



**The 13th International Graduate Students Conference on
Population and Public Health Sciences
(IGSCPP)**

Abstract Book

July 8, 2022

The College of Public Health Sciences, Chulalongkorn University

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WELCOME MESSAGE



Prof. Sathirakorn Pongpanich, Ph.D.
Chairperson, Executive Committee, 13th IGSCPP
Dean
The College of Public Health Sciences, Chulalongkorn University, Thailand
www.cphs.chula.ac.th

Dear Colleagues,

On behalf of the College of Public Health Sciences, Chulalongkorn University and Scientific Committees of the 13th International Graduate Students Conference on Population and Public Health Sciences, I would like to welcome all of you to the College of Public Health Sciences. There will be a number of student presentations reflecting the broad diversity of public health issues. We hope you will take the advantage of this opportunity to participate in interesting discussions as well as to meet with new colleagues.

I would like to thank the conference co-chair Assoc. Prof. Dr.Aree Jampaklay, Director of Institute for Population and Social Research, Mahidol University and Assoc. Prof. Dr.Phudit Tejavivaddhana, MD, Director of ASEAN Institute of Health Development, Mahidol University as well as the members of the Organizing and Scientific Committees, colleagues and staff for their tireless efforts to organize this conference. I, as well, would also like to acknowledge significant support of Chulalongkorn University for this conference.

The success of the conference now rests upon your collective shoulders, in your presentations and participation. I encourage all of you to take in the experience as much as you can, to meet colleagues, to debate scientific perspectives, and of course, to take some time to enjoy the surroundings and Chulalongkorn University Campus.

Once again, welcome all of you to The 13th International Graduate Students Conference on Population and Public Health Sciences.





WELCOME MESSAGE



Assoc. Prof. Phudit Tejavatvaddhana, Ph.D.

Co-Chairperson, Executive Committee, 13th IGSCPP

Director

ASEAN Institute for Health Development, Mahidol University, Thailand

www.aihd.mahidol.ac.th

Dear Colleagues,

On behalf of the organizing committee, I am very honored to welcome you to the 13th International Graduate Students Conference on Population and Public Health Sciences (IGSCPP). This international conference is jointly organized by the College of Public Health Sciences (CPHS), Chulalongkorn University, Institute for Population and Social Research (IPSR), and the ASEAN Institute for Health Development (AIHD) of Mahidol University. The collaboration between these three organizations has been strengthened by several positive outcomes. This annual conference is a wonderful platform for graduate students to exchange ideas, broaden their knowledge, meet new friends, expand their network, and strengthen the academic collaboration among the three partnering organizations. I would like to thank all participants for their contributions to the conference. I hope you will find the presentations and discussions today useful and interesting and will gain inspiration from them. Finally, I would like to thank CPHS for hosting this academic event and IPSR for co-organizing and supporting this remarkable conference.

With this, I sincerely hope that this conference will be an important step toward strengthening our knowledge in Population and Public Health Science.



WELCOME MESSAGE



Assoc. Prof. Aree Jampaklay, Ph.D.

Co-Chairperson, Executive Committee, 13th IGSCPP

Director

Institute for Population and Social Research, Mahidol University

<http://www.ipsr.mahidol.ac.th/>

My Dear Colleagues,

Welcome, everyone. I am grateful to be part of the 13th International Graduate Students Conference on Population and Public Health Sciences (IGSCPP), 2022. This annual conference has been continually organized for the past 12 years with a common goal of promoting academic activities, networking, and building partnerships. In these globally trying times, it is delightful to celebrate the success of the collaborative effort once again between these three exceptional Institutes:

- College of Public Health Sciences (CPHS), Chulalongkorn University
- ASEAN Institute for Health Development (AIHD), Mahidol University
- Institute for Population and Social Research (IPSR), Mahidol University

On behalf of the Institute for Population and Social Research (IPSR), Mahidol University, it is my honor to welcome everyone from diverse backgrounds and countries attending this conference. I am sure that by sharing your research, we will gain a deeper understanding and knowledge about different aspects of population and public health, including health care and reproductive health.

My sincere congratulations and gratitude go to the two fellow co-chairs and their excellent staff: Prof. Dr. Sathirakorn Pongpanich with the College of Public Health Sciences (CPHS), Chulalongkorn University, and Assoc. Prof. Dr. Phudit Tejavivaddhana with the ASEAN Institute for Health Development (AIHD), Mahidol University, for putting so much effort into helping organize this conference. I am also thankful to all IPSR staff who actively contributed to making this conference happen. Your support is vital to our success.

My genuine appreciation goes out to all graduate students, researchers, and presenters sharing their research at this conference. Your contribution is essential to this collaborating and networking event.

Let me once again welcome everyone to the 13th International Graduate Students Conference on Population and Public Health Sciences (IGSCPP). I know you will find this experience to be a treasure for your academic life, now and in the future.

Thank you



The 13th International Graduate Students Conference on Population and Public Health Sciences (IGSCPP)

July 8, 2022

The College of Public Health Sciences, Chulalongkorn University

Time	Program
8.30-8.45	VDO Presentation & Welcome
8.45-9.00	Conference Welcome Report Welcome keynote: <i>Professor Sathirakorn Pongpanich, Ph.D.</i> <i>Dean, College of Public Health Sciences,</i> <i>Chulalongkorn University</i> <i>Associate Professor Phudit Tejavivaddhana, Ph.D., MD</i> <i>Director, ASEAN Institute of Health Development,</i> <i>Mahidol University</i> <i>Associate Professor Aree Jampaklay, Ph.D.</i> <i>Director, Institute for Population and Social Research, Mahidol University</i> Conference Opening Keynote <i>Professor Bundhit Eua-arporn, Ph.D.</i> <i>President of Chulalongkorn University</i> <i>MC: Prof. Chitlada Areesantichai, Ph.D.</i>
9.00-9.30	Special Lecture: <i>Impact of COVID-19 for Public Health Education in CLMV</i> <i>Professor Wongsu Laohasiriwong, Ph.D.</i> <i>Dean, Faculty of Public Health, Khon Kaen University</i> Chairperson & Co-Chairperson <i>Assoc. Prof. Wattasit Siriwong, Ph.D. / Asst. Prof. Montakarn Chuemchit, Ph.D</i>
9.30-9.40	Photo Group / Short Break
9.40-12.00	Oral Presentation
Room 1 (Host by CPHS)	Track 4: Communicable Diseases (CD) and Non-Communicable Diseases (NCD), Sexual and Reproductive Health and Rights, Gender and Sexuality, Violence Against Women and Children, STIs and HIV/AIDS, Health Promotion, Health Behaviours
	Chairperson & Co-Chairperson <i>Wandee Sirichokchatchawan, Ph.D. / Asst. Prof. Dusita Phuenqsamran, Ph.D.</i> Outstanding awards committee: <i>Assoc. Prof. Cheerawit Rattanapan, Ph.D.</i>

Time	Program
	1) Mortality Trend Analysis for Pneumonia in the Philippines from 1960 to 2019 (#01) <i>by Angel Mae F. Luga</i>
	2) Overweight Risk Factors among Adolescents in Indonesia (#02) <i>by Purwo Setiyo Nugroho</i>
	3) To be a Victim in Their Own Community: Experience to Violence Exposure among Adolescents in Makassar, Indonesia (#03) <i>by Andi Ny Yudha</i>
	4) Sexual And Reproductive Health Needs of Adolescents: A Case Study at Senior High School 2 Bantul, Yogyakarta-Indonesia (#04) <i>by Ratu Matahari</i>
	5) Menopause Healthcare and Women's Right to Health in Prison: A Global Scoping Review (#05) <i>by Lizz Srisuwan</i>
	6) Gender Identity, Sexual Orientation, and Pattern of Sexual Behaviors of LGBTIQAN+ in Thailand (#06) <i>by Naphat Krutthai</i>
	7) Factor Associated with Reproductive Health Agency Among Indonesian Young Women Aged 15-24 (#07) <i>by Achmad Fauzan Maulana</i>
Room 2 (Host by IPSR)	Track 1: Population, Demography, Aging and Migration, Active Aging and Innovation Track 3: Primary Health Care, Global Health, Health Care Management, Health Promotion, Health Behaviours, Substance abuse, Addiction studies, Mental Health, District Health System, Health System Research, Universal Health Care Coverage, Social Health Protection and Health Security Management, Health Economic, Behavioural Economic, Health Policy and Administration Track 6: One Health, Zoonoses and Antimicrobial Resistance
	Chairperson & Co-Chairperson: <i>Asst. Prof. Wakako Takeda, Ph.D. / Tepanata Pumpaibool, Ph.D.</i> Committee: <i>Asst. Prof. Somsak Wongsawass</i>
	1) Barriers and Facilitators to Access Mental Health Services: Perspectives of People Living with Mental Illnesses in Indonesia (#08) <i>by Lafi Munira</i>
	2) Loneliness in Later Life and its Association with Physical and Mental Health: Findings from a Vietnam Aging Community Survey (#09) <i>by Man Vo Thi Hue</i>
	3) A Policy Simulation Impact of Tobacco Excise Tax Increase on Cigarette Consumption, Mortality, Medical Treatment Cost, Life-Years Gained, and Government Revenue in Indonesia (#10) <i>by Ridhwan Fauzi</i>

Time	Program
	4) Financial Burden Toward Out-Of-Pocket Expenditure on Health Care among Households with Members Suffering from NCDs in Vietnam (#11) <i>by Nguyen Thi Phuong Linh</i>
	5) Six Decades of Schistosomiasis Disease in the Philippines: Profile and Trend Analysis (#12) <i>by Jamerah B. Sidic</i>
	6) Factors Associated with Menstrual Hygiene Management among Female Students in Tangerang Municipality, Indonesia (#13) <i>by Wihdaturrahmah</i>
	7) Factors Associated with the Utilization of Antenatal Care Visits in Sylhet, Bangladesh (#14) <i>by Moni Paul</i>
Room 3 (Host by AIHD)	Track 2: COVID-19, Public Health, Public Health Sciences and Health Social Science, Digital Health and Technology Track 5: Environmental and Occupational Health, Sustainable Development Goal, Global warming, Disaster management, Resilience
	Chairperson & Co-Chairperson: <i>Asst. Prof. Aroonsri MongkolChat, Ph.D. / Assoc. Prof. Nutta Taneepanichskul, Ph.D.</i> Committee: <i>Asst. Prof. Marc Voelker, Ph.D.</i>
	1) Evaluation of Self-purification Capacity of Gamasiab River in Nahavand Township in Iran using MATLAB Software (#15) <i>by Mahdi Reyahi-Khoram</i>
	2) Development of Lipidomics LC-MS/MS Method for Absolute Quantification of Targeted Polar Lipids in the Liver Sample of Zebrafish Model (#16) <i>by Kajol Thapa</i>
	3) Prediction of Pesticides Exposure and Human Health Risk among Rice Farmers in Ayeyarwady, Delta Region, Myanmar: A Cross-Sectional Study During COVID -19 Pandemic (#17) <i>By Moe Thu Khin</i>
	4) Health Impact Assessment of Short-term Exposure Particulate Matter (PM) 2.5 on Hospital Admission for Respiratory Diseases in Thailand (#18) <i>by Friscilla Hermayurisca</i>
	5) Geographical Distribution Improvement of Physicians in Thailand and Japan: A Comparative Longitudinal Secondary Data Analysis (#19) <i>by Hiromichi Takahashi</i>
	6) Myanmar Cross-border Patients' Health Seeking Behaviour in China and Determinants in the Decision-making Process (#20) <i>by Chenhao Wang</i>
	7) Sustainable Management of Facemask Waste Generated from COVID -19 Pandemic in Bhutan (#21) <i>by Tshering Yangdon</i>

Time	Program
12.00-13.30 (Host by CPHS)	Poster Presentation (room 1)
	<i>Poster committees: Vo Man Thi Hue, Ph.D. / Assoc.Prof. Sutthida Chuanwan, Ph.D. Prof. Ratana Somrongthong, Ph.D. / Nipunporn Voramongkol, M.D. MPH./ Nuchanad Hounnaklang, Ph.D. / Onuma Zongram, Ph.D. Assoc. Prof. Kanchana Rungsihirunrat, Ph.D.</i>
	1) The Prevalence and Factors Associated with Depression Among Lesbians in Chengdu, China <i>by Linghong Liao</i>
	2) Abstract on Evaluation of Risk Mother Tracking System (RMTS) at Shan(S) State <i>by Sai Win Zaw Hlaing</i>
	3) Association between Completed Suicide and Gender in Chaiyaphum Province, Thailand <i>by Pattarachai Simaroj</i>
	4) Association between Medical Insurance Choices and Healthcare Utilization among Diabetes Patients in The People's republic of China: A Secondary Data <i>by Duohui Chen</i>
	5) A Study of Perceived Stress among Adolescents Living in Slums of Dhaka, Bangladesh in the Times of Pandemic <i>by S M Taslima Yasmin</i>
	6) Exploring and Reducing Tuberculosis Stigmatisation and Discrimination in Thai High-Schools <i>by Saowaluk Moonsarn</i>
	7) Bioinformatics Analysis to Identify Key Cell Cycle-regulated Target Genes of Quercetin and Their Associations with a Disease-free Survival in Cholangiocarcinoma <i>by Patthorn Jaikla</i>
	8) The Prevalence of Probable Post-Traumatic Stress Disorder among Flood-prone Provinces in Thailand <i>by Natakorn Ritbunyakorn</i>
	9) Spatial Epidemiology of Pediatric Pulmonary Tuberculosis (Tb) Cases in Medan City 2016-2020 <i>by Dini Pratiwi</i>
	10) Determinant of Intra Uterine Device (IUD) Use in Public Health Center of Cangkringan, Sleman Regency, Yogyakarta-Indonesia <i>by Ratu Matahari</i>
	11) Relationship of Sense of Ownership and Trust to Community Engagement in the Community Health Worker Program, Karenni State, Myanmar: A Cross-Sectional Study <i>by Mrs. Celyn</i>
	12) Factors Associated with Comprehensive Knowledge of HIV among Adolescents Aged 15-19 in Zimbabwe <i>by Gamuchirai Natasha Munjoma</i>

Time	Program
	Poster Presentation (room 2) <i>Poster committees: Kriangkrai Lerdthusnee, Ph.D. / Napaphan Viriyautsahakul, Ph.D. M.D. Assoc. Prof. Chaweewon Boonshuyar/ Pokkate Wongsasuluk, Ph.D / Nanta Auamkul, M.D, M.P.H/ Narumol Bhummapha, Ph.D, / Lecturer Dr. Dyah Anantalia Widyastari / Asst. Prof. Supaporn Songpracha, Ph.D</i>
	13) The Stress among lecturers in the Universities with Online Teaching in Vietnam during COVID-19 Pandemic: A Preliminary Study <i>by Anh Hoang Thi Ngoc</i>
	14) Health Risk Assessment Related to Cadmium Exposure from Cigarette Smoking among Indonesian Smokers in Surakarta, Indonesia: A Cross-Sectional Study <i>by Panji Mukti</i>
	15) Factors Affecting Knowledge about HIV/AIDS in Women of Reliable Age in North Sumatera Province in 2017 (2017 Idhs Data Analysis) <i>by Bebby Alfiera Riyandina Hardja</i>
	16) Influential Factors of Thai Older Adults' Intent to Receive Short-term Stay Service <i>by Ichikawa Mariko</i>
	17) Demographic Changes and Economic Growth: Empirical Evidence from Macau <i>by Tian Yingguihang</i>
	18) Access and Use of Mobile Phone in Rural Mountainous Community in Nepal <i>by Paudel S</i>
	19) Case Analysis of Rabies Transmitting Animal Bites (GHPR) in North Tapanuli Regency, North Sumatra Province in 2016-2020 : Spatio-Temporal Epidemiological Study <i>by Saidah Fatimah Sari Simanjuntak</i>
	20) Association between Loneliness and Related Factors among University Students during COVID-19 Pandemic in Bangladesh <i>by Sanjida Sultana</i>
	21) Prevalence of Food Insecurity and it's Predictors amongst Adolescents Living in Urban Slum Settlements of Dhaka, Bangladesh during the Era of COVID 19 Pandemic <i>by S M Taniya Yasmin</i>
	22) Prevalence of Musculoskeletal Symptoms among Female Garment Workers in Khan Mean Chey, Phnom Penh city, Cambodia: A preliminary result from cross-sectional study <i>by TRY Phally</i>
	23) Outpatient Satisfaction with Community Health Service Center using Servqual-ipa in Shanghai, People's Republic of China <i>by Enli Chen</i>
	24) Shedding Light on the Opposite Standpoint: Determining the Contributing Factors Regarding the Anti-vaxxers' Refusal to Get Vaccinated Against COVID-19 <i>by Charisha Buen</i>
	25) Mortality Trends from Diabetes Mellitus in the Philippines, 1960-2019 <i>by Ralf Benjo Goder Morilla</i>
	26) A Conceptual Model for Ayushman Bharat 2.0: A Proposal for Universal Healthcare <i>by Ritwika Verma</i>

