Geriatric Depression Scale) questionnaire.

Results: The results showed 326 (63.67%) elderly detected at risk of falling. In the gait test, 51.22% of respondents with abnormal results. For a balance test (standing test, right foot forward, left foot forward, and lifting one foot 10 seconds each), 62.58% of respondents get abnormal results in a lift one foot every 10 seconds. Whereas in the strength test, there were 60.12% of respondents who were unable to reach 12 times sitting up for 30 seconds. The results of multivariate analysis showed that the results of the gait test influenced by age, self-confidence no to fall, and history of the disease. A 10-second leg lift test influenced by the area of residence, age, type of fitness, self-confidence no to fall, and history of the disease. While the strength test results influenced by the area of residence, age, self-confidence no to fall, and history of the disease.

Conclusions: Risk factors that influence the results of gait, balance, and strength tests significantly are self-confidence not to fall, stress level, age, residence area, gender, and history of the disease.

Keywords: Gait, Balance, Strength, Risk Factor, Fall, Elderly, Result

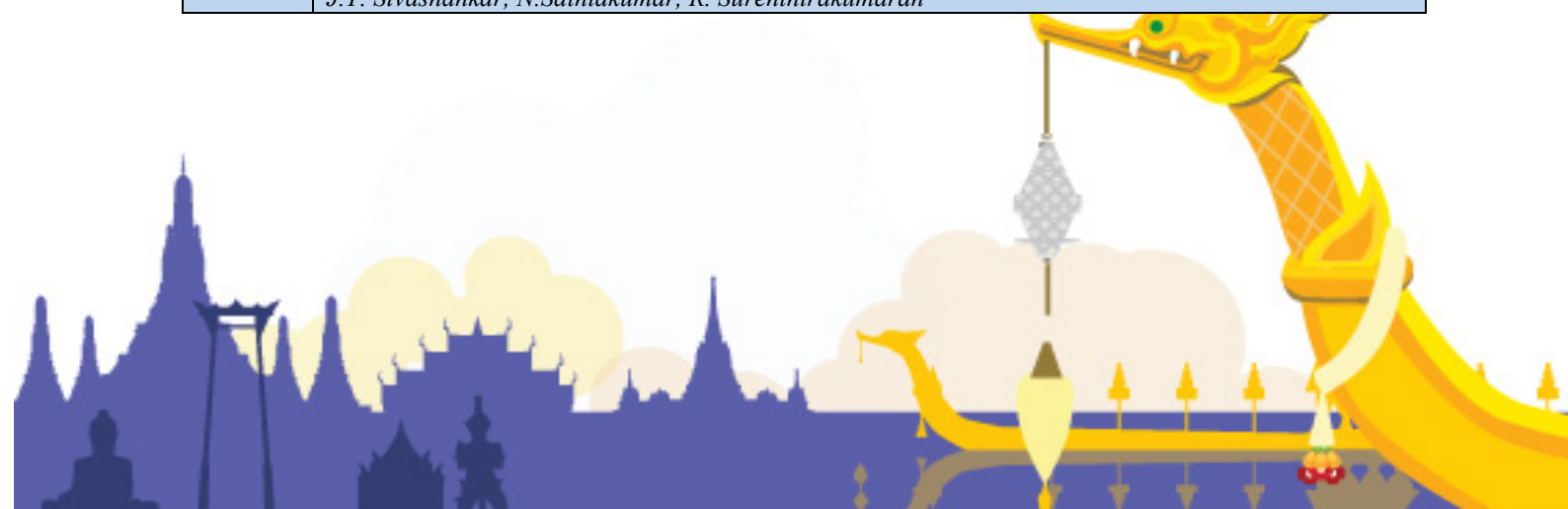


November 22, 2019

Venue: Banglampoo Room, Floor 6

Time: 13.00 – 13.30 hrs

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P-258	Machine learning app for pigmented skin lesion diagnosis with HAM10000 dataset <i>Poom Malakul Na Ayudhya</i>
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P-265	Better services through better systems: A case study on strengthening the pharmacy inventory management system in conflict-affected ethnic areas of Myanmar <i>Aye Thinzar Oo, Rachel Whelan, Phyo Wai Minn, Sunshine Aung, Kyaw Sann Oo, Eh Khu Say, Zaw Toe Myint, Lwin Mar Soe</i>
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P-255

Developing a Smart Phone App to Promote Exclusive Breastfeeding in China

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Abstract

Background/Objectives: Exclusive breastfeeding for the first six months of life is the optimal way to feed infants. Exclusively breastfed infants have a reduced risk of infectious diseases such as diarrhea, and pneumonia, and are less likely to develop obesity and diabetes in later life. Numerous studies have confirmed that breastfeeding is associated with improved performance in intelligence tests during childhood and adolescence. A recent survey undertaken across China during 2017-2018 shows that among infants under 6 months, only 29.2% were being exclusively breastfed. This is well below the target of at least 50% exclusive breastfeeding rate by 2020, a goal set by the Chinese State Council. We aim to increase the rate of exclusive breastfeeding in Sichuan Province, China by developing a Smart Phone App.