Time	Program
13.30-15.30	Oral Presentation
Room 1 (Host by CPHS)	Track 4: Communicable Diseases (CD) and Non-Communicable Diseases (NCD), Sexual and Reproductive Health and Rights, Gender and Sexuality, Violence Against Women and Children, STIs and HIV/AIDS, Health Promotion, Health Behaviours
	Chairperson & Co-Chairperson: <i>Asst. Prof. Montakarn Chuemchit, Ph.D / Assoc. Prof. Thunwadee Suksaroj, Ph.D</i> Committee: <i>Asst. Prof. Piyawat Katewongsa, Ph.D</i>
	8) Cancer in the Philippines from 1960 to 2019: A Time-Trend Analysis (#22) <i>by Kathleen L. Cabanlit</i>
	9) Seroprevalence of Dengue, Zika, and Chikungunya viruses among Human and Non-human Primates Living in Proximal in Laem Chabang, Thailand (#23) <i>by Fanny Sae Wang</i>
	10) Sociodemographic Correlates of Coming Out among U.S. Sexual Identity Minorities (#24) <i>by Matthew Kusen</i>
	11) TNF- α Treatment Decreased Progesterone Receptor-Mediated Transcription in Breast Cancer Cells (#25) <i>by Kunjira Rojpaisarnkit</i>
	12) Risk Factors and Outcomes of Intracranial Hemorrhages among Patients with Non-valvular Atrial Fibrillation Using Non-vitamin K Oral Anticoagulants (#26) <i>by Shoon Lae Nandar</i>
	13) Gender-based Violence Awareness and Access to Social, Legal, and Health Services among Women in Eastern Myanmar during the Military Coup (#27) <i>by Pan Nu Zaw</i>
	14) Husbands' Characteristics and the Unmet Needs for Family Planning among Married Women in Myanmar (#28) <i>by Yar Zar Tun</i>
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	8) Referral Patterns of Intermediate Care in Thailand (#29) <i>by Nalinee Nakittipha Chukhamfoo</i>

Time	Program
	9) Compilation, Explanation and Restoration of Moh Phon's Herbal Prescriptions for the Skin Conditions Caused by Viral, Bacterial, and Fungal Infections (#30) <i>by Ye Qiaoling</i>
	10) Determinants of Life Satisfaction among Older Persons in Myanmar (#31) <i>by Myo Thandar</i>
	11) Preventive Health Care and Health Care Services Utilization of Vietnamese Older Persons: Results from National Household Living Standards Survey 2018 (#32) <i>by Thao Nguyen</i>
	12) Associations between Sexual Orientation and Gender Identities (SOGI), and barriers to healthcare among LGBTQ+ people in Bangkok, Thailand (#33) <i>by Lizz Srisuwan</i>
	13) LGBTQ+ Healthcare Access in Nepal During the COVID19 Pandemic (#34) <i>by Sushobhan Bhandari II</i>
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	Chairperson & Co-Chairperson: <i>Asst. Prof. Orapin Laosee, Ph.D. / Kraiwuth Kallawicha, Ph.D.</i> Committee: <i>Asst. Prof. Sirinya Phulkerd, Ph.D.</i>
	8) Proof of Concept of Method for Evaluating Capacity Building for Health Literacy Responsive Practice (#35) <i>by Hailey Bradley</i>
	9) The Clinical Effects of Lysiphyllum strychnifolium (Craib) A. Schmitz Tea on Breastmilk Production (#36) <i>by Suwanna Maenpuen</i>
	10) The Determinants of Happiness among Food Delivery Riders in Bangkok and Metropolitan Area during the COVID -19 Pandemic (#37) <i>by Yasuko Watanabe</i>
	11) Prevalence and Associated Factors of Food Insecurity During COVID-19 Pandemic among Bangkokian (#38) <i>by Wimonmanee Mekkhum</i>
	12) Indonesian's Health Social Workers in Maternal and Child Program during COVID-19 Pandemic: How Were They Worked? (#39) <i>by Tri Bayu Purnama</i>
	13) Perception on Proper Used Face Masks Disposal in the COVID-19 Era among Nakhon Pathom Province Residents of Thailand (#40) <i>by Aye Kyawt Khine</i>
15.30.00-16.00	Wrap Up & Evaluation Chairperson & Co-Chairperson: <i>Anchalee Prasansuklab, Ph.D. / Anuchit Phanumartwiwath, Ph.D.</i>
16.00-16.15	Outstanding Award and Closing <i>Professor Sathirakorn Pongpanich, Ph.D.</i> MC: <i>Anchalee Prasansuklab, Ph.D. / Anuchit Phanumartwiwath, Ph.D.</i>

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Oral Presentation



(01) Mortality Trend Analysis for Pneumonia in the Philippines from 1960 to 2019

Angel Mae F. Luga, Kathleen L. Cabanlit, Arafat M. Balt, Jamerah B. Sidic, Ralf Benjo G. Morilla,
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ABSTRACT

Pneumonia is referred to as the infection of the lung parenchyma, which has been the leading cause of death of many individuals, not just in the Philippines, but all around the world. For that reason, disease surveillance for deaths from Pneumonia which involves the assessment of the rise, fall, and stagnation of the death rates from this disease is essential for the sake of the control of its spread. However, the problem is that there is still no recent research available for the mortality trend for Pneumonia in the Philippines. With that, a mortality trend analysis for deaths from Pneumonia in the Philippines from 1960 to 2019 was done. Specifically, the yearly mortality rates for Pneumonia from 1960 to 2019, as well as the age-standardized, sex-specific, and region-specific mortality rates were identified and used for the construction of the mortality trends for Pneumonia in the Philippines. To do so, data for pneumonia that is available in the Philippine Health Statistics, was used for the computation of the mortality rates that were used to construct mortality trends. As for the statistical analysis, a Two Samples t-Test, and the Pearson Correlation R Test, were used. At the end of the study, results showed that, in the recent years, there is recurring increase in the number of deaths from Pneumonia in the Philippines which indicates the need for urgent response for the control of this disease. Males had higher death rates from Pneumonia for years 1960 to 2004, however, it could be observed that the mortality trend for both sexes start follow the same movement starting from 2005 to 2019, due to these two sexes having identical mortality rates. Not only that but results also shows that the elderly in the Philippines, those with the age of 70 and over, are the ones that are deeply burdened by the disease, and this could be due to existing comorbidities and immunosenescence driven by aging. This shows the need for immediate solutions like availability of vaccines for the elderly in the Philippines from Pneumonia to protect them from the said infectious disease. As for the region-specific mortality rates from Pneumonia, it shows that Western Visayas has the highest number of deaths from Pneumonia, which suggests that this is the region in the Philippines that is mostly burdened by the disease and is also the region that needs most attention.

Keywords: mortality, Pneumonia, time-trend

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(02) Overweight Risk Factors among Adolescents in Indonesia

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ABSTRACT

Background: Overweight is one of the health problems in Indonesia. The prevalence of overweight increased from 2013 to 2018 based on the Indonesian Basic Health Survey conducted by the Indonesian Ministry of Health. Overweight contributes to other chronic diseases that can increase morbidity and mortality risk. Overweight also can affect adolescents psychologically, such as being less confident and bullied by their friends, which will cause depression in themselves. International Agency for Obesity, a part of the World Health Organization (WHO), revealed that 80% of overweight among adolescents was caused by an environment dominated by lifestyle, socioeconomic, and unhealthy diet. Some factors are associated with overweight, such as physical activity, smoking, parent knowledge, parent's job, sedentary behavior, passive smoking, obesity in their family, etc. Thus, the overweight risk factor needs to prevent appropriately and early based on scientific research. Using this study, we can know the significant risk factors associated with overweight. Policymakers can use this research result to make policies for preventing overweight among adolescents.

Objective: This research examined the significant risk factors of overweight among adolescents in Indonesia using the dataset from the Indonesian Global School-based Health Survey (GSHS) 2015.

Methodology: This study analyzed secondary data from the Global School-based Health Survey (GSHS) 2015 conducted by the Indonesian Ministry of Health and the World Health Organization. A cross-sectional design was conducted in this study. Logistic regression analysis was used to analyze the GSHS dataset. 11,142 respondents were available on the dataset, but 9772 respondents were selected by completeness data (no missing data in respondent's variables). The survey dataset can be freely accessed on <https://extranet.who.int/ncdsmicrodata/index.php/catalog/489>. Respondents were chosen in a two-step. The first step was choosing a school with probability in the area. The second step was choosing respondents with random sampling in each class

Result: The result revealed that overweight has significantly association between education (p-value 0.001, AOR 0.801, 95% CI 0.704-0.912), smoking behavior (p-value 0.027, AOR 1.252, 95% CI 1.026-1.528), and sitting activities habit (p-value 0.000, AOR 0.751, 95% CI 0.663-0.850) to overweight among adolescents in Indonesia.



Conclusion: Adolescents have risk factors to overweight; thus, they must be aware of their health. Researchers recommended the Indonesian government develop some policies for preventing overweight among adolescents in Indonesia. In addition, the Indonesian government must ratify a Framework Convention on Tobacco Control (FCTC) to minimize new adolescent smokers.

Keywords: Overweight, Adolescent, Risk factors, Indonesia

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(03) To be a Victim in Their Own Community: Experience to Violence Exposure among Adolescents in Makassar, Indonesia

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ABSTRACT

Violence has been recognized as a global public health issue. The consequences go beyond one's health and socioeconomic well-being; it is a serious violation of human rights and security. Growing up in the midst of societal violence have proven to have impacts to adolescents social, emotional, behavioral, and cognitive development.

This study examines the correlation among Sociodemographic, Perception of aggressive behavior, perception of problem behavior, towards the experience of Self-victimization community violence exposure (SEVC) among adolescents in Makassar Indonesia. Cross-sectional study were used to measure experience using online questionnaire, and Self-report of SEVC.

The preliminary results out of sample of 159 participants through multi-stage sampling, among adolescents age 15-19 years old in Makassar, Indonesia. Most of the participants are female (57.9 %), with the mean of age 16.73 (SD 1.54). Perception of Aggressive behavior (Fantasy measure, pro-heroic fantasy, and prosocial fantasy) with the median of 0.73 (IQR 0.29), 0.55 (IQR 0.22), 0.66 (IQR 0.20) respectively, and perception of problem behaviour with the median 3.00 (IQR 5). Self-victimization of exposure to community violence found to be median of 11.965 (IQR 3.42) .The study found association among self-victimization of exposure to community violence towards perception of problem behavior (Beta sig : 1.513) and area of living (Beta sig : 4.952) (p value < 0.05).

The research has provided the new insights measuring the correlation among community violence exposure and other measurements. As a result of these findings, preventative measures and recommendations for future programming will be identified, based on the principle of adolescent--centered and survivor-centered -approaches.

Keywords: Adolescents; Community Violence; Gender

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(04) Sexual And Reproductive Health Needs of Adolescents: A Case Study at Senior High School 2 Bantul, Yogyakarta-Indonesia

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ABSTRACT

Introduction: Unwanted pregnancy is still a reproductive health problem among adolescents. It was influenced by the lack of education about reproductive health for adolescents and the lack of access to adolescent-friendly reproductive health services. Schools as educational institution have a role to provide education about reproductive health through the center for information and counseling among adolescents (PIK/R).

Objective: This study aims to explain the needs for reproductive health aspects among students at Senior High School 2 Bantul.

Method: This study was qualitative research with a case study approach. This study was conducted at senior high school 2 Bantul. A total of 12 students were recruited for focus group discussion, 3 counseling teachers, and one of primary health care provider were in-depth interviewed and purposively recruited. The data was analyzed with the content analysis. The study was approved by the ethical committee of Universitas Ahmad Dahlan with certificate number 012003017.

Results: The study found that students have positive perception on reproductive health that it is not only concern about individual physic but also mental health to prepare them to be ready for the period of conception, pregnancy, and delivery. The school has center for information and counseling but has not been implemented optimally due to the lack of interest of students to join its activities- which was influenced by the attitude of the counselors who are not adolescents friendly and put labeling to students who are consult about reproductive health.

Conclusion: It can be concluded that the provision of adolescent-friendly reproductive health education institutions is needed to meet the needs of reproductive health information which leads to an understanding of preventing premarital sex and increasing life skill education.

Keywords: adolescent, sexual reproductive health, youth friendly service, stigma

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(05) Menopause healthcare and women's right to health in prison: A Global Scoping Review

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ABSTRACT

Background: Women are a minority population in the male dominated detention setting and comprise about 6% of the global population of 11 million people. Where attention is devoted to women's unique sexual and reproductive health needs, this is largely focus on menstruation management and ante-post nata care. Incarcerated menopausal women's unique health needs oftentimes are largely unmet creating challenges to protect and respect their equality and right to health. Their health needs have been recognised as an important but neglected public health issue. Although the number of older incarcerated women has been exponentially increasing, there is a dearth of evidence regarding the health needs and provision for menopausal women in detention.

Objective: A scoping review was conducted to map and describe what is known about the need for services and management of the menopause in women in detention settings globally.

Method: Arksey and O'Mallay's scoping review methodology was adhered to. Systematic research using detailed MESH terms was conducted by using seven databases (CINAHL, Medline, Pubmed, ProQuest central, PsycInfo, Scopus and Web of Science) to collate relevant published material in the timeframe 2010-2022. Of 268 records retrieved, 14 were duplicates, 234 studies were excluded after title and abstracted screening, and 5 records remained. Searching of the grey literature and searching within those 5 records yielded an additional 10 records, making a total of 15 records were subsequently charted and analysed thematically.

Result: The analysis of 16 records from 6 countries (Brazil, England and Wales, Canada, Germany, Greece, and the United States) yielded four themes; Menopause symptoms and needs in prison, Challenges in accessing menopause care, Competencies of prison healthcare staff to support menopause women, and Recommendations for age and gender appropriate healthcare for women in prison.

Conclusion: The review highlights the invisible nature of menopausal women in prison health policies, the challenges in seeking healthcare, and the glaring gaps in practical medical supports of women in peri and menopause in detention settings. We note that there is no explicit statement of menopause prisoners' healthcare in the UN normative guidance (The Bangkok Rules).

Keyword: healthcare, menopause, prisoners, incarceration, the Bangkok Rules

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(06) Gender Identity, Sexual Orientation, and Pattern of Sexual Behaviors of LGBTIQAN+ in Thailand

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ABSTRACT

Background: Sexual behavior matters to sexual and reproductive health, especially the prevention and control of transmission of sexually contracted infection, including STIs, HIV, and HVB and HVC. The pattern of sexual behaviors among people with sexual diversity had been under periodical surveillance. Moreover, the issues are not well examined in some groups due to the assumptions that they may be at no or lower risk of such infections, for example, lesbian cisgender.

Objective: This cross-sectional study aimed to describe the sexual orientation and gender identity (SOGI) of LGBTIQAN+ and their pattern of sexual behaviors.

Methodology: This analysis employed the data of an online survey conducted from February to March 2022 and includes 220 samples of LGBTIQAN+ who reported being sexually active during the past 12 months. The chi-square test statistic is used to evaluate whether there is an association between pattern of sexual behaviors and sexual orientation and gender identity (SOGI).

Results: The mean age of these samples is 33 years old (range 18-55 years old), 47.7% living in Bangkok, and 50% graduated with a Bachelor's degree. Gay cisgender men, transgender men, and transgender women engaged in all patterns of sexual behavior, while over 91% of lesbian cisgender women were doing only oral sex and non-penetrative sex. Transgender men also had penetrative vaginal sex (12%), and transgender women had vaginal and anal sex (5%). A larger proportion of gay cisgender men and transgender women reported using barriers when having sex than other SOGI. A chi-square test of independence showed that there was a significant association between self-reported SOGI and pattern of sexual behaviors ($X^2(8, N = 220) = 149.399, p = .000$) and between self-reported SOGI and using barriers for protective sex ($X^2(4, N = 220) = 52.337, p = .000$).

Conclusion: The results indicate that most lesbian cisgender women engaged in sex are least at risk of HIV compared to others, but oral and non-penetrative sex may pose some risk to other STIs. Transgender men and women need prevention for their vaginal and anal penetrative sex behavior, and interventions should address this behavior to provide comprehensive and consistent services to these population groups.

Keywords: Sexual orientation and gender identity (SOGI), LGBTIQAN+, sexual behavior

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(07) Factor Associated with Reproductive Health Agency Among Indonesian Young Women Aged 15-24

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ABSTRACT

Background: Reproductive health agency as the ability to choose contraception and healthcare for women is essential for their health. However, lack of understanding of their reproductive health rights may prevent women from accessing healthcare services. In addition, many barriers constrained women to exercise their agency in reproductive health decision-making. To date, most studies on reproductive health agencies focus on all women at reproductive age. There were only a few studies concerning reproductive health agencies among young women in Indonesia.

Objective: To determine the factors associated with the reproductive health agency among young women in Indonesia.

Methods: This study utilized secondary data from the 2017 Indonesia Demographic and Health Survey (IDHS) and involved a total of 3,524 currently married women aged 15-24 years. Women who had independent or joint decisions for all questions regarding contraception use and healthcare utilization decision-making were defined as women who have a higher reproductive health agency, and those who answered otherwise were categorized to have a lower reproductive health agency. Chi-square (χ^2) analysis was employed to examine the relationship between socio-economic factors and socio-demographic factors and reproductive health agency, while binary logistic regression was used in the multivariate analysis.

Results: Lower agency in reproductive health decision-making was found in 53 percent of Indonesian young women. The highest percentage of women with lower agency was found in women with no children in the family. Binary logistic regression shows that women who had 1 or more children (Adjusted Odds Ratio [AOR] 32.6; $p < 0.001$; 95% confidence interval [CI] 23.9-44.7), living in Java regions (AOR 2.6; $p < 0.001$; 95% CI 1.5-4.6), being employed (AOR 1.2; $p < 0.01$; 95% CI 1.0-1.5), and having husbands with a close age-gap (AOR 1.2; $p < 0.05$; 95% CI 1.0-1.4) were more likely to have a higher agency in reproductive health decision-making in the family compared to their counterparts who had no children, living in outer Java, unemployed, and had a substantial age-gap between spouses.

Conclusion: Having 1 or more children, living in Java regions, being employed, and having a close age gap with the husbands were the factors associated with a higher women's agency in reproductive health decision-making in the family. Programs to increase women's agency in reproductive health rights are needed, particularly the initiatives to widen the women's involvement in the employment sector.

Keywords: reproductive health decision-making, women's agency, young women, contraception, healthcare services

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(08) Barriers and Facilitators to Access Mental Health Services: Perspectives of People Living with Mental Illnesses in Indonesia

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ABSTRACT

Introduction: More than 80% of people experiencing mental health conditions, including individuals experiencing neurological and substance use disorders, are without quality, affordable mental health care in the world. In Indonesia, limited access and stigma around mental health are only two of many problems that have emerged around the issue, besides the lack of data, limited resources, and gaps in available treatment.

Objectives: To explore perceptions of barrier and facilitator factors that affected their access to mental health services among people living with mental illnesses in Indonesia.

Methodology: This qualitative study collected data through in-depth interviews through WhatsApp chat with 28 informants aged 18-32 years. People living with mental illnesses included those living with depression, anxiety, or bipolar disorder. Purposive sampling was drawn from the bipolar care Indonesia Facebook group, where all participants with depression, anxiety, and bipolar were invited to participate. Thematic analysis was applied to analyse the data. Ethics approval was obtained from Chulalongkorn University's Ethical Committee before the study began in 2022.

Results: This study included 28 single and married participants, both men and women aged 18 to 32 years. Our participants lived on several islands in Indonesia, such as Sumatera, Java, Kalimantan, and Papua. Results indicated that there were some barriers that influence their access to mental health services: 1) Long distance to mental healthcare, 2) The stigma they received from family, friends, and society, 3) Expensive treatment costs, and 4) Lack of social support. We also found some facilitators influencing their access to mental healthcare: 1) National health insurance ownership, 2) Support from a spouse, close family, and friends, and 3) Social media content related to mental health help-seeking.

Conclusion: The study revealed many factors, such as distance, stigma, expensive treatment costs, and lack of social support as barriers. We also found some factors, including the national health insurance ownership, support from close family, and social media influence as facilitators that influence survivors' access to mental healthcare. This study suggested the massive distribution of psychoeducation on mental health toward health workers at the primary care level, caregivers, and society to reduce the stigma against people with mental disorders in Indonesia. Social support plays a significant role and this should be promoted to assist people living with mental illnesses to deal with their conditions better.

Keywords: access, mental health services, depression, stigma, support

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(09) Loneliness in Later Life and its Association with Physical and Mental Health: Findings from a Vietnam Aging Community Survey

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ABSTRACT

Background: With the rapidly growing population aging, social isolation and loneliness has become a major health concern and associated with adverse health consequence among older adults living in community. There is limited evidence about associated factors of loneliness among the aging population in Viet Nam.

Objectives: This study aimed to identify the prevalence of loneliness among older adults, its risk factors, and the association between loneliness and physical and mental health among Vietnamese older adults.

Methods: A community survey was conducted in Thua Thua Hue Province, Viet Nam in 2018 with a sample size of 725 older adults aged 60 and above. The survey instrument consisted of questions about socio-demographic information, physical and mental health status, fear of falling (FOF), cognitive function and perceived social support. Loneliness was measured by a single yes/no question: “In the past month, did you ever feel very lonely or distant from others?”. FOF was assessed using Fall Efficacy Scale – International (FES-I). Cognitive function was measured by the Mini-Mental State Examination. Multivariate logistic regression analyses adjusted for covariates was used to explore the relationship between loneliness and physical and mental health with a significance level at $p < 0.05$.

Results: Among 725 participants, 30.1% were feeling lonely or distant from others. After adjustment for age, gender, marital status, residency and living arrangement, multivariate logistic regression showed that the participants who were feeling lonely were more likely than their counterparts to experience cognitive impairment (AOR = 1.83; 95% confidence interval [CI]: 1.18-2.82), high FOF (AOR = 1.89; 95% CI: 1.32-2.71), limitation in basic activities of daily living (AOR = 2.24; 95% CI: 1.45-3.44), feeling worthless (AOR = 7.47; 95% CI: 5.09-10.98), feeling very nervous (AOR = 5.58; 95% CI: 5.86-12.56), and less likely to perceive high social support (AOR = 0.62; 95% CI: 0.43-0.88).

Conclusion: Loneliness is significantly associated health outcomes of older Vietnamese adults, both physically and mentally. Targeting interventions including healthcare and social care programs for social-isolated older adults living in the community could be effective in reducing their adverse health outcomes.

Key words: loneliness, physical health, mental health, older adults, aging

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(10) A Policy Simulation Impact of Tobacco Excise Tax Increase on Cigarette Consumption, Mortality, Medical Treatment Cost, Life-Years Gained, and Government Revenue in Indonesia

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ABSTRACT

Background: Smoking is one of the leading risk factors for mortality in Indonesia. However, the government is hesitant to impose a stringent tobacco control policy. The study aimed to examine the impact of tobacco excise tax increase on cigarette consumption, mortality, medical treatment cost, life-years gained, and government revenue in Indonesia.

Methods: The study consisted of two phases. First, the demand for cigarettes was analyzed using the two-part econometrics model. Data were retrieved from the National Socioeconomic Survey (SUSENAS) 2015, 2016, 2017, 2019, and 2020. The smoking participation was examined using logit specification, while the second part (smoking intensity) used the Generalized Linear Model (GLMs). Second, a compartmental model involving 65 million smokers was employed to assess the impact of different tobacco excise tax increased scenarios on cigarette consumption, tobacco-attributed mortality, tobacco-attributed medical treatment cost, life-years gained, and government revenue in Indonesia

Results: Price was negatively associated with the decision to smoke and smoking intensity. The estimated overall cigarettes price elasticity was approximately between -0.4933 to -0.4277. Subgroups analysis found that youth were more sensitive to price change than adults. Furthermore, The results revealed that a 12.5-200% increase in tobacco excise taxes would reduce the number of smokers by 0.5 to 8.0 million smokers, decrease cigarette consumption by 5.7 to 90.4 billion sticks, avert tobacco attributed mortalities by 0.2 to 3.3 million, produce additional life-years by 4.2 to 68.0, reduce tobacco-attributed medical treatment costs by 1.4 to 22.7 trillion rupiahs, and generate additional government revenue by 16.7 to 176.6 trillion rupiahs.

Conclusions: Raising the tobacco taxes has significant benefits to public health and economics. Therefore, It is necessary to significantly increase the cigarette taxes annually by at least 30% and simplify the taxes structure to prevent smokers from switching to the cheaper brand.

Keywords: Tobacco Tax, Mortality, Healthcare Cost

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(11) Financial Burden Toward Out-Of-Pocket Expenditure on Health Care among Households with Members Suffering from NCDs in Vietnam

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ABSTRACT

Background: Non-communicable diseases (NCDs) are growing issues worldwide. While evidence from many studies indicated that households with members suffering from NCDs are at greater financial risk, little information about this issue is available in Vietnam.

Objective: This study is conducted in order to examine the magnitude of financial burden due to out-of-pocket (OOP) expenditure among households with NCD patients in Vietnam.

Methods: This study used secondary data obtained from a cross-sectional household survey on health service accessibility and utilization that was conducted in 6 provinces in Vietnam in 2015. The selection criteria are households having at least one member suffering from hypertension or diabetes. The final sample size of 1736 households and 1955 patients was analyzed using STATA software version 15.1. The financial burden due to OOP was measured by using the indicators of catastrophic health expenditure (CHE) and impoverishment. CHE is defined as a situation when a household's total OOP health payments equal to or exceed 40 percent of the household's capacity to pay. Impoverishment occurs when a non-poor household is pushed under the poverty line after paying for health services. The poverty line was constructed as the average food spending of households whose food spending share was in the 45th to 55th percentile range.

Results: There was about 85 percent of patients with NCDs had health insurance. Most of the patients suffered from NCDs for at least 15 years. There was 85.6 percent of households had to pay OOP for health care with an average of 488 US dollars in one year. The average amount of money that households had to pay OOP for outpatient and inpatient services for one year was 247 US dollars and 150 US dollars respectively. There was almost 9 percent of the households incurred CHE and 3.6 percent of households were impoverished due to OOP expenditure for health care.

Conclusions: There is a high proportion of household with members suffering from NCDs has to pay OOP for health care. Although there is a high percentage of patients with health insurance, a certain percentage of households still incur financial hardship. Therefore, policies and national programs on health service accessibility and financial support through basic benefit packages at primary health care targeting this population should be reviewed and considered.



Key words: NCDs, non-communicable diseases, financial burden, catastrophic health expenditure, impoverishment

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(12) Six Decades of Schistosomiasis Disease in the Philippines: Profile and Trend Analysis

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ABSTRACT

Schistosomiasis is a major cause of morbidity and mortality in undeveloped countries. It remains a public health concern in endemic areas of the Philippines, with approximately 12 million people living in 28 endemic provinces spread across 12 geographical zones at risk of Schistosomiasis Infection with japonicum. This study examined trends and profiles of schistosomiasis disease mortality in the Philippines over 60 years using data from the Philippine Health Statistics. The result shows that average mortality rates have decreased during the previous six decades. The trend in schistosomiasis sex-specific mortality rates showed that men had a greater schistosomiasis-related death rate than women. Children under the age of 1 have the lowest death rate and people over the age of 70 have the highest death rate. For the region-specific mortality, Region VIII (Eastern Visayas) has the highest mortality rate and the highest morbidity rate is Region XI (Davao). There is a weak correlation between the national morbidity and mortality attributed to schistosomiasis.

Keywords: mortality, Schistosomiasis, time-trend

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(13) Factors Associated with Menstrual Hygiene Management among Female Students in Tangerang Municipality, Indonesia

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ABSTRACT

Introduction: The lack of proper guidance, facilities, and tools for girls to manage their menstruation is a neglected public health, social, and educational issue that need to be prioritized, coordinated, and invested in. Menstrual Hygiene Management (MHM) is a challenging for adolescent girls in Indonesia since social norms and cultural practice do not provide them accurate information of MHM. The objective of this study was to assess factors that influence Menstrual Hygiene Management among female students.

Methodology: The quantitative cross-sectional study was conducted among menstruating female students at the age 12-15 years old who had menarche. Self-administered online questionnaire was used to collect the data in one of Junior High Schools by using multistage sampling. Statistical analysis was performed using univariate and bivariate analysis using chi square test to identify the significant association between MHM and factors influencing such as sociodemographic, source of information and variable on menstruation, knowledge, attitude, and enabling factors related to MHM.

Results: The study enrolled 240 junior high school female students, with the mean age of respondents was 13.77 years (SD = 0.96) and most of them reached menarche between 12-15 years old. Mother was the main source of first information related to menstruation (70%). Over a half of students reported to have good practice of MHM. The students who had high knowledge level towards MHM reached only 35.8%. About 12% of students still considered menstruation as disease, its blood contains dangerous substances by 51.2%, and 82.1% still do not aware how to dispose the sanitary pad. Only 16.7% of students had positive attitude, while neutral attitude reached by two-thirds. It is found that most of respondents often felt ashamed and uncomfortable and still believed that they need to avoid some foods during their menstruation. The significant majority of students reported that they had adequate WASH facilities. However, approximately 80% of students revealed that school did not provide hand washing soap, a hook and a mirror. The study revealed that attitude ($P = 0.001$) and WASH facilities ($P = 0.033$) were significantly associated with practice of MHM.

Conclusion: The study findings revealed that attitude and WASH facilities were influenced to Menstrual Hygiene Management Practice. It is proven that the socio-cultural including beliefs, myths, and misconception were still exist and contributed to their attitude and practice. However, WASH facilities as an enabling factor are also an essential issue as it will assist girls to manage their menstrual hygiene. Therefore, the study recommends to improve WASH facilities in school in order to meet the need of menstruating girls. Moreover, school needs to provide comprehensive reproductive health education integrating with existing school health program (UKS) and primary health care in order to address knowledge regarding the socio-cultural norms and the practice of MHM.

Keywords: adolescence, female students, menstruation, menstrual hygiene management

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(14) Factors Associated with the Utilization of Antenatal Care Visits in Sylhet, Bangladesh

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ABSTRACT

Introduction: ANC (antenatal care) is considered as a vibrant element for mothers' healthcare during pregnancy to reduce the maternal and neonatal death. However, the coverage in Bangladesh is only 47% while the Sylhet region reported as 10.8% of quality antenatal care. There are few studies that explore on low ANC coverage in Sylhet region and anxiety burden among pregnant.

Objectives: To estimate utilization rate and examine the association of the personal, socio-cultural, accessibility, anxiety and ANC utilization in Sylhet region of Bangladesh.

Methodology: Cross sectional study was conducted in three health service units of two districts of Sylhet division, Bangladesh. The measurements included utilization of ANC, accessibility, anxiety and socio-cultural. Simple random sampling was employed to recruit the pregnant women during the waiting time at health service units. Face-to-face interview by a structured questionnaire was performed in April- May, 2022. Descriptive statistics, chi-square test and multiple logistic regression were conducted to determine the associated factors of ANC utilization for pregnant women.

Results: The study revealed that 50.8% of pregnant women had adequate ANC utilization and 40% of them had no husband support, more than half had difficulty of affording medicine and ultrasound (52.1% and 51.1% respectively). One quarter (25.3%) pregnant women indicated moderate to severe anxiety. Multiple logistic regression identified that factors associated with ANC utilization were income (AOR: 2.12; 95% CI: 1.29-3.50), planned pregnancy (AOR: 1.92; 95% CI: 1.03-3.58), social media usage (AOR: 1.49; 95% CI: 0.96-2.32) and taking folic supplement (AOR 1.46; 95% CI: 0.96-2.23). Majority of pregnant women who had no savings, not access to social media, not taking folic supplement and difficulty to afford medicine and ultrasound were prone to not attending adequate ANC utilization.

Conclusion: Family planning program should be introduced among young married women to consider of unmet needed pregnancy. Bangladesh local government could support essential health services i.e. medicine supplement, diagnosis to assist poor pregnant women in rural areas.

Keywords: Antenatal Care (ANC) visits, Adequate Antenatal Care (ANC) utilization, Sylhet

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(15) Evaluation of Self-purification Capacity of Gamasiab River in Nahavand Township in Iran using MATLAB Software

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ABSTRACT

Introduction: Surface water pollution is another threat to public health. One of the key factors that is effective in treating surface water is self-purification. There are different definitions for self-purification. In some scientific sources, the concept defined as an index to estimate the pollution of river. Numerous kinetics models of water quality have been proposed to evaluate the self-purification. Streeter-Phelps model is a classic method to describe the self-purification in a river. In solving the Streeter-Phelps model, two factors as Critical Time (TC) and Critical Deficit (DC) influence model performance.

Objectives: The aim of this research is studying and determine DC in oxygen sag curve to predict the self-purification capacity of a part of Gamasiab River that is situated in Nahavand Township. The time or distance at which the critical oxygen deficit occurs (TC) will also determine.

Methodology: This research was performed in Nahavand Township in Iran. Three sampling stations were determined and the river water qualities including Dissolved Oxygen (DO), five days Biochemical Oxygen Demand (BOD5) and water temperature (T) as variables used to evaluate the quality of river water. Sampling and analysis plan was prepared based on standard methods. The numerical solutions for Streeter and Phelps Model was performed using Matlab software. This model is used to evaluate the self-purification of the river.

Results: The quantity of important factors (TC, DC) was determined. The results of DO and BOD5 changes along the river are plotted in summer, winter and annual average. Based on the results, the curves clearly fit the Streeter–Phelps model’s classic form with a sag curve.

Conclusion: Rivers have always been important to human populations. But Gamasiab River is doubly important in the study area. Unfortunately, the management of the river is not done sustainably, as the operation of more than 40 fish farms along the river is done through open cycle method, and this way of operation will be too harmful and will not bring benefit. It is hoped that the results of this study can be useful for improving the public health management of the river.

Keywords: Gamasiab River, MATLAB software, self-purification, Streeter–Phelps model

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(16) Development of Lipidomics LC-MS/MS Method for Absolute Quantification of Targeted Polar Lipids in the Liver Sample of Zebrafish Model

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ABSTRACT

Background/Objectives: Hepatic steatosis (HS) is a clinical condition characterized by the accumulation of fat in liver. Due to their resemblance with mammals, lipidomic analysis in zebrafish offers a unique opportunity to study the development and metabolic processes of HS. Previous studies have demonstrated a high-fat diet induced fatty liver in zebrafish. However, alteration of polar lipids and their metabolic processes in the liver has not been fully understood. This is due to the lack of sensitive methods able to quantify lipids from a small material (<5 mg). Thus, this study aims to develop a sensitive and reliable liquid chromatography-tandem mass spectrometry (LC-MS/MS) method for quantifying polar lipids in zebrafish liver.