Methods: During 2015-2017, a sample of 1,901 pregnant women at 15-20 weeks of gestation were recruited from four maternal and child health hospitals in Chengdu, Sichuan, and were followed prospectively to 12 months postpartum. Detailed information on infant feeding practices was collected at discharge, 1, 3 and 6 months postpartum through personal interviews. A review of the literature and a focus group of mothers were undertaken to ascertain how this information could be used to promote exclusive breastfeeding.

Results: Of the 1,225 mothers followed up for 6 months, only 108 (8.8%; 95% CI 7.3%, 10.5%) were exclusively breastfeeding at 6 months postpartum. Discussion with a focus group of mothers suggested that an important source of information is from using their smartphones. Every mother attending clinics in Chengdu had access to a mobile phone which could be used to obtain breastfeeding information. A mobile app will now be developed to test this further hypothesis. Testing will be initially using focus groups followed by a randomized controlled trial.

Conclusions: The exclusive breastfeeding rate at 6 months postpartum remains low in Sichuan Province. Given the high mobile phone ownership and the important role of smartphone as information source for mothers, there is a need for a mobile app using modern technology to support exclusive breastfeeding in the country.

Keywords: Exclusive breastfeeding, Smart phone app



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Trends and Issues of Research on Nursing of Rheumatoid Arthritis Patients Treated with Biologics in Japan

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Abstract

Background/Objectives: Biologics for treatment of rheumatoid arthritis (RA) were introduced in 2003, and the activity of patients has greatly improved. However, since daily life in which self-injection is required to be performed continuously involves anxiety and burden, there are many difficulties in treatment and living experienced by patients before remission. The present study aimed to understand the trends of research for the purpose of clarifying nursing-related problems associated with novel treatment methods and the role of nursing and examine nursing to improve QOL of patients.

Methods: The literature was searched by adding the keywords of eight "biologic names" to "RA" and "Nursing" in a search of Ichushi Web version. After excluding conference minutes, 41 papers were obtained; Non-nursing-related papers and non-RA patient-related papers were excluded, and finally 30 papers were selected. A description describing the purpose of the research papers and the content of the results were regarded as codes for single semantic content, and the generated codes were organized into subcategories and categories by similar content.

Results: Thirty papers were published from 2005 to 2018. Trends in research on the care of patients undergoing treatment with biologics were classified into the following five categories: "Feelings of patients about treatment (50.0%)", "Self-injection instruction methods (23.3%)", "Self-care for infection prevention (13.3%)", "Factors affecting remission rate (6.7%)", and "Improvement of QOL due to treatment (6.7%)".

Conclusions: Research on self-care of patients, such as self-injection and knowledge on infection prevention and technical guidance, accounted for one third of the reports on nursing of patients treated with biologics. However, more than half of the papers were reports on nursing case that respected the feelings of patients. The importance of the role of nurses to support anxiety relief, etc. so that pharmacotherapy can be safely continued for RA, a chronic disease, was suggested.

Keywords: Rheumatoid arthritis, Biologics, Nursing





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Driving Health Innovation to Achieve the Healthy Ageing Society: Effort of Local Government in Japan

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Abstract

Japan has faced rapidly ageing society with low birth rate. Social security expenditure accounts for approximately 33% of total expenditure in 2018. Although public health insurance system and long-term care insurance system has secured the universal access to healthcare services with affordable co-payment, financial sustainability of public insurance is questionable. Kanagawa Prefecture, the second largest local government in Japan, has launched the “healthcare new frontier policy”, aiming at a society where everyone can live healthy through the rapid social changes with super-aged society. This policy mainly consists of two approaches: realization of personalized health through facilitating cutting-edge medicine and technology; and reviewing personal life style through improvement of “ME-BYO”. The aim of this study is to report the effort of Kanagawa Prefecture, and to discuss about the effects of the policy on the society, and to figure out the key challenges and limitations of this policy.

Keywords: Health innovation, Japan, Ageing



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Machine Learning App for Pigmented Skin Lesion Diagnosis with HAM10000 Dataset

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Abstract

Background/Objectives: HAM10000 is a dermatoscopic image dataset for machine learning. It is created by Philipp Tschandl and others in 2018. Its aim is to solve the problem of small size and lack of diversity of available dataset of dermatoscopic images. This dataset consists of 10,015 images of pigmented skin lesion including seven diagnostic categories of pigmented lesions: actinic keratoses and intraepithelial carcinoma / bowen's disease (akiec), basal cell carcinoma (bcc), benign keratosis-like lesions (solar lentiginos / seborrheic keratoses and lichen-planus like keratoses, bkl), dermatofibroma (df), melanoma (mel), melanocytic nevi (nv) and vascular lesions (angiomas, angiokeratomas, pyogenic granulomas and hemorrhage, vasc). We use this dataset to develop android mobile app for pigmented skin lesion diagnosis.