Methods: The experimental design consists of the development of lipid extraction by methyl tert-butyl ether (MTBE), followed by lipid separation using liquid-liquid extraction (LLE), and the implementation of LC-MS/MS with multiple reaction monitoring (MRM) for absolute quantification of targeted lipids. The mixture of 12 lipid standards and internal standard (IS) as 1,2-Dipalmitoyl-rac-glycero-3-phosphocholine was extracted using MTBE: MeOH (5:1 v/v), followed by the pre-separation of polar and neutral lipids by LLE, with 2 mL MeOH: NaCl (80:20, v/v) and 1 mL hexane: MeOH (98:2, v/v). For the quantitative analysis of lipid in presence of matrix, each collected liver was subjected to lyophilization (48 hrs). Then, the sample was pooled to get a final dry weight (5 mg), and further grinded in the tube for lipid extraction, and quantification. For the data analysis, MRM spectral data were processed manually using the software TargetLynx (Waters, USA), and Microsoft Excel was used for quantification and plotting graphs.

Results:

For MTBE-protocol, recovery of IS were between 80 - 100 % (%RSD = 6.98, $n=10$). Likewise, the LLE-protocol was validated by observing the recovery of lipid standards in the polar layer as follows: PC(16:0/18:0), PE(16:0/18:1), PG(16:0/18:1), PC(P-18:0/18:1), PS(18:0/18:2), SM(35:1), and PI(18:1/18:1) with 80 - 98 % recovery (%RSD = 2.51-9.70, $n=4$). Finally, the recovery of IS in liver samples from zebrafish was 108 % (% RSD=1.63, $n=3$).

Discussion and conclusion: Based on the high recovery and low %RSD results, we conclude that our protocol is reliable and effective for lipid separation and absolute quantification of lipids. Moreover, high recovery of IS in the liver matrix suggests that the method is suitable for the quantitative analysis of lipids in the zebrafish liver. Next, the developed method will be applied to quantify targeted polar lipids from the liver of HS zebrafish.

Keywords: Hepatic steatosis, Lipidomics, Liquid chromatography, Mass spectrometry, Lipid extraction

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(17) Prediction of Pesticides Exposure and Human Health Risk among Rice Farmers in Ayeyarwady, Delta Region, Myanmar: A Cross-sectional Study during COVID -19 Pandemic

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ABSTRACT

Background: Agricultural workers are inevitably exposed to pesticides during the preparation and application of the spray solution. Pesticide contamination may cause potential adverse health effects and environmental impacts. Myanmar farmers often have a strongly desirable to kill pests in rice fields since pesticides are becoming a convenient tool. This study aims to predict the potential risks of inhalation exposure of pesticide among rice farmers in Delta Ayeyarwady Division, Myanmar.

Method(s): A cross-sectional study was carried out with 454 rice farmers from March-April 2022. Data collection was done through household online face-to-face interviews were used with a semi-structured questionnaire. Descriptive statistics were used to analyze the exposure data in this study.

Result(s): The health risk assessment was followed by the process of Standard Operating Procedures for Residential Pesticide Exposure Assessment of the United State Environmental Protection Agency (U.S.EPA 2012). The study showed that 83% of insecticides, 74% of herbicides and 29% fungicides respectively used by rice farmers in two districts of the Ayeyarwady, Delta Region, Myanmar. The applicated rate (AR) were 4.62×10^{-7} (lb. ai/ft3) of insecticide, 1.84×10^{-6} (lb. ai/ft3) of herbicide and, 2.88×10^{-7} (lb. ai/ft3) of fungicide, correspondingly. The exposure assessment showed that the average daily dose (ADD) for inhalation exposure of insecticides, herbicides, and fungicides were 1.3×10^{-3} , 1.6×10^{-2} , and 2.5×10^{-3} mg/kg-1day-1, respectively. And the risk characterization for non-cancer showed the hazard quotient (HQ) of insecticides, herbicide, and fungicide were 0.63, 0.07 and 0.009 respectively.

Conclusion: Although the study revealed that rice farmers may not getting risk from non-cancer ($HQ < 1$) by the inhalation exposure route, but there is other 2 main routes of exposure i.e. dermal and consumption route that need to be considered for further study particularly, insecticides that should be highly concerned because of high value of HQ.

Keyword: Pesticides, Agricultural workers, Risk assessment; Myanmar

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(18) Health Impact Assessment of Short-term Exposure Particulate Matter (PM) 2.5 on Hospital Admission for Respiratory Diseases in Thailand

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ABSTRACT

Background: Particulate Matter with diameter $\leq 2.5 \mu\text{g}/\text{m}^3$ (PM_{2.5}) is highlighted as harmful kind of pollutant in the worldwide. Several previous epidemiological studies investigated the dangerous effects of PM_{2.5} to human health due to various diseases particularly respiratory problems.

Objectives: The aim of this study to assess impacts of PM_{2.5} exposure and provide the estimation attributed cases of hospital admission for respiratory diseases which could be avoid where “cut-off values” are respected due to short-term PM_{2.5} exposures in the Thai population.

Methodology: This study analyzed PM_{2.5} concentration and health data in 2019. Total numbers of population and area size for specific province have been collected. We obtained data related total number hospital admission of respiratory diseases for all provinces from Ministry of Public Health, Thailand. Daily average PM_{2.5} concentrations were calculated from all air stations to indicate 77 provinces in Thailand. Air Q+ Software developed by WHO was used to elaborate the changes and health impact of air pollution PM_{2.5} in population. This study applied 6 options of daily PM_{2.5} average as “cut-off” or counterfactual factor followed Air Quality Guideline (AQG) standard.

Results: Total numbers of hospital admission for respiratory diseases (ICD-10 code is J00–J99) in 2019 were 3,180.35 incidences per 100,000 population at risk (adult ages ≥ 30 years old). The number population at risk for all provinces was 40,572,731 or 60,957.6 per 100,000 population. The highest number of incidence in province specific was responsible for Nakhon Ratchasima at 77876.76 cases per 100,000 population at risk. The benefit from reduction of PM_{2.5} on respiratory diseases hospital admission are related to 0.61% for cut-off equal to $15 \mu\text{g}/\text{m}^3$ and 0.07% for cut-off equal to $50 \mu\text{g}/\text{m}^3$. We adjusted daily average of PM_{2.5} at $15 \mu\text{g}/\text{m}^3$ as the lowest cut-off value, and the results described the estimation case number was 159,902 for respiratory admissions in hospital or 349 attributed cases per 100,000 population.

Conclusion: The result demonstrated the significant impacts short-term exposure of PM_{2.5} on hospital admission through estimation attributed proportion and cases. The estimation indicates the roadmap for policy maker and stakeholder to improve air pollution risk and management actions.

Keyword: Air pollution, PM 2.5, AirQ+ tool, Short-term Impacts, Respiratory diseases

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(19) Geographical Distribution Improvement of Physicians in Thailand and Japan: A Comparative Longitudinal Secondary Data Analysis

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ABSTRACT

Background: The equitable distribution of healthcare workforces to all citizens is necessary to achieve health for all, and has been discussed and addressed in all countries including Thailand and Japan.

Objective: This study aimed to longitudinally examine the change in the geographical distribution of physicians between 2008 and 2018 through a comparison between Thailand and Japan.

Methodology: This research was a longitudinal comparative descriptive study. All data is open secondary data that can be downloaded in the government website. The number of physicians, the physician-population ratio, the Gini coefficient and Spearman's correlation coefficient between population density and physician-population ratio in 2008 and 2018 were calculated and compared between Thailand and Japan. As a subgroup analysis, all 76 provinces in Thailand and 335 secondary medical areas in Japan were divided into four groups according to two criteria: urban-rural and higher-lower initial physician supply classification.

Result: During the decade, the Gini coefficient was improved from 0.372 to 0.319, and from 0.217 to 0.211 in Thailand and Japan, respectively. The correlation coefficient in Thailand was 0.168 and 0.181 in 2008 and 2018, respectively, with no statistical significance. In Japan, the correlation coefficient was 0.368 and 0.405 in 2008 and 2018, respectively, with statistical significance. As for the subgroup analyses, the physician-population ratio in Thailand was improved by 1.86-1.91 and 1.56-1.59 times for the groups with more and less physician-population ratio as of 2008, respectively. While it in Japan was improved by 1.14-1.18 and 1.14 times for the urban and rural groups, respectively.

Conclusion: While both countries improved the geographical distribution of physicians and increased the number of physicians from 2008 to 2018, Thailand more successfully improved physician distribution. On the other hand, there was a slight improvement in physician distribution in Japan, and a trend toward further concentration in urban areas was observed. In Thailand, it may be effective to implement measures to increase the number of physicians and to grasp healthcare supply and demand according to the aging society that has been implemented in Japan. In Japan, policies such as a strong mandate for physicians to work in rural areas with associated benefits that have been implemented in Thailand may be effective.

Key words: Gini coefficient, Health workforce, Health policy, Physician supply and distribution, Rural health services

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(20) Myanmar Cross-border Patients' Health Seeking Behaviour in China and Determinants in the Decision-making Process

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ABSTRACT

Introduction: With the development of regionalization, resources integration and redistribution have been pushing forward. Borderline has been no longer a barrier to resource-sharing. Considering the cost, technology, medical quality, legitimacy, and other factors, some patients cross the border to neighbouring countries for healthcare services. However, very few focused studies were found in the Myanmar-China border area in this regard.

Objectives: This study was conducted to draw the overall pattern of Myanmar cross-border patients' health seeking behaviour in Ruili, to evaluate the accessibilities of them to get the proper healthcare services, and, to identify the determinants during their decision-making process.

Methodology: This study is a mix-method study, the data was collected using a structured questionnaire for healthcare providers and relative representatives; in-depth interviews were held with Myanmar patients who cross the border to Ruili, China for healthcare services.

Results: According to the data from healthcare providers and the Health Commission of Dehong, a vast discrepancy was shown between the number of inpatients and outpatients. 4,080 (13.59%) out of 30,032 Myanmar cross-border patients were inpatients in 2020; 25,952 (86.41%) were outpatients. The same pattern was shaped in hospital choices. 27,056 (90.09%) of Myanmar cross-border patients chose county-level hospitals. Only 2,976 (9.91%) patients chose preliminary healthcare institutions.

Based on the data, in this research, Myanmar cross-border patients are most likely of Han or Kachin/Jingpo ethnicities, age distribution will mostly be between 19-60 years old. Mandarin-speaking is widely accepted among Myanmar patients. The patients are most likely to choose county-level institutions as the healthcare provider in Ruili. Myanmar cross-border patients were willing to cross the border to Ruili for healthcare services under the illness condition of 1) diagnosed with an illness that cannot be cured by basic medication treatment; 2) doctor from Myanmar recommends the patient to go to the Ruili side.

From the residential area for Myanmar cross-border patients, physical accessibility (medical equipment) cannot fully fulfill patients' needs, thus, this is one of the push factors that makes them cross the border to Ruili. According to the in-depth interview, patients didn't show the sensitivity to price, the financial condition of them are all at an average or above-average level. Going to Ruili for healthcare services is more accessible for Han or Kachin/Jingpo people or for who speaks Chinese.

Conclusion: Combining all elements above, this study demonstrates differences between inter-continental long-distancing cross-border patients and Myanmar cross-border patients in the Muse-Ruili area. Unlike the European patients who seek healthcare services in Asia or other developing countries because of more competitive price, Myanmar cross-border patients come to Ruili for healthcare services mostly pushed by the medical technology and convenience, which refers to availability and transportation accessibility. Technology-driven cross-border patient behaviour is wildly practiced from a low- or middle-income country to a similar or high-income country, but not the convenience-driven cross-border patient behaviour.



Keywords: cross-border patient; health-seeking behavior; Myanmar-China border area.

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(21) Sustainable Management of Facemask Waste Generated from Covid-19 Pandemic in Bhutan

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ABSTRACT

The purpose of the study was to estimate facemask waste generation and examine management since the pandemic in Bhutan.

A mixed-method approach was used to collect data in Class A Thromde (self-governing municipalities) of Bhutan. 1,527 general population was surveyed online from February to April 2022 (at the peak of the third wave of COVID-19) and data were analyzed using descriptive statistics with SPSS Version 20.0. In-depth interviews were conducted with environmental officers and summarized emerging themes on management. Waste characterization was conducted at Thimphu Thromde's landfills to indicate subsequent changes in waste statistics.

The finding showed most of those surveyed discarded mostly on average 3-4 surgical facemasks in a week. Thimphu Thromde generated (tons/month), 74.1 and 47.7 surgical and N95 waste respectively, while those respective figures were 15.7 and 13.8 for Samdrup Jongkhar. The pandemic has exposed the fragility of the waste system, with an increase in the volume of waste that is largely landfilled. The haphazard dumping of face masks coupled with Thromde's limited recognition of the environmental hazards regarding facemask waste has resulted in new risks and challenges for achieving sustainable development goals (SDGs).

Examining the five important measures for sustainable management of municipal waste is important as we have had to contend with 58% increase in plastic waste including facemasks is challenging as it involves both social and technical aspects. Therefore, understanding the current scenario of facemask waste and management during the COVID-19 pandemic can be used as a tool to re-examine Bhutan's overwhelmed management system to incorporate disaster preparedness and resilience to resist the change and impact beyond the pandemic.

Keywords: COVID-19, Sustainable management, Facemask waste, Solid waste management, Bhutan, Class A Thromde

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(22) Cancer in the Philippines from 1960 to 2019: A Time-Trend Analysis

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ABSTRACT

Despite long years of cancer research centered on its treatment, the disease persists in comprising a significant portion of global mortality. In the Philippines, cancer is the second leading cause of death. An exhaustive time-trend analysis inclusive of recent data is important to measure the nation's current progress in combating cancer, capturing the effect of demographic and other national-scale changes over time. Beyond just the cause-specific health outcomes, disparities between sexes and age groups have historically been well-established. Looking into these health gaps is crucial in alleviating current strategies for cancer. However, public health initiatives for cancer care done by the Philippine government and other organizations are often poorly disseminated and recognized. Thus, this study employed visual analytics, analyzing trends and profiles of cancer mortality in the Philippines from 1960 to 2019 by cause, cancer site, sex, and age, and discussed relevant national policies. Data of registered cancer deaths and estimated population in the years 1960 to 2019 were acquired from the publication of Philippine Health Statistics. The overall trend and forecast of cancer mortality were analyzed using Tableau while proportionate cancer mortality by site, cause- and sex-specific death rates, and age-standardized rates were calculated and graphically examined using spreadsheet software. Lung cancer caused the most significant proportion of cancer-related mortality among males, while breast cancer leads among females. Other than the remainder and sex-specific cancer, cancer of the trachea, bronchus, and lung, colorectal cancer, Leukemia, and cancer of the lip, oral cavity, and pharynx constituted the higher proportions in both sexes. Steadily increasing trends by cause and sex were observed from 1960 to 2019 and was forecasted to increase up to a rate of 68.99 by 2029, with males having higher rates. Mortality from cancer across all age groups followed a "J-shaped" pattern, wherein deaths were high among the 0-4 years age group, afterward declined, then started rising again among adults. Similar to global outcomes, cancer remained one of the leading causes of mortality in the country over decades. Differences between cancer profiles and rates between sexes and age groups are attributed to complex and interrelated factors making males and the elderly most vulnerable among the population. Given this less to no improvements in cancer health outcomes, a national commitment to cancer prevention, including a multisectoral approach to address the difficulties in cancer care delivery, especially to the most vulnerable populace, must be taken.

Keywords: Malignant neoplasm, cancer, mortality, time-trend, Philippines

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(23) Seroprevalence of Dengue, Zika, and Chikungunya viruses among Human and Non-human Primates Living in Proximal in Laem Chabang, Thailand

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ABSTRACT

Background: Mosquito-borne infection has always been a public health concern in Thailand due to the widespread of vector mosquito, *Aedes aegypti* and *A. albopictus*. Although the infected cases are tracked and recorded by Thai Ministry of Public Health (MoPH), the data collected may not be specific and precise since most infection are asymptomatic and self-limiting. The resolution on minimizing the transmission is also not well-developed. Therefore, this study aims to investigate the seroprevalence of three arboviruses including dengue (DENV) all four serotypes, zika (ZIKV), and chikungunya (CHIKV) viruses that have record of circulation in Thailand. Human community that lives closely to non-human primate (NHP) habitat that is, known to be the reservoir and virus origin, were sampled to be the study target for transmission cycle examination.

Objectives: This research aims to access the seroprevalence of DENV 1-4, ZIKV, and CHIKV and its relationship between NHP and human population living in proximal in Chon Buri Province of Thailand.

Methods: Blood samples from monkey and human living in proximal were collected in Laem Chabang, Chon Buri Province of Thailand in 2019. Serums were screened for anti-ZIKV, DENV, and CHIKV antibodies using the current gold standard method, plaque reduction neutralization (PRNT₉₀), recommended by World Health Organization (WHO) for seroprevalence assessment.

Results: Among the 115 human participants, prior infection with DENV 1-4 and CHIKV were found in multiple samples, with DENV-2 (86.1%) being the dominant strain of circulation. Followed by DENV-3 (68.7%), DENV-1 (65.2%), CHIKV (38.3%), DENV-4 (23.5%). None of the human sample were found to exhibited ZIKV infection. In contrast, only one (1.0%) NHP samples were found positive for DENV-1 and 6 out of 105 (5.7%) samples for ZIKV. Significant association of age and seropositivity were also recognized in DENV-1, DENV-2, and CHIKV infection among the human participants.