Methods: Tensorflow v.2.0.0-beta1 and Python 3.6 are used for developing trained model. Mobilenet v.2 model trained with ImageNet dataset is used for transfer training. HAM10000 dataset is divided into training and validating groups with ratio 80:20. The model is trained for 10 epochs with 32 in batch size. Finally, trained tensorflow model is converted to tensorflow lite float model and is used for Android app development.

Results: The trained tensorflow model is tested with validation data and can achieve final validation loss: 0.65 and final validation accuracy: 76.30%

Conclusions: Even validation accuracy is high but not enough to use the app as fully automation. The model development still needs further improvement.

Keywords: HAM10000, Skin diagnosis, Mobile



P-259

Effect of a Household Approach with Distillatory Apparatus on Salt Intake and Blood Pressure in Coastal Area of Bangladesh

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Abstract

Background/Objectives: As southern part of Bangladesh is at a low altitude, sea water invades easily the inland. Cyclone which occurs in Bay of Bengal causes often flood by sea water. Moreover there are saline ponds for shrimp culture even 30 km away coastline. Accordingly groundwater contains salt derived from sea at a high concentration. Because most of inhabitants use groundwater or surface water containing salt, excessive salt intake may lead to health problems. To prevent health problems, we devised Triangular Solar Still (TrSS) to produce distilled water, introduced it there and investigate the effect on users.

Methods: We recruited 62 healthy females living in Charbanda or Parboyarjhapa village located in Khulna Division, Bangladesh. We provided TrSS for participants and they used TrSS approximately for 2 weeks. Na/K ratio (urinary salt index) and blood pressure were measured before and after TrSS usage. Data were analyzed by t-test or ANOVA.

Results: 39 females were analyzed, because 23 females were excluded from analysis due to absence from measurement or wrong usage. Of 39 females, 29 females usually used groundwater or surface water for drinking (non-rainwater users: NRU). 10 females usually used harvested rain water (rainwater users: RU). Before TrSS use, Na/K ratio of NRU was significantly higher than RU. After TrSS use, there was no significant difference between two groups. Na/K ratio and Systolic blood pressure of NRU after TrSS use were significantly lower than before.

Conclusion: TrSS is useful for prevention of excess intake of salt in coastal area of Bangladesh.

Keywords: Bangladesh, Groundwater, Salt, TrSS



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Evaluation of Artificial Intelligence Photo-labelling Performance in Detecting Fast Food Items in Singapore Food Setting

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Abstract

Background/Objectives: Diet assessment is an indispensable tool of diet-related health promotion and intervention programmes, especially for risk classifications and monitoring changes of diet on individuals/population levels. Assessing habitual diet is best done prospectively, with individuals recording food consumed at time of eating (diet record) over several days, instead of relying on memory of past intakes. Diet record (DR) using photographs of food taken by the respondent is advantageous, as it is less prone to response bias (e.g. over reporting of healthy food and omission of unhealthy food) and less burdensome compared to written DR. Despite the advantages, the photo method is resource-intensive, requiring dietitians labelling the photographs. Utilization of artificial intelligence has been piloted to improve the efficiency of photo-based DR, but its performance has not been evaluated in Singapore food setting.

Methods and Results: We evaluate the performance of Google Vision (GV), an artificial intelligence photo-labelling system, in detecting 52 photos of fast food items (FF) out of 147 photographs of food taken by volunteers (non-professional photographers) in 2018. FF labelling (burger, pizza, fries, nuggets, etc.) is chosen as identification of individuals consuming large amount of FF and monitoring the changes of food consumption following dietetic consultation is of public health interest, reflecting real-world use of this system. All GV labelling with confidence of 0.50 or above were retained and compared with dietitian labelling of food photographs as reference. Every individual request of photograph interpretation was completed by GV within 3.5 seconds. Incorrect labelling occurred in 6 out of 52 FF, and one out of 95 non-FF, resulting in sensitivity of 88.5% (95%CI: 76.6-95.6%) and specificity of 98.9% (95%CI: 94.3-100%). Overall, inter-rater agreement between GV and dietitian labelling was strong, with Cohen's Kappa of 0.89 (95%CI: 0.81-0.96).

Conclusions: These results suggest that the ability of GV to classify fast food items within Singapore food setting is feasible and reasonably accurate. Its usage in interpreting large-scale photo-based DR could be considered, if the goal was to assess or monitor fast food items intakes. The performance of GV for other labelling criteria and in other countries food settings warrants further investigations.

Keywords: Diet assessment, Artificial intelligence





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Spatial Temporal Patterns of Leprosy in Malaysia, 2014-2018

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Abstract

Background/Objectives: This study aimed to examine whether spatial-temporal patterns of leprosy can be used to identify areas at risk of leprosy disease. A longitudinal study among 1,114 people in urban area in Federal Territory of Kuala Lumpur and Putrajaya from 2013 to 2018 studied spatial and temporal determinants for recent leprosy cases.