Conclusion: Overall, the human seropositivity result has implied mosquito-borne infection has been spreading in Laem Chabang via urban cycle with DENV-2 being the dominant strain.

Keywords: Arbovirus, mosquito-borne infection, non-human primate, seroprevalence

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(24) Sociodemographic Correlates of Coming Out among U.S. Sexual Identity Minorities

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ABSTRACT

Background: Previous research has shown that disclosing sexual identities in unsupportive environments have resulted in rejection, discrimination or violence, which lead to poorer physical and mental health outcomes as well as greater risk of suicidal ideation. However, coming out as a sexual minority when done in a supportive environment can be associated with improved well-being and health outcomes. Little evidence is known about what sociodemographic factors may influence who comes out and who is outed and their correlations.

Objective: This research aims to assess socio-demographic and individual factors potentially associated with coming out as LGBQ+ to friends and family as well as being outed as LGBQ+ to family members before ready or without consent.

Methods: This research utilized the Generations Study, a nationally representative population-based survey collected between 2016-2017 across three generations of Lesbian, Gay, Bisexual and other sexual identity minorities (LGBQ+) in the United States. This research analyzed a sample of 1,416 sexual minority adults and calculated the odds ratio of coming out and being outed utilizing multivariate logistic regression. Three models were deployed for the outcome variables of interest (1) coming out to a friend, (2) coming out to a family member as LGBQ+ and (3) being outed as LGBQ+ to a family member before telling them. We analyzed coming out against independent variables: cohort (age group), gender, sexual orientation, race, nativity, education, experiencing conversion therapy and Adverse Childhood Experiences (ACE).

Results: We found evidence of multiple factors that increase or decrease the odds of coming out and being outed as a sexual minority. Within the models deployed, statistically significant results for individual categories emerged within the variables for cohort (age), gender, sexual orientation, education, ACE and those who experienced conversion therapy. Some of the most striking results included those who experienced conversion therapy had 3.61 times ($p > .001$) the odds of being outed as LGB+ to their family compared to those who did not. Lesbian and gay persons had 4.96 ($p < .001$) times the odds of coming out to their family and 3.84 ($p < .001$) times the odds of being outed to family compared with other sexual identities.

Conclusion: This research will help policy makers and practitioners who work directly with and determine legislation on where to focus support to help reduce health disparities for LGBQ+.

Keywords: Gender and Sexuality, Demography, LGBT

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(25) TNF- α Treatment Decreased Progesterone Receptor-Mediated Transcription in Breast Cancer Cells

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ABSTRACT

Introduction: Breast cancer is the most prevalent cancer in women. Breast cancer subtypes are classified by hormone receptor expression, including ER, PR, and HER2. ER+/PR+ breast cancer showed a better prognosis than ER+/PR- breast cancer. However, how PR loses its activity and leads to a worse prognosis outcome is still unknown. Cumulative evidence suggests that obese women with breast cancer tend to have a worse prognosis than non-obese woman as obesity can promote the secretion of pro-inflammatory cytokines such as TNF- α , leading to NF- κ B pathway activation.

Furthermore, ER and NF- κ B pathway showed positive crosstalk. NF- κ B activation is associated with the more aggressive ER+ breast cancer. However, the relationship between PR signaling and the NF- κ B pathway in breast cancer remains unknown. Thus, this study aims to identify the relationship between PR transcription and NF- κ B pathways in breast cancer cells. Here, we determined that the TNF- α treatment suppressed PR transcription and decreased PR responsive gene expression upon hormone treatment.

Objectives: To investigate whether TNF- α treatment suppresses PR-mediated transcription in PR-positive breast cancer.

Methodology: To explore how TNF- α treatment affects PR transcriptional activity in breast cancer cells. T47D (ER+/PR+) breast cancer cells were used as a cell model. First, T47D cells were transiently transfected with PRE2-TK-Luc reporter and a Renilla plasmid to control transfection efficiency for 24 h. Cells were treated with or without 10 nM of R5020, TNF- α at 1, 5, and 10 ng/ml, or 10 nM R5020 in combination with TNF- α at 1, 5, and 10 ng/ml for 24 h. Then, measure PR reporter activity by Dual-Glo luciferase assay and the representative PR target gene expression, including CyclinD1, HSD11B2, and FKBP5 were analyzed via RT-PCR.

Results: The treatment of progestin in combination with TNF- α significantly decreased PR-mediated transcriptional activities in a dose-dependent manner in T47D breast cancer cells. In addition, treatment of TNF- α significantly suppressed the PR responsive gene expression upon hormone treatment, including Cyclin D1, HSD11B2, and FKBP5 gene.

Conclusion: TNF- α suppressed PR-mediated transcription in breast cancer cells, suggesting that obese breast cancer patients with high pro-inflammatory cytokines level could have low PR transcriptional activities. Our data may help explain why obese women with locally produced pro-inflammatory cytokines are likely to have a worse breast cancer prognosis than non-obese women. Thus, treatment to reduce pro-inflammatory cytokine production in obese



breast cancer women may help increase PR transcription and decelerate breast cancer progression, leading to a better prognosis and survival.

Keywords: TNF- α , PR, breast cancer

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(26) Risk Factors and Outcomes of Intracranial Hemorrhages among Patients with Non-Valvular Atrial Fibrillation Using Non-vitamin K Oral Anticoagulants

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ABSTRACT

Background: Intracranial hemorrhage (ICH) is the most devastating complications of oral anticoagulant. While data regarding the risk factors and outcomes of ICH are available in the literature, little is known regarding the development of ICH in Thai patients using non-vitamin K oral antagonists (NOACs).

Objectives: To identify risk factors for the development of ICH along with clinical outcomes after ICH in patients with non-valvular atrial fibrillation (NVAF) using NOACs.

Methods: A non-identifiable database of patients with NVAF from January 2013 to December 2017 from 10 hospitals was used as the study cohort. Patients were divided into two groups; those with ICH and those without ICH. Univariate and multivariate analyses were performed to identify risk factors of ICH. The outcome of ICH was also evaluated. SPSS statistics version 25 was used for data analysis.

Results: A total of 961 NVAF patients were included into the data analysis. The mean age of patients was 74.35 (SD + 10.08) years, whereas 478 (49.7%) were males and 483 (50.3%) were females, respectively. The mean body weight in kg was 64.60 (SD + 14.13). For types of NOACs, 453 (47.1%) received dabigatran, 263 (27.4%) received rivaroxaban and 245 (25.5%) received apixaban. There was a total of 12 patients (1.2%) who were diagnosed with ICH. The majority of ICH cases were found in rivaroxaban users. Based on univariate analysis, age ≥ 75 ($p = 0.03$), HAS-BLED score of ≥ 2 ($p = 0.04$), hyperthyroidism ($p = 0.004$) and concomitant use of acid suppressive therapy ($p = 0.01$) were associated with an increased risk of ICH. After multivariate analysis, only concomitant use of acid suppressive therapy was significantly associated with ICH with odds ratio of 4.72 (95%CI, 1.27-17.53). For clinical outcomes, patients with ICH had very high mortality rate compared to those without ICH (OR: 22.26, 95% CI: 5.44–91.11; $p < 0.01$).

Conclusion: The incidence of ICH in Thai NVAF patients is similar to the Western population. Concomitant use of acid suppressive therapy was associated with an increased risk of ICH. This could potentially indicate either acid suppressive therapy may interact with NOACs or its use may be an indicator of the overall heightened risk of bleeding of the patients. Patients with ICH had a very high mortality rate. As a result, attempts should be made to reduce the risk of ICH development among NVAF patients using NOACs.

Keywords: atrial fibrillation, oral anticoagulants, intracranial hemorrhage

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(27) Gender-based Violence Awareness and Access to Social, Legal, and Health Services among Women in Eastern Myanmar during the Military Coup

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ABSTRACT

Introduction: One in three women globally has suffered at least one form of gender-based violence (GBV) in their lifetime. Gender-based violence is among the most serious yet underrated issues in Myanmar despite the fact that the country has been one of the most dangerous countries for women around the world. Being a country in poverty with economics and political instability combined with deeply rooted patriarchal system makes women and girls vulnerable to violence. Lives of people became more difficult since military coup started in February 2021 along with intensified armed conflicts. Previous studies explored the determinants of GBV or intimate partner violence, consequences of GBV, and so on. At the present time with military coup, people's attention was more on politics and development issues rather than on GBV concerns. Challenges such as human resource and funding limitations, safety and security issues discouraged researchers to conduct studies in the respective field.

Objective: To be able to support gender-based violence survivors by developing effective strategies in such political crisis, the study explored the situations of social, legal, and health services accessibility of survivors during the military coup.

Methodology: The study was set up in Eastern part of Myanmar where ethnically diverse people live and armed-conflicts have been happening throughout the military coup. The study applied qualitative data analysis through the interviews conducted to ten women GBV survivors and three representatives of service provider organizations. Study participants were recruited using purposive sampling method through case management organizations. Study participants were from different residential areas, different GBVs, education, age, and occupation backgrounds.

Results and Conclusion: The analysis results showed that all participants sought at least social support from their family or acquaintances. The reason was not because they all had awareness on their case as GBV but they could not bear psychological burden. Only a few numbers of survivors sought legal and health supports. The main reasons were financial difficulties worsened day by day after the military coup, justice system collapse, and trust issue on formal justice actors in political crisis. Cultural norms and awareness of the society played a role in help seeking behaviors. Analysis results on service providers' responses were also consistent with survivors' responses. There were very few reported cases to legal and health service providers. Safety and security issues, trust issues, mobility restrictions during



the military coup created challenges in disseminating service information, service provision, and promoting GBV awareness in the community in Eastern Myanmar.

Keywords: Gender-based violence, service accessibility, awareness, military coup, Myanmar

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(28) Husbands' Characteristics and The Unmet Needs for Family Planning among Married Women in Myanmar

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ABSTRACT

Background: Unmet needs for family planning (UMNFP) in Myanmar is relatively high compared to other countries in Southeast-Asia and Asia Pacific regions. UMNFP indicates the gap between women's fertility desires and their contraceptive practices. High UMNFP might cause unwanted pregnancies which can result in higher rate of unsafe abortions and maternal deaths. Although some studies have examined various factors affecting the UMNFP in Myanmar, knowledge about how husbands' characteristics are influencing the UMNFP is still limited. Myanmar is one of the developing countries with a strong patriarchal society where men are the main decision-makers for family affairs including reproductive health issues. So, it is important to study the husbands' characteristics that influence the UMNFP among married women in Myanmar.

Objectives: To determine the husbands' characteristics influencing UMNFP among married women aged 15-49 in Myanmar.

Methodology: This study was a cross-sectional study using secondary data derived from Myanmar Demographic and Health Survey (MDHS 2015-16). The sample population was 7,870 married women aged 15-49 in Myanmar. Multivariate binary logistic regression was performed using STATA Version 14.0 to examine the factors influencing UMNFP at three specified levels, individual level, microenvironment level which includes husbands' characteristics and macroenvironment level.

Results: This study found that 17.3% of married women were having UMNFP. The results indicated that women married to educated husbands were having less odds of UMNFP than the women with uneducated husbands (aOR=0.77, p-value<0.01, 95% CI=0.64–0.93). The larger age differences more than 15 years between spouses increased the likelihood of UMNFP (aOR=1.44, p-value<0.05, 95% CI=1.03–2.03). The probability of having UMNFP in women who were household heads was higher than the women whose husband is household head (aOR=2.53, p-value<0.001, 95% CI=1.94–3.28). The odds of having UMNFP in women who make the decision alone for her healthcare was higher than the women making decision together with her husband (aOR=1.20, p-value<0.01, 95% CI=1.05–1.37).

Conclusion: This study found that husbands' characteristics including husbands' education, larger age difference with wife, being household head and husbands' involvement in decision making of women's healthcare, were significantly associated with UMNFP among married women in Myanmar. Therefore, it is important to strengthen the husband involvement in the health education programs about contraception so that husbands would have the positive attitudes towards contraception, in turn, making husband to support their wives for contraceptive use. Moreover, strategies focused on the husbands with low education level should be formulated to improve their knowledge, attitudes and practices on family planning thereby supporting the contraceptive use of their wives and reducing UMNFP.

Keywords: Unmet Needs, Family Planning, Husbands' Characteristics, Married Women, Myanmar

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(29) Referral Patterns of Intermediate Care in Thailand

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ABSTRACT

Introduction: Intermediate care or sub-acute care needs specific services provided by health professionals. The main goal of intermediate care is to encourage the patients after the acute phase to be recovered in the critical period of care. Policies relating to acute care and long-term care have been far more developed in Thailand than in intermediate care. Even high-quality intermediate care is promising to lessen the number of death cases and promising in preventing the patients flow into the long-term care phase in uncritical cases.

Nowadays, the readiness of the health care facilities to provide intermediate care in Thailand is based on the numeral contexts such as area's facilities, manpower, policy, or resource from a purchaser in the health care system. Even though Thailand had legal support for compromising the equity among the different main health care schemes, there was found inequity among the 3 main health care schemes. The inequity issue led to the arguments relating to the difference in receiving patterns of health services such as referral patterns of care. Focusing on the intermediate care, there were limited shreds of evidence to be found as an empirical study to inform the policy about the intermediate care issue with the health care schemes in Thailand including the Universal Coverage Scheme, Social Security Scheme, and Civil Servant Medical Beneficially Scheme. Also, the patterns among different context/area of Thailand was limited.

Objectives: To find out the referrals patterns of intermediate care among 3 different health care schemes and 4 best-practice areas of Thailand

Methodology: This study focused on all patients who needed the intermediate care by basing on 19 groups of patients by diagnosis included in the Rehabilitation Impairment Categories (RICs). The considered cases were the RICs cases received health services from the hospitals within a critical period of care (6 months). The data bank from secondary data such as discharge and admission data from the financial year 2018-2019 by 8 hospitals including provincial hospitals and community hospitals among 4 provinces of Thailand which were acknowledged as the best-practice provincial hospitals in intermediate care was collected. In the part of the results, the name of the hospitals and areas will be presented anonymously as a provincial/community hospital of province#1, province#2, province#3 and province#4.



Results: There were 10,450 cases defended as intermediate care cases in this study. The most frequent pattern of referral patterns for intermediate care was the discharging from provincial hospitals to community hospitals which accounted for 89.67 per cent. It is also found that this pattern is the most frequent happened among 4 areas as it was account for 89.59 per cent. However, it found that province number#3 had the least percentage in this pattern but it was found the pattern of discharging from community hospital to community hospital in the highest percentage (18 per cent) compared to other areas and there was no case found in this area as discharging from community hospital to provincial hospital while there were found some cases happened in other areas.

Conclusion: The most practiced for intermediate care cases in Thailand was discharging from provincial hospital to community hospital. There were found readmission cases for intermediate care cases within critical periods of care.

Keywords: Intermediate care, referral pattern, Thailand, social health protection, health care schemes, Universal Coverage, Universal Health Coverage, Social Security Scheme, Civil Servant Medical Beneficially Scheme

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(30) Compilation, Explanation and Restoration of Moh Phon's Herbal Prescriptions for the Skin Conditions Caused by Viral, Bacterial, and Fungal Infections

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ABSTRACT

Background: The Traditional Thai Medicine (TTM) prescription of Moh Phon was developed and recorded by Abhakara Kiartivongse or Moh Phon since 1915.

Objectives: This study aimed to elucidate traditional Thai medical wisdom regarding Moh Phon's prescriptions, especially the skin conditions caused by viral, bacterial, and fungal infections.

Methods: The crude herbal drugs in Moh Phon's Traditional Thai skin recipes are prepared and certified by their vernacular and scientific names. A scientific review and establishment of descriptions of plant species, ethnomedical uses, pharmacological and toxicological activities, and active ingredients. The prevalences of plant species used in the formulary were analyzed.

Results: Forty-four remedies for 15 skin conditions or diseases caused by viral, bacterial, and fungal infections were found. It was found that medicines were prepared using various parts of the plants, including leaf, root, fruit, bulb, rhizome, milk, gum, peel, and stem. There were 15 methods of preparing the medicines, including decoction, crush, pound, burn, rasp, crumble, squeeze, smash, chew, digestion, cut, grind, mix, fried, and broken. All medicines were externally used, including rub, apply, mask, shower, and paste. A total of 35 species were identified, divided into 28 dicots and 7 monocots. The most common families are Leguminosae (8.6%) and Solanaceae (8.6%). Commonly used plant species for skin disorders are *Cocos nucifera* L. (7.1%), followed by *Allium sativum* L. (4.8%), *Citrus aurantifolia* Swing. (4.8%), and *Curcuma longa* L. (4.8%).

Conclusion: This study provides the first report on scientific information, and traditional medicinal plant use, including parts used, methods of preparation, pharmacological and toxicological activities, and active ingredients in Moh Phon's prescriptions. This data supports the conservation of traditional knowledge and will facilitate future modern herbal drug development research.

Keywords: Moh Phon, Traditional Thai medicine, Skin condition, Medicinal plant

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(31) Determinants of Life Satisfaction among Older Persons in Myanmar

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ABSTRACT

Introduction: Myanmar has undergone significant demographic changes from high to low levels of fertility and mortality, and the share of older population has increased. While traditionally Myanmar society places high value on the reciprocal duties of parents and children and the importance of looking after older members of the family, however, Myanmar faces challenges in providing social protection to an increasing number of older people. As people get older, their physical health and functional ability will deteriorate and as a result, their satisfaction with life will also decline. The level of life satisfaction is expected to be lowest among the oldest group with low education and low socioeconomic status. As the older population is projected to gradually increase, it is crucial to consider factors that contribute to their perception of life satisfaction.