Methods: Data related to dengue cases were gathered from the Disease Control Division, Ministry of Health Malaysia. Geospatial analysis was applied to further study the spatio-temporal patterns of leprosy cases in data set, including hot spot/cold spot analysis and geographically weighted regression models.

Results: Spatial and temporal variation of leprosy cases was observed in the geographic areas affected by leprosy cases. This study demonstrated that the locally-acquired dengue cases have exhibited a spatial and temporal variation over the past twenty years in Malaysia. There is a clear evidence for the existence of statistically significant clusters of leprosy and these clusters.

Conclusions: These findings enabled us to detect and target leprosy clusters suggesting that the use of geospatial information can assist the health authority in planning leprosy control activities and it would allow for better design and implementation of dengue management program.

Keywords: Spatial, Leprosy, GIS



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Visualizing "Food Inaccessible Areas" in Sado Island, Japan

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Abstract

Background/Objectives: In recent years, with the suburbanization of large-scale commercial facilities, food stores decrease in the central part. Consumers who feel inconvenience or hardship in purchasing food products expand mainly among elderly people. The food access problem, such as difficulties in obtaining food products, has become apparent throughout the country. This problem is an important issue in terms of quality of life and health. The Ministry of Agriculture, Forestry and Fisheries has published food access maps to address this issue. In order to consider specific measures, it is necessary to examine in detail the geographical distribution of elderly people in the particular region, and the location of food stores such as supermarkets. However, this information has not been published. In this study, the authors tried to visualize the geographical distribution of the elderly people and the location of food stores in Sado Island, Niigata Prefecture, Japan, which is a sparsely populated area with a high aging rate.

Methods: Statistical GIS (geographic information system) boundary data and age-specific gender population data were obtained from the e-Stat (a portal site for Japanese Government Statistic). ArcMap 10.5 (Esri Japan) was used to visualize these data. A supermarket was treated as the food store. A buffer within 2 km from the supermarket (shopping area) was created as the range which the elderly people can utilize by a vehicle. Population aged 65 and over, or 75 and over were used.

Results: As a result of drawing the geographical distribution of the shopping area and the elderly people, the area where the highest number of people aged 65 and elderly lived was included in the shopping area. The area with the highest number of people 75 and over was not included. The out of the shopping area was considered to be a "food inaccessible area."

Conclusions: Visualizing the geographical distribution of the shopping area and the elderly people using GIS has enabled us to identify the food inaccessible area. In the future, it is necessary to conduct a more detailed analysis of food inaccessible areas taking into consideration the influence of topography.

Keywords: Food inaccessible areas, Geographic information system, Elderly people, Japan



P-263

Sports Monitoring with Flying Drones (Moving Aerial Cameras) Maybe Cost Efficient if Injuries are Prevented

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Abstract

Background/Objectives: Estimates from Yeo in the late 1990s as cited in the manuscript by Berry and colleagues on cervical spinal cord injury in rugby union and league, estimate the cost of care for a person with paraplegia is \$1 million, rising to a staggering \$5 million for a tetraplegia casualty. In addition to this is the fact that often insurance cover provided for casualties is insufficient. An Australian access economics report [2009] estimated the lifetime cost of care is 5.0 million for an incident paraplegia case and 9.5 million for a quadriplegia case, and costs/year are approximately \$90,000 per spinal cord injury paraplegia case. Hilton in 2018 published a manuscript on ‘moving aerial cameras at sporting venues and whether they have the potential to revolutionize injury surveillance monitoring’. These devices have the capacity to produce expert exposure for purposes of recording, investigation, tracking and monitoring of sporting injuries.

Methods: According to Wikipedia, the number of professional rugby union and league playing fields within Australia is estimated to be [RU; 20 and RL; 26 (NRL club venues and occasional venues)]. Hire cost from drone worxs is \$650/hour to monitor a sporting event across 46 clubs x 52 weeks one hour /week = \$1,554,800. Based on a manuscript by Hilton, reviewing rugby union and league Australian spinal cord injury datasets, there are more incident cases of spinal cord injury in union compared to league. The Australian Institute of Health and Welfare document titled; Australian sports injury hospitalizations 2011–12 report just under 800 head and neck injuries requiring hospitalization related to rugby-related sports. More specifically this included 35 neck fractures and 348 head fractures. The total cost equates to multiplying the number of cases x cost of care/case.

Results: Drone worxs cost divided by healthcare costs/case/year [\$90,000] equates to 17 so if these injuries are prevented then cost equivalence is reached in broad general terminology figurately speaking, after which cost benefits accrue.

Conclusions: Drones are not overly expensive compared to spinal cord injury costs. The occasional presence of aerial cameras at sporting venues may also deter repeated foul play.

Keywords: Spinal cord injuries, Drones



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Performance of Rapid Diagnostic Tests for Malaria Diagnosis in Children: A Systematic Review

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Abstract

Background/Objectives: Children aged under 5-year-old accounted for 61% of all malaria deaths around the world in 2017. In order to reach SDG 3.2 and 3.3, the quicker differential diagnosis between malaria and non-malaria fever is vital for lessening their death and severe cases. Rapid Diagnostic Tests (RDTs) is a strip to detect Plasmodium-specific antigens in a drop of blood and could be helpful in resource-limited areas for malaria diagnosis. Thus, the aim of our study is to assess the diagnostic accuracy of RDTs for malaria in children against microscopy or PCR.

Methods: Pubmed, Web of Science, EMBASE, Cochrane Library, the China National Knowledge Infrastructure, Wanfang Data, and Sinomed databases were systematically searched in August 2018 to identify relevant studies evaluating the performance of RDTs in children. Studies comparing RDTs with microscopy or PCR were eligible and their data were extracted. Quality of studies was evaluated using the revised Quality Assessment of Diagnostic Accuracy Studies Tool. Meta-analysis was used for data synthesis.

Results: 38 articles were included. For pre-treatment diagnosis, the pooled sensitivity and specificity of RDTs were 94% (95%CI:91-97%) and 95%(95%CI:91-97%). Subgroup analysis showed that RDTs conducted in high malaria transmission areas had higher sensitivity but lower specificity than those performed in low to moderate transmission areas. And both sensitivity and specificity estimated by prospective cohort studies appeared higher compared to cross-sectional studies. For post-treatment diagnosis, the specificity of HRP-2 based RDTs increased with days of follow-up. And at early stages after initial treatment, the specificity of Pf-LDH based RDTs was higher than HRP-2 based.

Conclusions: For pre-treatment diagnosis, RDTs had relatively high sensitivity and specificity in children malaria detection. As they also have the advantages of rapid detection and easy to use, it's recommended that the wider usage of RDTs should be promoted in both public and private health sectors for better case management of childhood malaria.

Keywords: Malaria, Rapid diagnostic tests, Children, Systematic review



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Better Services through Better Systems: A Case Study on Strengthening the Pharmacy Inventory Management System in Conflict-affected Ethnic Areas of Myanmar

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Abstract

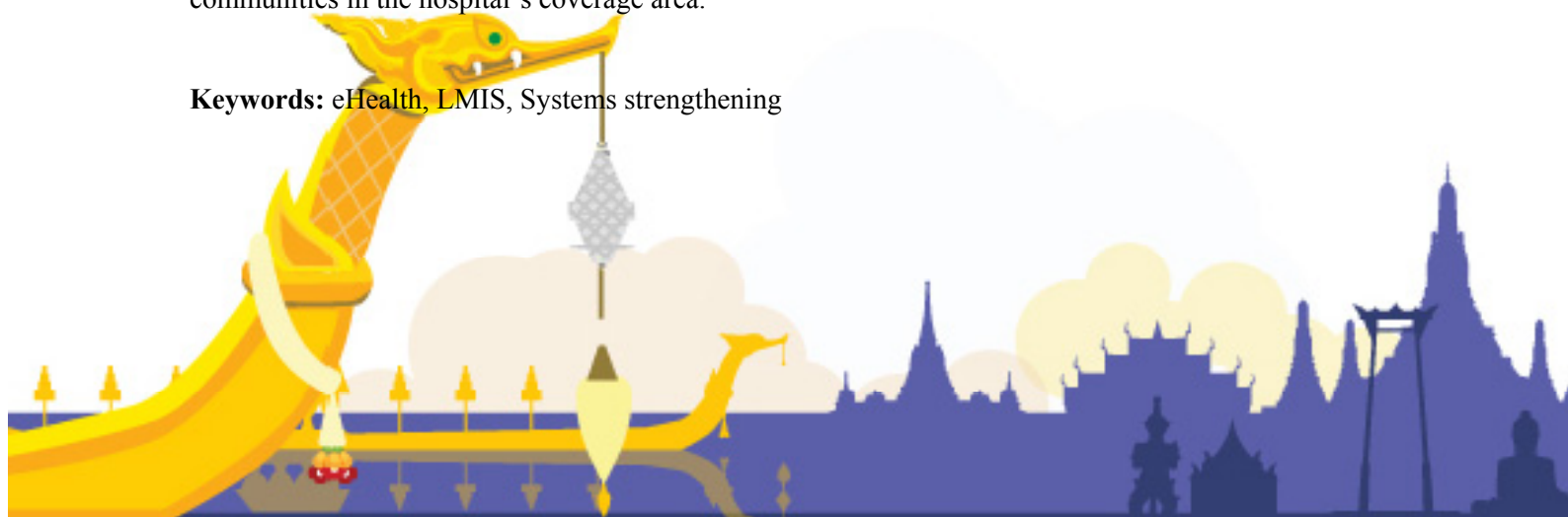
Background/Objectives: One of the world's longest civil wars between the Government of Myanmar and Karen ethnic minorities has displaced and marginalized many communities, and limited their access to quality healthcare services. The Karen Department of Health and Welfare (KDHW), which is affiliated with the Karen National Liberation Army, has provided primary healthcare services in ethnic areas where government services do not reach. In May 2017, KDHW opened Taw Nor Hospital to cover approximately 35,000 people from 49 villages. To achieve universal health coverage, providers like KDHW must have effective and efficient allocation of resources and utilization. Expenditures on medicines, supplies and equipment make up 40-60% of all hospital expenditures (Camp et al., 2014), but can be optimized by pharmacy management (PMx) systems that include regular monitoring of stock balances, expiry status, forecasting for procurement, and reorder levels. This assessment aimed to present preliminary findings and lessons learned from the implementation of a PMx system at Taw Nor Hospital.