Objective: This study aims to explore the determinants of life satisfaction among older persons in Myanmar.

Methodology: This study employs cross-sectional data from the 2019 Myanmar Inter-censal Survey conducted by the Department of Population, the Ministry of Immigration and Population. The sample of this study consists of 65,065 older persons aged 60 and over. The life satisfaction of those older people were asked about 5-point scale and evaluated on a scale ranging from 1 to 5 (all of the time = 1, most of the time = 2, some of the time = 3, a little of the time = 4 and none of the time = 5). In this study, it measures with two theories: Bottom-Up and Top-Down Models, and Need-Gratification Theory. The Bottom-Up model is conserved that the overall life satisfaction is the outcome of cumulative satisfaction in relevant life domains. The Top-Down model is described as life satisfaction is an influencer of domain-specific satisfaction. The Need-Gratification theory is based on the Maslow's five-hierarchical model of human needs. Binary logistic regression was used to examine the relationship between demographic, socio-economic, and health-related factors and the level of life satisfaction of older persons in Myanmar.

Results: This study finds that women (OR=1.05) are more satisfied with life than men. The results show that life satisfaction of older persons in Myanmar is associated with living in the coastal area (OR = 0.94) by geographical areas, having difficulties in any type of the six activities (OR = 0.77), and having a very poor health status (OR = 0.04), controlling for other factors. There are also factors that are positively associated with life satisfaction. The findings show that older persons who are well-educated and those who participate in community activities are more likely to be satisfied with their life compared



to those who have less education and who do not participate in community activities, respectively. Older persons living with a child (OR = 1.10) are more likely to be satisfied with their life compared to those living alone. Similarly, those who receive pension, allowance, or benefits (OR = 1.19) and those who live in the well-off households (OR = 1.42) are more likely to be satisfied with their life compared to those who do not receive pensions, allowance, or benefits, and those living in the worse-off households, respectively.

Conclusion: Life satisfaction is a key indicator of well-being. However, the different socio-economic backgrounds that hinder older persons from performing well in society could deplete their life satisfaction. This study suggests that not only socio-economic factors are associated with life satisfaction of older persons in Myanmar, but also health-related factors, geographical areas. The results have policy implications in the dimension of social protection strategies to improve older persons' well-being.

Keywords: life satisfaction, health status, income quintile, older persons, Myanmar.

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(32) Preventive Health Care and Health Care Services Utilization of Vietnamese Older Persons: Results from National Household Living Standards Survey 2018

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ABSTRACT

Background: As many countries are ageing rapidly, improving older persons' health and reducing the burden of disease are important goals of Vietnam. However, self-rated health of Vietnamese older persons showed signs of worsening health. Non-communicable diseases occupy seven spots in the top ten causes of Vietnam's disease burden. In most countries, when a major part of the disease burden for older persons is attributable to chronic diseases, preventive health care is considered as one of the central solutions to disease control. Vietnam still lacks effective policies in the areas of preventive health care as well as health services utilization, especially for older persons group. Only 24% of the mountainous people had routine medical check-up in the past 12 months in a survey in 2020. And even in a survey which was conducted in Hanoi city, only 51.21% of participants had a health examination during 2016. Moreover, in recent years, inequality in health care has increased. It creates many disadvantages in accessing health care services, especially for vulnerable groups (the older persons, ethnic minorities, the poor, etc.)

By providing the knowledgments about the use of health care services of older persons, this study supports the creation of policies that expand equal access to quality health services with a focus on preventive health care, especially in the current aging context.

Objectives: This study identifies the situation of the use of preventive health care (health check-up services) and the associated factors, as well as health care services utilization of Vietnamese older persons. The study focuses on three main objectives: (1) to determine the health status and health care service needs of Vietnamese older persons, (2) to investigate the factors associated with the use of health check-up services of Vietnamese older persons, (3) to investigate the differences in choosing health care facilities between different medical needs of Vietnamese older persons.

Method: The study used data from Vietnam Household Living Standards Survey (VHLSS) that conducted regularly once every two years by the Vietnam General Statistics Office. This study analyses the data of VHLSS conducted in 2018 with the main results were published in 2020 (the most recent survey was held in 2020 and data had not published at the time this study was conducted). The survey used a cluster-randomized stratified sample to collect data and had a total 38,811 respondents from 9096 households in 3,133 communes/wards which were representative at national, regional, urban, rural and provincial levels. VHLSS 2018 data is exploited in many fields, the current studies using its data focus mainly on poverty, labor market as well as productivity of agricultural production activities. However, studies on the health section are still underutilized. Focusing on health care situation of older persons, this study has a sample of total older person in VHLSS 2018 (individuals aged 60 years and older by Elderly Law of Vietnam), including 5037 older persons with 6030 responses regarding health care facility visits. With classification into three health service needs (no use, health check-up and medical treatment) and four types of health care facility, the study employs multinomial logistic regressions to analyze the predisposing, enabling and medical need factors associated with health care services utilization.

Results: With regards to health care services utilization, the percentage of older persons reporting no use, use for health check-up and use for medical treatment are 29.72%, 16.97% and 53.32%, respectively. The results show that age, being female, education and having health insurance (HI) are positively associated with the likelihood of using health check-up services as compared to not using any service. In detail, aged 70-79 compared to aged 60-69 has RRR at 1.4 (95% CI: 1.2-1.7), female



compared to male: RRR = 1.2 (95% CI: 1.0-1.5), education level at secondary school, high school, college and above compared to under primary school have RRRs: 1.4 (95% CI: 1.4-1.8), 1.3 (95% CI: 1.0-1.8), 1.5 (95% CI: 1.0-2.2), respectively, having any types of HI: medicaid, public HI, private HI compared to no having HI have RRRs: 4.1 (95% CI: 2.6-6.5), 4.4 (95% CI: 3.0-6.6), 4.1 (95% CI: 1.9-9.2), respectively.

In contrast, being from the minority group and co-residence with family members are negatively associated with the likelihood of using health check-up services. In detail, minority group compared to majority group has RRR at 0.5 (95% CI: 0.4-0.8), living arrangement: living with spouse only, living with children and spouse compared to living alone have RRRs: 0.5 (95% CI: 0.3-0.8), 0.4 (95% CI: 0.3-0.5), respectively.

Conclusion: While the health system in Vietnam has a full range of medical establishments from public to private health services, the proportion of older persons who use preventive health care (i.e., health check-up services) is quite low. The main barriers come from differences in demographic characteristics such as age, education, ethnicity or not having health insurance. Policies to increase coverage of health insurance for older persons are needed to increase the use of preventive health care services. The results also have implications for targeted programs which focus on certain groups of the aged population, such as younger older persons (aged 60-69) and the minority group.

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(33) Associations between Sexual Orientation and Gender Identities (SOGI), and barriers to healthcare among LGBTQ+ people in Bangkok, Thailand

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ABSTRACT

Background: Despite the seeming acceptance of lesbian, gay, bisexual, transgender, and queer (LGBTQ+) community in Thailand, they are not legally accepted and recognised. LGBTQ+ individuals, who may hold varied Sexual Orientation and Gender Identities (SOGI), can experience considerable accessibility and acceptability barriers to healthcare. As a result, their physical and mental health can be negatively affected. There are few studies of healthcare barriers experienced by LGBTQ+ population in Thailand.

Objective: This study aimed to determine associations between barriers to healthcare and SOGI among LGBTQ+ residing in Bangkok.

Method: A cross-sectional study using self-administrative online questionnaire with convenience sampling was undertaken. The questionnaire had five sections: demographics, barriers to healthcare, SOGI and understanding of SOGI questions. Data were collected between March to May 2022 with supports from gatekeepers in Bangkok working closely with the LGBTQ+ community. Ethical approval was granted by Liverpool John Moores University (Reference Number PHIPGT2033). Analysis of preliminary data from 10 questions about barriers to healthcare are presented. Descriptive statistics, Independent-Samples Kruskal-Wallis and Pairwise comparison were performed to determine the associations.

Result: As of the 22nd May 2022, there were 211 participants; the majority were aged 25-34 years old (84.2%), with 18-24 years old (21.1%), and 35 years or older (16%). Almost half identified as heterosexual/straight (44%), 32% as gay, 9% bisexual, 8.5% was lesbian, and 6.2% has other sexual identities. More than half were transgender (33% transgender women (TGW), and 28.1% transgender male (TGM)), and 21% as male or female, with 6.7% unsure, and 7.3% having other gender identities. Older respondents experienced significantly less accessibility and acceptability barriers compared with younger participants (p -value<0.05). There were significant differences in accessibility and acceptability barriers by SOGI. Gay men experienced significantly higher accessibility and acceptability barriers compared to pansexual (p -value=0.014) and bisexual (p -value=0.015). There were significant differences in healthcare access between TGW and males (p -value =0.029), and TGM and females (p -value=0.008). Acceptability among TGW and TGM was significantly lower compared to those who identified as male (p -value=0.027) or other (p -value=0.001).

Conclusion: With SO- and GI-segregated, significant accessibility and acceptability barriers to healthcare were identified among adolescent, gay and transgender individuals. Public health practitioners need to identify the distinct barriers which may impact people with different SOGI. Standardized collection of SOGI would help identify unique barriers and so could positively impact health policies ensuring LGBTQ+ people have access to equal healthcare in Thailand.



Keyword: barriers to healthcare, LGBTQ+, SOGI, Thailand

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(34) LGBTQ+ Healthcare Access in Nepal during the Covid19 Pandemic

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ABSTRACT

Background: The access to healthcare and health service delivery in Nepal has been severely impacted by the COVID-19 pandemic. While COVID-19 is a health pandemic that can impact everyone, LGBTQ+ individuals can experience a much larger impact due to the existing health inequality. The vulnerability of the LGBTQ+ population during the COVID-19 pandemic can range from stigma and discrimination, economic difficulties, access to healthcare, immunocompromised state if they are HIV positive, to affect in psychosocial wellbeing.

Objective: This study examines the situation of healthcare access among the LGBTQ+ individuals during the COVID-19 pandemic. The factors related to healthcare access during the COVID-19 pandemic is also observed through this study.

Method: Database of LGBTQ+ survey conducted by Blue Diamond Society (BDS), an LGBT rights organization in Nepal was utilized. The analysis includes 172 sample of LGBTQ+ individuals of Nepal surveyed in August 2020. Binary logistic regression is employed to investigate factors that influence healthcare access of the sample.

Results: The finding showed that LGBTQ+ individuals who are employed are 2.673 time more likely to access healthcare compared to people who aren't employed. In the age variable, 18 to 24-year-old are 59.4% and the 25 to 34-year-old are 54.9% less likely to access healthcare compared to the 35 and above age group. However, for 'discrimination and abuse' and 'stress/depression' variables, the findings are not ideal. After running the regression, it was found that LGBTQ+ who had experienced 'discrimination and abuse during the COVID-19 pandemic were 2.411 times more likely to access health care than that with no 'discrimination and abuse' experiences. Similarly, with the 'stress/depression' variable, LGBTQ+ with experience of stress/depression were 2.031 times more likely to access health care than that with no stress/depression. Findings for 'discrimination and abuse' and 'stress/depression' although not conventional can be supported by the fact that during the COVID-19 pandemic various organizations including Blue Diamond Society (BDS) were involved in providing help and support to the LGBTQ+ community. Since the survey participants were in contact with community-based organizations (CBOs) working with BDS, it's likely that they had increased reach and access to healthcare if they were experiencing 'discrimination and abuse' or when they were experiencing 'stress/depression'.



Conclusion: For LGBTQ+, healthcare access is influenced by employment, age, experience of being discrimination and abused and stress or depression. The findings guided that health promotion activities should be designed specifically to tackle the constraints of each group of LGBTQ+ population.

Keywords: LGBTQ+, COVID-19, healthcare, pandemic, access

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(35) Proof of Concept of Method for Evaluating Capacity Building for Health Literacy Responsive Practice

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ABSTRACT

Background: There is an increasing emphasis in policy and literature on “health literacy responsiveness” (HLR), the responsibility and ability of healthcare organizations, initiatives and personnel to respond appropriately to peoples’ diverse health literacy strengths, limitations and preferences. One aspect of HLR is the capabilities of health workers in many other settings to respond skillfully and effectively to diverse health literacies. Historically, HLR capabilities of practitioners have been considered as an aspect of organizational health literacy responsiveness. HLR practice is, however, important in a far wider range of settings and activities than these.

The Ophelia process is a widely used co-creation process to develop HLR interventions for the full diversity of health literacies. A core component uses vignettes to represent people with different health literacies.

Objectives:

1. To develop a framework of health practitioner capabilities for HLR practice and evaluation tools and strategies for these capabilities
2. To develop and test a method for assessing the ability of practitioners to respond to different health literacy strengths, limitations and needs that is integrated with the Ophelia process and based on the locally produced vignettes.

Methods: This descriptive study was a follow-up of an Ophelia project conducted in the province of Leyte, Philippines sponsored by the Ministry of Health. It used triangulation of qualitative and quantitative methods to seek to identify health literacy competencies and to validate the quantitative questionnaire developed. Data was collected using the questionnaire and open-ended interviews from both Ophelia and non-Ophelia participants, all of whom were rural health professionals. The qualitative and quantitative data were matched to validate the information derived from each method.

Results: Participants who scored lower in the confidence ranking questions derived from the tool, reported in the interviews they felt shy and intimidated in their practice. In comparison, participants who scored high in the confidence ranking questions who reported they felt at ease when communicating with patients due to their level of experience and comfortability. Results confirm that specific practical competencies necessary for improving health literacy responsiveness were increased throughout the workshops within personal skill domains and interactions with patients and the community.

Conclusion: There is a clear need for tools to evaluate the capabilities of health personnel for HLR practice. The Ophelia vignettes can be used as one tool to assess these abilities.

Keywords: Health literacy, Health practitioner competencies, Non-communicable diseases, Philippines

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(36) The Clinical Effects of *Lysiphyllum strychnifolium* (Craib) A. Schmitz Tea on Breastmilk Production

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ABSTRACT

Introduction: The inability to produce sufficient breastmilk supply in mothers is a major concern throughout the world. Galactagogues are used as treatments to increase breastmilk production. *Lysiphyllum strychnifolium* (Craib) A. Schmitz (LS) has therapeutic properties including breastmilk stimulation in traditional use. LS has been used as herbal tea to stimulate breastmilk production in the Northeast of Thailand. However, no research has been conducted to demonstrate the efficacy of this herb.

Objectives: To determine the clinical effects of LS tea to increase breastmilk in among nursing women with normal delivery.

Methodology: A single-blind randomized controlled trial was conducted in nursing women with normal delivery at two hospitals in Thailand. Eighty-four participants were randomized into two groups by computer-generated numbers. The inclusion criteria were females aged 20-40 years with normal delivery, exclusive breastfeeding, no history of herb allergy with full term and healthy neonates. The intervention group received 2 g of LS tea, prepared by a factory with GMP standard, mixed in warm water 200 ml and the control group received only 200 ml of warm water before meal 3 times a day for 7 days. On day 4 and 10, breastmilk volumes were measured. Each infant was weighed by using a digital scale on day 0, 4 and 10. Paired t-tests or Wilcoxon signed ranks tests and a repeated ANOVA were used for data analysis.

Results: The mean breastmilk volumes were 62.86±44.90 ml/time in LS group which were higher than those of the control group (47.38±32.18 ml/time) without statistical significance ($p=0.073$) between groups on day 4. On day 4, all participants in the intervention group began secreting breastmilk, whereas five participants (11.9 %) in the control group could not provide adequate breastmilk supply. The mean differences of infant weight from baseline, day 4 and day 10 were statistically significant between both groups ($p<0.001$). On day 4, the intervention group lost 0.39 % of their body weight while the control group lost 2.51 %. On day 10, the infants in both groups gained more weight. Moreover, the adverse effects of LS tea were not found among the pairs of mothers and infants.

Conclusion: LS tea is a promising natural galactagogue for increasing breastmilk volume in the immediate postpartum period and the infant weight in the intervention group was greater than that in the control group on day 10. LS tea tends to stimulate breastmilk initiation without significant side effects.

Keywords: *Lysiphyllum strychnifolium* (Craib) A. Schmitz, galactagogues, Ya-Nang-Daeng, breastmilk

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(37) The Determinants of Happiness among Food Delivery Riders in Bangkok and Metropolitan Area during the Covid-19 Pandemic

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ABSTRACT

Background: The novel coronavirus (COVID-19) has rapidly spread worldwide. Social distancing is recommended for individual to protect and prevent the spread of COVID-19. According to the guideline, working from home is one of the most effective ways to reduce exposure to COVID-19. Therefore, the food delivery service has been rapidly grown up of due to high demand. Previous report revealed that Thailand ranks a high level of happiness compare to other countries. However, limited research study discovers happiness in specific group such as food raiders.

Objective: To describe the happiness among Thai food delivery riders who work in Bangkok and metropolitan area.

Method: The cross-sectional study was conducted among food delivery riders who work in Bangkok and metropolitan area. Participants were recruited through the rider's network of food delivery companies during April-May 2022. Google form was created to gather the information from riders which includes happiness level, personal characteristics, working and economic conditions. Happiness levels were measured on single-item questions by the five Likert scales. It classified into two categories below low happiness levels (very unhappy, unhappy, and neither happy nor unhappy) and high happiness levels (happy and very happy). Descriptive statistics, chi-square test, and multiple logistic regression were conducted to determine the factors of happiness among food delivery riders.