Methods: In May 2017, qualitative in-depth interviews with medical superintendents and medical officers were used to explore existing PMx capacity, bottlenecks and required interventions. Respondents identified and prioritized five interventions: 1) basic training for pharmacy management to respective staff, 2) development and installation of PMx software, 3) training to use the software, and 4) performance monitoring. Stepwise interventions were undertaken from June 2018 to December 2019. The progress of pharmacy management performance was assessed using a monitoring checklist for stock balance monitoring, expiry status check, transaction errors rate, and disposal practices.

Results: Preliminary findings show that there were some improvements in pharmacy inventory management performance. Both pharmacy staff and supervisor practiced monthly stock balance and expiry monitoring, forecasting and planning for purchasing required medicines, and performing quarterly physical stock checks. However, 60% of transaction errors remained, primarily due to lack of timely data entry into the PMx database and difficulty to correct errors within the database.

Conclusions: The pharmacy management information system improved efficiency in managing inventory, enabled timely informed decision-making, and improved access to medicines for ethnic rural communities in the hospital's coverage area.

Keywords: eHealth, LMIS, Systems strengthening



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Behavior Problems among Grade Eight School Children in Jaffna District, Sri Lanka; Prevalence Correlates and the Effectiveness of a Yoga Based Intervention Package

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Abstract

Background/Objectives: To determine the prevalence, correlates of behaviour problems of Grade 8 school children, and to evaluate the effectiveness of a yoga-based intervention package in the schools to address these behavioural problems.

Methods: Parents and teacher report of strength and difficulty questionnaire was validated for Jaffna students and cut off points determined to differentiate behaviourally normal and abnormal children using psychiatric clinic and community samples (abnormal children n=40, normal children n= 88). A cross sectional study carried out to determine the prevalence of abnormal behaviour and its correlates using multi stage cluster sampling population proportionate to size in Jaffna district (n= 1328). A desk review conducted with relevant expertise to finalize the yoga based intervention package. A non-randomized control trial carried out in 4 educational zones of Jaffna district for 6 months using a yoga based intervention package with a pre and post quantitative assessment and a post qualitative assessment from the intervention group.

Results: Behaviourally abnormal students assessed by parents, teachers and students were 10.1% (C. I= 8.5- 11.8), 32.1% (C.I= 29.6- 43.6) and 26.5% (C.I= 24.2- 28.9) respectively by Jaffna cut off points. Total difficulty score and all the subscale scores between pre and post assessment, reduced significantly in intervention group and worsened in the control group (p<0.001 for both groups). Focus group discussion indicated the benefits of this intervention.

Conclusions: This yoga based intervention package was simple and the effectiveness now proved scientifically therefore can be introduced in all the schools in Sri Lanka for the better quality of life of the adolescents.

Keywords: Behavioural problems, Difficulty scores, Yoga based intervention





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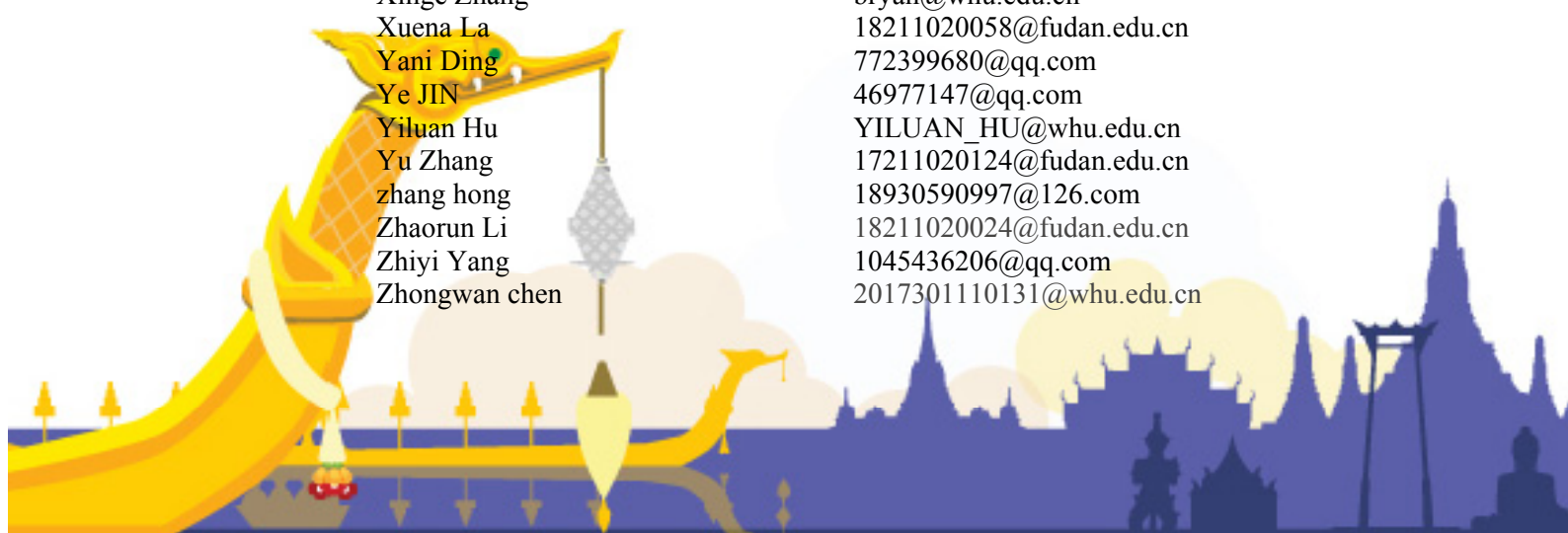
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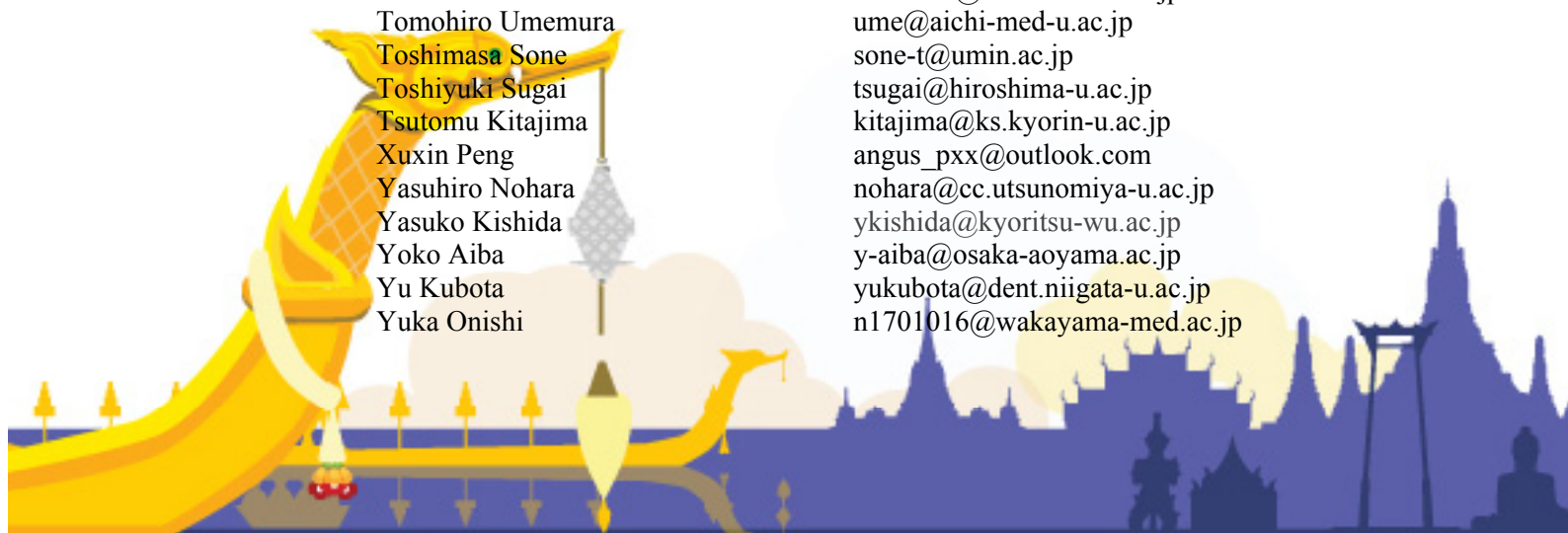




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Thai Health Promotion Foundation

Thai Health Promotion Foundation (ThaiHealth) was established in 2001, the first organization of its kind in Asia. Created under the Health Promotion Foundation Act 2001, ThaiHealth is an autonomous state agency outside the formal structure of the government. It is funded by a 2% additional levy on top of the excise taxes, or 'sin taxes', from alcoholic beverages and tobacco products. It is administered by the multi-sectoral Board of Governance chaired by the Prime Minister of Thailand with half of the members from relevant ministries and the other half from independent experts on various fields.