Results: A total of 422 completed data were used for analysis. Over half of the participants were male (68%) and worked full-time jobs as food delivery riders (55.9%). One-third (33.2) of participants indicated they have high happiness. Multiple logistic regression identified that factors associated with those who reported high happiness levels were female (AOR:2.14, 95% CI:1.32-3.47), more than aged of 30 years (AOR:2.11, 95% CI:1.33-3.36), sleep well last seven days (AOR:1.69, 95% CI:1.04-2.75), less feeling stressed (AOR:3.09, 95% CI:1.92-4.97).

Conclusion: The findings highlighted an importance of the promotion of booster vaccinated as well as motivating of the preventive measures among young riders. Social support from friends and family with engaging in physical activity could leads reduce stress levels and improve sleep quality.

Keywords: Happiness, Food delivery, Thailand, COVID-19

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(38) Prevalence and Associated Factors of Food Insecurity during COVID-19 Pandemic among Bangkokian

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ABSTRACT

Introduction: The prevalence of food insecurity (FI) in Thailand has fluctuated throughout time. The COVID-19 pandemic had a substantial impact on Thailand's food networks, resulting in severe FI during the pandemic, and the factors that contribute to food insecurity differ greatly across developed and developing countries. This study may contribute as a step in achieving the SDGs by 2030.

Objectives: The aim of this study was to estimate the prevalence and associated factors of food insecurity during COVID-19 pandemic among Bangkokian.

Methodology: This cross-sectional study design was carried out over 50 subdistricts in Bangkok. Participants were recruited by convenience sampling technique, and gathered using self-administered Google Form. Individual characteristics and Food Insecurity Experience Scale (FIES) were collected. Data were cleaned, coded, and analyzed in Excel and SPSS 22 for univariate, bivariate (chi-square), and multivariate (logistic regression) analysis.

Results: The majority of the 440 participants were females, aged between 46-55 years old, single, living with family, has no child, graduated with bachelor's degree, employed, earning more than 20,000 Baht per month, and not the head of the family. The study revealed that as much as 39.4% of all participants experienced food insecurity due to the impact of COVID-19 pandemic (mild 25.5%, moderate 8%, and severe 5.9%). Food insecurity was significantly associated with age, living with a disabled person, house ownership status and additional supports. Those aged 36-45 and 46-55 were 0.29 (OR 0.29; 95% CI 0.114-0.723); and 0.14 times (OR 0.14; 95% CI 0.046-0.398; $p < 0.001$) less likely to experience food insecurity than those younger in age. Risk of food insecurity was increased by 3.4 times when a family member was disabled (OR=3.369; 95% CI 1.513-7.505); increased 2.7 times as a house renter (OR=2.738; 95% CI 1.366-5.490), and increased 2 times when using additional food support (OR=2.055; 95% CI 1.336-3.163).

Conclusion: Almost half of the participants had been experiencing food insecurity, hence the pandemic poses a threat to food security. Therefore, additional research and the relevant stakeholders should focus on food assistance intervention and policy to protect young adults and disabled households from food insecurity.

Keywords: food insecurity, food security, food insecurity experience scale (FIES), COVID-19 impact, urban food insecurity

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(39) Indonesian's Health Social Workers in Maternal and Child Program during COVID-19 Pandemic: How Were They Worked?

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ABSTRACT

Introduction: COVID-19 pandemic changes the whole system in the world including health social workers in the community. During COVID-19 pandemic, their activities have full and partial community mobility restriction in the early pandemic. Temporary full restriction of public activities inhibit responsibilities of health social workers for maternal and child program in the community which named as Posyandu mainly on monitoring and promoting health. In the tailed of pandemic, social health workers might worked with partial restriction to interrupt COVID-19 transmission.

Aims: This study aims to investigate what extent of health social workers activities related to supporting maternal and child program in the community during COVID-19 pandemics. Further, this study aims also demonstrate the changing of social workers activities before and during COVID-19 pandemics.

Methods: A cross sectional study was conducted in Medan City, The Province of North Sumatera, Indonesia. In this study, we obtained 72 health social workers distributed in one sub-district in study location. A questionnaire with before, during and after Posyandu has been asked to subjects. Chi-square test with 95% prevalence ratio has been used to analyze the data instead of descriptive statistics.

Results: This study found that 60% of social workers hadn't routinely participated Posyandu activities during COVID-19 pandemic. Of 90% social workers considered about personal and environmental safety are needed during work at Posyandu and 63% of social worker also expected for training of Posyandu during COVID-19 pandemic. A half of total respondent (58%) asked the mother and children about COVID-19 symptom before coming to posyandu. However, only 20% of social worker had participated in health promotion of COVID-19 during posyandu. Low motivation of social worker was associated with social worker participation (P value =0,004).

Conclusion: Social worker participation during COVID-19 pandemic should be improved with availability of personal protection equipment. Raising social worker awareness and knowledge of COVID-19 is important to support maternal and child program while several issues would emerge when lack of monitoring on those program in the future.

Keywords: Health Social Workers, Posyandu, COVID-19 Pandemics

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(40) Perception on Proper Used Face Masks Disposal in the COVID-19 Era among Nakhon Pathom Province Residents of Thailand

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ABSTRACT

Background: In the time of a major catastrophe called Covid-19, face mask wearing is one of the simple preventive measures to apply worldwide. Therefore, the consumption and production of face masks become enormously increased due to mandatory use of face masks announced by the respective government. As the use of face masks is growing, the potential risk of spread of infection within the community and the impact on environmental pollution become higher due to improper disposal of used face masks. Furthermore, the impacts occurred by improper disposal are the consequences of people's activities and hence the level of perception on used face masks disposal needs to be assessed.

Objective: The objective of this study is to assess the individual's perception on proper used face mask disposal in the Covid-19 era among the residents of Nakhon Pathom Province.

Method: A descriptive cross-sectional online survey was conducted in 3 districts of Nakhon Pathom Province from 20th May to 28th May 2022. Self-administered survey questionnaires were adopted from the constructs of Protection Motivation Theory and validated by 3 experts from AIHD. The reliability was tested with Cronbach's Alpha which is more than 0.7.

Result: Total of 158 data were used for analysis. More than half of participants (53.2%) have low level of perception and 51.9% have poor knowledge on proper used face masks disposal. According to Chi-square analysis, level of knowledge, having experience of Covid-19 infection, occupation of participants and area of resident were significantly associated with level of perception with the significant P-value of less than 0.05.

Conclusion: The findings revealed that the people still have low perception and poor knowledge on disposing of used masks properly. Enforcing on health promotion and information for proper way of disposing is essential for the community to ensure safety of public health and environment. Then, the government and Public Health Officials have to consider timely oriented and user friendly modes of disposal guideline on used masks to prevent further public health problems and environmental pollution.

Keywords: Used face masks, Disposal, Perception, Covid-19 era, Protection Motivation Theory

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Poster Presentation



(P01) The Prevalence and Factors Associated with Depression Among Lesbians in Chengdu, China

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ABSTRACT

Background: The lesbians and its unique subculture have always been excluded by the heterosexual society. In Chinese society, they are an invisible and neglected minority group. Lack of understanding of lesbians and even homophobia makes lesbians less deserving of health services than others making them depressed. Depression is one of the most common mental disorders and has become a globally significant public health problem, and is particularly common among LGBTQ+ which lesbians were included.

Objectives: The purposes of this study were to evaluate the prevalence of depression and to determine the association between related factors and depression among lesbians who identifying themselves as pure girl, a woman with a more feminine appearance compared with a woman with a masculine male appearance and lived in Chengdu, China.

Methods: This study was designed as a cross-sectional study. The study area is in Chengdu, China. Sichuan Province. Data were collected between April and May 2021. Data were collected through an online questionnaire. The questionnaire included socio-demographic and experience/s of depression questions

Results: The prevalence of depression among lesbians who identifying themselves as pure girl was 39.1 percent. In logistic regression analysis, depression was significantly associated with lower age (18-24 years) (OR: 0.16, 95%CI: 0.29-0.94).

Conclusion: Lesbians who identifying themselves as pure girl were more likely to experience higher prevalence of depression than the general population. Especially youth lesbians who identifying themselves as pure girl were prone to be at risk of depression than older age. This highlights the need for early screening of depression and easy to access psychological health care service system for lesbians in China.

Keyword lesbians, depression, China

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(P02) Abstract on Evaluation of Risk Mother Tracking System (RMTS) at Shan(S) State

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ABSTRACT

Background: Causes of maternal mortality in Myanmar (based on Nationwide Cause Specific Maternal Mortality Report, 2008) were post-partum hemorrhage, eclampsia, unsafe abortion, prolonged labor and sepsis. Those are preventable if the risk pregnancies are tracked and evaluated regularly. Therefore RMTS was introduced to enhance maternal care at primary care level. General objective is to develop a simplified risk mother tracking system

Specific Objectives:

- (1) To explore current recording and reporting system for risk mother
- (2) To explore difficulties and bottlenecks in implementation as well as solutions to overcome
- (3) To develop simplified recording and reporting system for every pregnant mother
- (4) To investigate the acceptance of RMTS among all actors

Methods: RMTS was implemented in all primary health centers(438) of Shan State(S) for a year since January, 2016. Evaluation study was conducted among basic health staffs (BHS) such as midwives (MW), auxiliary midwives (AMW) and volunteers from Myanmar Maternal and Welfare Association. A Cross Sectional Study designed was conducted, recruiting (989) participants (MW, AMW, volunteers) during December'2016 to March'2017 and data analyzed descriptively.

Results: MW (99.3%), AMW (90.7%) responded that the RMTS was useful. Majority of MW (96.2%) provided antenatal care for 1-3 cases of risk pregnancy per month and (40.8%) of them could receive weekly service by MW. Similarly, majority of AMW (95.7%) served (1) to (2) cases per month and only (35.4%) of risk mother accessed/ received care from AMW. MW provided home visit care to (90.7%) of risk pregnancies whereas (77.6%) in AMW. Only (55.9%) of volunteers were aware of the RMTS and (11.6%) of them applied the system in their respective villages.

The study revealed additional on-job training of RMTS for health staffs, volunteers was required. Qualitative inquiry identified (1) need to revise/add the RMTS (2) enthusiasm on usage of RMTS in routine health system (3) feedback from volunteers.. This system enhanced BHS's capacity to track risk pregnancy more straightforwardly and reduce maternal and neonatal mortality. Further scale up of RMTS will require emergency fund for referral, referral pathways, ambulance and cooperation of communities in addition to the role and responsibility of PHS respectively.

Conclusion: Findings showed practicality of RMTS in reduction of both maternal and neonatal mortality with a minimal additional workload to BHS.

Keywords: maternal/ neonatal mortality, risk mother, tracking system

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(P03) Association between Completed Suicide and Gender in Chaiyaphum Province, Thailand

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ABSTRACT

Background: Suicide is a cause of death with impact emotional and societal costs, although it is a generally preventable cause of death and a critical global public health issue. In Thailand, suicide rate is in the uptrend and Chaiyaphum province is also one of the province that face with this lethal phenomenon. However, there are very few study about suicide cases in Chaiyaphum province.

Objective: Therefore, this current study aimed to evaluate the association between completed suicide and gender in Chaiyaphum province.

Method: This study used the registry-based data of completed suicide and attempted suicide cases in self-harm surveillance database of Thailand national suicide prevention center, Department of Mental Health, Ministry of Public Health Thailand from January 2018 – December 2021. Completed suicide was considered the outcome. Binary logistic regression was performed to find the association.

Result: From 563 registered cases, 278 cases (49.4%) were completed suicide and 285 (50.6%) cases were attempted suicide. After analysis, males increased 7.27 odds of the completed suicide compared to females ([OR= 7.27, 95% CI:4.91, 10.76], P <0.001). The difference in age groups, divorced, and unemployed were associated with completed suicide (p<0.05).

Conclusion: We found that the increased odds of completed suicide were associated with gender, age, divorced and a group of employee. Males were more likely to completed suicide compared to females. The policymaker should be considered on the different of gender to provide intervention which can destigmatize the old taught that boys don't cry to boys can cry and seek help and they have to focus more on employee-workplace suicide prevention policy.

Keywords: Completed suicide, Chaiyaphum, Gender, Suicide, Thailand

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(P04) Association between Medical Insurance Choices and Healthcare Utilization among Diabetes Patients in The People's republic of China: A Secondary Data Analysis

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ABSTRACT

Background: With economic development, aging of the population, improved insurance coverage. Due to the lack of medical and health resources and insufficient health service capacity of primary health care facilities in China, the unbalanced allocation of resources also makes patients prefer to go to secondary and tertiary health care facilities bypass the primary health care facilities and make the secondary and tertiary health care facilities overwhelmed. This study attempts to analyze the factors Association between Medical insurance Choices and healthcare Utilization among diabetes patients among patients of age 45 years or older in China.

Objective: To assess how socio-demographic factors and medical insurance scheme affect the decision to utilize outpatient services and conditioning on use the choice among primary and higher level which are secondary and tertiary health care facilities utilized by diabetic in China.

Methods: The multivariable analysis used multiple logistic regression to assess the association between dependent variables and independent variables. Data from 2018 waves of the China Health and Retirement Longitudinal Survey were used.

Results: More than 62.7% of the individuals suffered from chronic disease, which indicated the grim reality that there are significant healthcare service demands. And this study found that among Chinese middle-aged and elder adults, only diabetes patients and diabetes patients with other chronic disease increased the likelihood of using outpatient care than compared to patients without diabetes and diabetes patients without other chronic diseases. In addition, this research shows that the patients who have chronic disease are in a high-risk group for utilization of outpatient service. But it may not be the risk factor for the patients of the choice to use secondary and tertiary hospitals. It illustrates that it is better to improve the mechanism for chronic disease prevention and management which allowed the patients to better access the healthcare services.

Conclusions: The findings indicate the reducing the utilization of outpatient services in secondary and tertiary hospitals in China will require improving the quality of services rendered from primary health care facilities and the utilization of primary health care facilities. If the focus is on the provision of critical chronic disease screening and chronic disease prevention and advocacy services, the utilization of primary health care services can be increased. With the rising prevalence of chronic diseases, it is more important to improve the basic medical insurance system and guarantee the ability to effectively improve the level of medical security for patients with chronic diseases, promote the timely treatment of patients, guarantee the health quality, and effectively reduce the economic risk of disease.

Keyword: Healthcare utilization, Medical insurance, Public health policy

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(P05) A Study of Perceived Stress among Adolescents Living in Slums of Dhaka, Bangladesh in the Times of Pandemic

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ABSTRACT

Background: Adolescence is considered as a stressful phase due to physical, psychological, and sexual changes. Due to stress overload, adolescents are more prone to mood disorders such as anxiety and depression that can hamper their quality of life. To further this, evidence has shown that unprecedented events such as the Covid-19 pandemic contributes to worsening stress especially among those from lower socioeconomic backgrounds. The lack of sufficient data regarding the burden of any mental health status in slums leads to problems with effective administration and allocation of health care and prevention services.

Objective: The objective of this study was to find the prevalence and predictors of stress among adolescents living in the slums of Dhaka.

Materials and methods: A cross sectional study was conducted from April 2022- May 2022 among 235 adolescents aged 12- 18 years living in slums of Dhaka who were selected using random sampling method. Stress was assessed using the perceived stress scale-10 in face-to-face interviews. The data were analyzed using descriptive, bivariate and binary logistic regression.

Results: Majority of the participants belonged to mid adolescence (51.9%) followed by early adolescence (32.3%) and late adolescence (15.7%). 34.9% of these participants reported low stress and 65.1% moderate-high stress. Higher levels of stress were found with increasing age, poor social support; loneliness and going hungry which were associated to the pandemic.

Conclusion: The results of our study draws attention not only to a high prevalence of stress but also how crisis such as the Covid-19 pandemic can contribute to this stress. Relevant authorities should take adequate steps to provide more social support and other support such as food aid to adolescents especially those from vulnerable population such as slum dwellers. Further studies also need to be carried to identify other associated factors.

Keywords: Adolescence, stress, slums, Covid-19, Bangladesh

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(P06) Exploring and Reducing Tuberculosis Stigmatisation and Discrimination in Thai High-Schools

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ABSTRACT

Introduction: Thailand is one of the countries with a high rate of tuberculosis (TB) and infection TB/HIV. It is important to notice that stigma highly impacts on the quality of life of individuals infected by TB and is a major barrier to health care and public health control. However, assessing TB stigma towards TB patients are also reported to be high among high-school students. Therefore, this study emphasizes on reduction of TB stigma and discrimination in Thai high-schools using a communication intervention.

Objectives: To explore the effectiveness of communication intervention on reduction of TB stigma and discrimination among high-school students in Bangkok, Thailand.

Methodology: This study was a quasi-experimental study with two groups of pretest-posttest studies. The participants were high-school students who were studying in grades 10-12 under Bangkok areas. Of the 216 participants, 108 were randomly assigned into the experimental group, while the other 108 were randomly assigned into the control group. A systematic sampling was used for the selection of the participants in each group. The experimental group received a communication intervention that included TB knowledge and attitude training, reducing stigma training, raising confidences, and social supports for three months, whereas the control group did not receive that intervention. The investigation period was conducted for five months. Data analysis included descriptive and inferential statistics. Descriptive statistics comprised of frequency and percentage were adopted to analyze the participants' demographic characteristics, while Repeated-measure ANOVA was used to evaluate changes in three outcomes measurements at baseline, intervention and follow-up periods.