ThaiHealth pursues the vision that “all the people living in Thailand have capability and living in a society and an environment conducive to good health” by

driving the mission “to inspire, motivate, coordinate, and empower individuals and organizations in all sectors to have capability, and to create society and environment conducive to good health.” This allows it to promote health in close partnership with each and every sector in society. Up to now, over 20,000 partners from individuals, communities, organizations from all sectors have committed to promote a better health with ThaiHealth and the number is still growing.

The mandate translates into 15 master plans that ThaiHealth pursue as its strategic priority areas, categorized into the issue-based, setting-based and the system-based plans. Over the past two decades, ThaiHealth was considered by many including the World Health Organization to be an effective model for innovative and sustainable financing for health. ThaiHealth acts as a catalyst for activities that changes values, lifestyles, and social environments directed to positive changes in health status. It has enabled Thailand to achieve important gains and impacts in tobacco control, alcohol control, road injury reduction, and several other areas of health promotion. ThaiHealth also conduct a comprehensive social marketing plan, encompassing media campaigns on priority health issues. ThaiHealth’s media campaign has built health awareness up to 85 percent of the public. This contributes to shifts in community norms and attitudes that ripen the political and social environment for change.



SMOKING KID



Challenge

The Thai Health Promotion Foundation (THPF) is an organization that looks to reduce the toll cigarette use takes on the Thai population. However, the number of people starting smoking has not diminished as much as they would like. Now, the THPF wants a fresh, new anti-smoking campaign that will shock smokers, get them thinking and help reduce the number of smokers in the country.

Insight

When adults see children modeling, they usually normally take action to educate the children about their actions and when the same adults ignore the children's action, they overlook the danger from the insight, we use children asking for a light as the device to send a message that strikes adults and warns them about the dangers of smoking. As adults warn the children not to smoke, the children repeat the warning back. This memorable incident will cause adults to think about the dangers of smoking every time before they light up their next cigarette.

"Because warning yourself about the dangers of smoking is the most effective way of quitting smoking."

Creative Execution



At smoking areas outside busy public buildings in central Bangkok and suburbs, we get child actors aged 7 to 10, holding a cigarette, to walk up to adults and ask them for a light. When adults refuse and warn the children not to smoke, the child actors would ask them why they themselves are smoking and hand a brochure to the adults.

The scary threat we...

But why not about yourself? Becoming parental is the most effective way to quit. You can quit for good with our support.

Result

The VDO clip furiously lights up conversation worldwide.



Over **5,000,000** YouTube views in 10 days.

Stimulated over **20,000** comments globally about the hazards of smoking.

Earned free press coverage in 30 countries as "the best anti-smoking campaign ever."

An increase of **40%** in phone inquiries by smokers who want to quit.



TheiHealth at a Glance:

Organization	Thai Health Promotion Foundation (ThaiHealth)
Vision	<i>"Everyone in Thailand has capability, and is living in a society and environment conducive to wellbeing."</i>
Funds (source, \$US)	2% earmarked tax of tobacco and alcohol excise tax \$US 135 Million (2018)
Legislation / Objectives	<p><i>Health Promotion Act 2001</i></p> <ul style="list-style-type: none"> ➤ To promote and encourage health promotion in the population of all ages in accordance with the national health policy. ➤ To create people's awareness of and a belief in health. ➤ To support campaigns for the reduction in the consumption of alcoholic beverages, tobacco and other deteriorating substances. ➤ To conduct studies, research and meetings in health promotion. ➤ To develop the ability of communities and organizations in health promotion. ➤ To support media campaigns for health promotion
Plans	<ol style="list-style-type: none"> 1. Tobacco Control Plan 2. Alcohol and Substance Abuse Control Plan 3. Safety and Social Risk Factors Management Plan 4. Health Risk Control Plan 5. Health Promotion Plan for Vulnerable Populations 6. Healthy Community Strengthening Plan 7. Healthy Child, Youth, and Family Promotion Plan 8. Health Promotion in Organizations Plan 9. Physical Activity Promotion Plan 10. Healthy Media System and Spiritual Health Pathway Promotion Plan 11. Health Promotion Innovation and Open Grant Plan 12. Health Promotion in Health Service System Plan 13. Health Promotion Mechanism Development Plan 14. Healthy Food Promotion Plan 15. Health Literacy Promotion Plan

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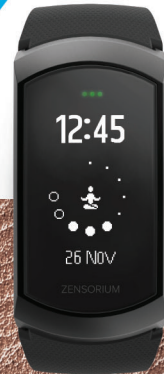
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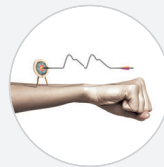
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