Results: The outcomes significantly showed that the communication intervention was effective to reduce TB stigma and increase TB knowledge, TB attitudes and self-efficacy on TB stigma and discrimination compared with the control group (p-value <0.05). However, TB discrimination encountered no significant difference within and between both groups (p-value >0.05).

Conclusion: Our intervention can reduce TB stigma, and improve TB knowledge, TB attitudes and self-efficacy on TB stigma and discrimination in the experimental group. Therefore, this study should be adopted to reduce TB stigma in school program and other institutions.

Keywords: Tuberculosis, Stigmatisation, Discrimination, Intervention, High-schools

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(P07) Bioinformatics Analysis to Identify Key Cell Cycle-regulated Target Genes of Quercetin and Their Associations with a Disease-free Survival in Cholangiocarcinoma

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ABSTRACT

Introduction: Cholangiocarcinoma (CCA) is an aggressive form of cancers and the leading cause of mortality in Thailand due to late diagnosis and lack of effective therapy emphasizing the development for effective therapeutic strategies. To overcome chemoresistance and minimize high toxicity of chemotherapy, natural compounds have been proposed as alternative options for anti-cancer agents. Quercetin is a natural compound which has been shown to inhibit cell proliferation and induce cell cycle arrest in various types of cancer highlighting as a potential candidate agent for CCA therapy. However, the key cell cycle-regulated target genes of quercetin and their associations with survival rate in CCA are not well understood.

Objectives: To identify key cell cycle-regulated target genes of quercetin and their associations with survival rate in CCA using bioinformatics-based analysis

Methodology: Cell cycle-regulated target genes of quercetin were retrieved and analyzed the interaction between target proteins and quercetin by molecular docking. Gene expression and survival time of CCA patients were collected from the Cancer Genome Atlas (TCGA) and Gene Expression Omnibus (GEO) database. Differential expression of target genes and survival analysis were performed using GraphPad Prism. Disease-free survival (DFS) and overall survival (OS) were estimated by Kaplan-Meier method. A p-value<0.05 was considered as statistically significant.

Results: CDK1, CDK2, CDK6, PLK1, GSK3B and CDC25B were identified as target genes of quercetin. Molecular docking revealed that CDK2 had the highest binding affinity. Differential expression analysis demonstrated that all target genes were significantly overexpressed in CCA tissues. High expression of CDK1, CDK2 and PLK1 was significantly correlated with low DFS of CCA patients.

Conclusion: This study revealed key molecular targets of quercetin in cell cycle regulation and their associations with survival rate of CCA patients which could be beneficial in development of an anti-cancer agent.

Keyword: cholangiocarcinoma, quercetin, cell cycle regulation, molecular docking, disease-free survival

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(P08) The Prevalence of Probable Post-Traumatic Stress Disorder among Flood-prone Provinces in Thailand

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ABSTRACT

Introduction: Thailand has been facing many challenges from flooding events annually. The cumulative flooding events happen mostly in the Central and Southern part of Thailand such as in Nakhon Sawan and Nakhon Si Thammarat provinces. Flood disaster can have a long-term psychosocial impact on flood survivors. Nonetheless, there is a limited study of prevalence of probable PTSD among survivors in flood-prone communities using a simple screening such as the Primary Care PTSD Screen for DSM-5 (PC-PTSD-5). PC – PTSD-5 has been used to screening for PTSD in various types of disaster-related events including natural disasters or war in many countries. The benefits of PC-PTSD-5 are few numbers of questions and a higher rate of detection of PTSD.

Objectives: The objectives of this study were to determine the prevalence using PC-PTSD5 and associated factors of probable PTSD among people in the flood-prone communities in Nakhon Sawan and Nakhon Si Thammarat provinces in Thailand.

Methods: This study is a secondary data analysis from a previous cross-sectional survey conducted from 2019 to 2020 in Nakhon Sawan and Nakhon Si Thammarat provinces in Thailand. Both provinces were selected from the expert reviews' discussion. For secondary analysis, the data were screened for any missing data, only the participants with completed data from the surveyed questionnaire were included in the analysis. The analysis was performed for 758 flood survival participants. Frequency and percentage were presented for descriptive analysis. The chi-square test and multiple logistic regression were performed using SPSS Version 22 to determine the associated and risk factors between independent variables such as general characteristics, flood experiences, and impact from floods, with dependent variable (probable PTSD: Yes/No). The level of statistical significance was at p-value less than 0.2 for Chi-square and p-value < 0.05 for logistic regression.

Results: From a total of 758 participants who had experienced floods, 12.7% were screened positive for having the probable PTSD. The Chi-square test shows that age group, educational level, monthly income, number of family members, and the provincial residency are associated with having probable PTSD. Further analysis by multiple logistic regression indicates that flood survivors who aged 31-40 and 41-50 years old have 79% (OR: 0.211; 95% CI: 0.053-0.845) and 62% (OR: 0.379; 95% CI: 0.167-0.861) decrease odd of having probable PTSD compared to those who aged 61 years old and above, respectively. Whereas participants in Nakhon Sawan province have 4.836 times higher odd of having probable PTSD than participants in Nakhon Si Thammarat province.

Conclusion: The total prevalence of probable PTSD in flood-prone communities of Nakhon Sawan and Nakhon Si Thammarat provinces was 12.7%. Age group and provincial of residence are risk factors related to positive probable PTSD. Further intervention and coping measures focusing on psychosocial effects from flood disasters among flood victims should be investigated.

Keywords: flood, disaster, PC-PTSD, post-traumatic stress disorder, Thailand

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(P09) Spatial Epidemiology of Pediatric Pulmonary Tuberculosis (Tb) Cases in Medan City 2016-2020

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ABSTRACT

In the world, pulmonary tuberculosis is the cause of morbidity and mortality in children, but the prevention of cases of pulmonary tuberculosis in children is still not a priority. Objective of this study was to determine the spatial epidemiology of pulmonary tuberculosis cases in children in 2016-2020, method using a quantitative approach with ecological studies. This research was conducted in March-July 2021. The location of this research is the entire city of Medan with a total of 21 sub-districts. The sample used is a report on finding cases of pulmonary tuberculosis in children in Medan City in 2016-2020. In this study, the sampling technique used secondary data on cases of pulmonary tuberculosis in children in the last 5 years. Data analysis in this research is spatial analysis using geoda application and Qgis version 1.8.0. The results of this study are cases of pulmonary tuberculosis in children are higher in boys, there is no special pattern between population density and cases of pulmonary tuberculosis in children, humidity in Medan City for the last 5 years tends to be stable, in 2016 there is a positive spatial autocorrelation with Moran's I values. of 0.1999, in 2017 there was no positive spatial autocorrelation with a Moran's I value of 0.147, in 2018 there was no spatial autocorrelation with a Moran's I value of 0.131, in 2019 there was no autocorrelation with a Moran's I value of -0.067, and in 2020 there was a positive spatial autocorrelation with Moran's I value of 0.275.

Keywords: *Epidemiology, Spatial, Pediatric Pulmonary Tuberculosis*

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(P10) Determinant of Intra Uterine Device (IUD) Use in Public Health Center of Cangkringan, Sleman Regency, Yogyakarta-Indonesia

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ABSTRACT

Introduction: The family planning program is an effective effort to suppress the rate of population growth which is still a problem in the population sector. The population program in Indonesia is prioritized to achieve the goals of preventing unwanted pregnancies, regulating the interval between pregnancies, regulating the number of children in the family. This condition is in accordance with the national development plan, namely the increasing use of long-term contraceptive methods such as the IUD (Intra Uterine Device), implants and sterilization.

Objective: This study aims to analyze the determinants of the use of contraceptives (IUD) at the Cangkringan Health Center, Sleman Regency, Special Region of Yogyakarta Province.

Method: This research uses analytic observational method. The research design used the case control method. The research sample was 88 women in the fertile period (married women) that were chosen with the cluster sampling technique. The data collection method is primary data with a questionnaire instrument. Data analysis was used Chi Square test. This study was approved by the ethical committee of Universitas Ahmad Dahlan with the number of certificate

Results: The results showed that factors that were not related to the use of IUDs were Education level $p\text{-value } 0.517 > 0.05$, knowledge $p\text{-value } 0.031 \leq 0.05$, and barriers $p\text{-value } 0.006 \leq 0.05$, while factors related to age $p\text{-value } 0.494 > 0.05$, the number of children $p\text{-value } 1 > 0.05$, and husband support $0.001 \leq 0.05$.

Conclusion: It can be concluded that there is no relationship between the level of education, knowledge and barriers to the use of an IUD, whereas there is a relationship between age, number of children and husband support.

Keywords: Contraceptive methods use, longterm contraceptive, married women, family planning method

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(P11) Relationship of Sense of Ownership and Trust to Community Engagement in the Community Health Worker Program, Karenni State, Myanmar: A Cross-Sectional Study

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ABSTRACT

Background: Community Health Workers (CHWs) are viewed as the most promising health workforce in resource-constrained countries. The promise of CHW Programs, however, stems from their integration with the main health-care system and their immersion in and support of the community. For this reason, the WHO has strongly encouraged the use of Community Engagement (CE). In Demoso Township, Karenni State, Myanmar, the CHWs are the most common health professionals after the midwife and yet the description of CE is largely absent in the literature.

Objectives: The objectives of this study are to explore the people perception towards engagement, to determine the effect of ownership and trust on CE and to generate recommendations for the improved engagement of the people in CHW program.

Method: The study design was quantitative descriptive cross-sectional using mobile application in Demoso Township, Karenni State, Myanmar in May 2022. The study tool was developed based on the literature review and the specialist committee review. The subjects were the service utilizers of CHWs and were randomly assigned. The Pearson Chi Square test was run to analyze the associations.

Results: From the total of 425, 71.3% of participants have high level engagement which is transformational and more proactive allowing more leadership role to the communities. There are statistically significant associations between CE and sociodemographic characteristics such as age, marital status, educational level, family type, household monthly income, meeting venue, collective funding, and leadership and management training with Chi square value of $X^2 = 15.102, 21.047, 22.100, 18.552, 49.382, 21.854, 5.761, 21.344$ respectively with $p < 0.05$. It shows no association between CE and ownership $X^2 = 3.494$ with $p > 0.05$. However, significant association was found between CE and trust, $X^2 = 6.826$ with $p < 0.05$.

Conclusion: Our findings show transformational level of engagement. And there is a statistically significant association between CE and trust. This study suggests health managers to establish more trusting relationship between CHWs and community so that they can increase their engagement in the CHW program and may create better ownership of the program in the future and towards the sustainability of the program.

Keywords: Community Engagement, Sense of Ownership, Trust, Community Health Workers, Myanmar

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(P12) Factors Associated with Comprehensive Knowledge of HIV among Adolescents Aged 15-19 in Zimbabwe

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ABSTRACT

Comprehensive knowledge of Human Immunodeficiency Virus (HIV) is regarded as essential in HIV prevention as knowledge is regarded as power. An increase in HIV cases among adolescents in Zimbabwe is of great concern and makes one wonder if adolescents have adequate knowledge to prevent themselves from acquiring HIV. Current statistics show that the girl child is disproportionately affected by HIV in Zimbabwe as more girls are infected with HIV compared to their male counterparts. This paper firstly sought to identify if there are significant differences in HIV knowledge among adolescents by sex. Secondly it aimed at identifying the factors that are associated with comprehensive knowledge of HIV among adolescents aged 15-19 years in Zimbabwe. The paper is a secondary analysis of data collected as part of the Zimbabwe Demographic and Health Survey of 2015/16. Quantitative methods, including descriptive statistics, simple and multiple logistic regression were utilized in the analysis to identify associations between selected socio-demographic variables and comprehensive knowledge of HIV. Findings reveal that there is no statistically significant difference in Comprehensive knowledge of HIV among adolescents by sex. 44% of males compared to 43.6% of females had comprehensive knowledge of HIV. Age was associated with having comprehensive knowledge of HIV as older adults aged 19 had 1.85 higher odds compared to those aged 15, aOR = 1.85: 95%CI (1.49, 2.28), $p = .000$. However, those living in rural areas had 25% less odds of having comprehensive knowledge of HIV when compared to those residing in urban areas, aOR = 0.75: 95%CI (0.59, 0.97), $p = .027$. Higher wealth status was also associated with higher levels of comprehensive knowledge of HIV. Adolescents from the richest families were 1.34 times more likely to have comprehensive knowledge of HIV compared to the poorest. Those with secondary or higher education were twice more likely to have comprehensive knowledge compared to those without any education. Findings indicate that there is need for government to implement comprehensive sexuality education very early in high school before adolescents are sexually active so as to catch them young. Road shows targeting poor communities are needed to impact knowledge to the poor who have limited access to information. Policy to keep all adolescents in school till completion of ordinary level is important. Offering community based sexual and reproductive health sessions in rural communities is of importance.

Keywords: Comprehensive knowledge of HIV, Factors, Adolescents, Zimbabwe.

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(P13) The Stress among lecturers in the Universities with Online Teaching in Vietnam during COVID-19 Pandemic: A Preliminary Study

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ABSTRACT

Background: Stress has different meaning for each person under concrete conditions. Stress is part of our daily human experience, but it is associated with a great variety of essentially dissimilar problems, especially during COVID-19 pandemic which changed many aspects in our life.

Objective: The main purpose of this study was 1) to investigate the level of stress among lecturers in the universities in Vietnam during COVID-19 pandemic 2) The second purpose is to find the association among demographic, COVID-19 factors, difficulties in teaching online, and stress among tertiary education lecturers in Vietnam.

Methods: This study was conducted during April to May 2022 using online questionnaire. 247 lecturers in universities in Vietnam who aged from 23 to over 50 years were collected their personal information and stress using convenience sampling. The measurement tools were Perceived Stress Scale (PSS-10) questionnaire. Chi square test was carried out to analyze the association among associated factors and level of stress.

Results: The characteristics of participants showed most of them were female (22.3%), majority were aged from 31 to 40 years (45.7%) and the most of working time per week is under 48 hours (53%). Findings showed that 83.4% of participants were with moderate stress, which is much higher than percent of low and high level of stress, 8.1% and 8.5% respectively. Findings demonstrate consistent associations among education level ($p=0.025$), working hour per week ($p=0.00$), teaching method ($p=0.036$) and level of stress (low, moderate and high).

Conclusions: The prevalence of lecturers with moderate stress level is substantial. The changes of education have been accelerated by Covid-19 pandemic, that has impact on teaching routines and the stress of lecturers. Understanding the associated factors to stress are likely to solve disadvantages, minimize the level of stress and improve the efficiency of education in the regrettable situation. Recently, Vietnam government had supportive package to teachers in COVID-19 such as waving insurance fee and rising base pay so that ease a part of difficulties from pandemic.

Keyword: COVID-19, Lecturers, Online Teaching, Stress, Teaching

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(P14) Health Risk Assessment Related to Cadmium Exposure from Cigarette Smoking among Indonesian Smokers in Surakarta, Indonesia: A Cross-Sectional Study

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ABSTRACT

Introduction: Smoking is a habit that has a negative impact on the health of the world community, not least in Indonesia. Indonesia is one of the developing countries that have the highest number of smokers and ranks third under China and India. Tobacco cigarette is responsible as it kills more than 8 million people worldwide. Heavy metals contained in tobacco smoke accumulate in tissues and fluids that can cause carcinogenic and non-carcinogenic effects. Heavy metal such as cadmium poses major health hazards which is found in tobacco smoke. Cadmium is classified as a group I carcinogen.

Objectives: This study aimed to assess the human health risk related to cadmium exposure from cigarette smoking among Indonesian smokers.

Methodology: The personal information and smoking behavior were obtained from an online questionnaire among Indonesian male smokers who lived in Surakarta city. The survey was conducted on 100 subjects aged 20-35 years old who continue to smoke for at least 6 months. The data analysis was using 4 steps of Health Risk Assessments for inhalation from the US EPA: Hazard identification, Dose-response assessment, Exposure Assessment, and Risk Characterization.

Results: Most of the participants (19%) smoke 8.68 ± 7.34 cigarettes per day with an average of 3.8 ± 3.36 years. Both cancer risk and non-cancer risk of heavy metals exposure through inhalation were assessed, and the results found the average cancer risk (CR) and non-cancer risk (HQ) were 4.75×10^{-6} and 132.0 which ranged from 3.74×10^{-7} to 2.06×10^{-5} and 10.3 to 571.4, respectively, 87% of subjects found the cancer risk $> 1 \times 10^{-6}$ and 100% found HQ>1, which were exceeded the acceptable level.

Conclusion: According to the results, the findings of the study showed from the total 100 respondents all were found non-cancer risk or suggesting substantial non-cancer risks posed by heavy metals respondents. While the Cancer Risk inhalation posed by personal Cd exposure via inhalation had the average CR for Cd (4.75×10^{-6}) exceeded the tolerable risk limit. These results indicate that ~ 5 out of one million adults living in the study area may develop cancer from inhaling arsenic during their lifetime. This study concluded that cadmium contained in cigarettes may pose adverse health risks to smokers for both cancer risks and non-cancer risks. These findings suggest that people should give more concerned about the heavy metals contamination that may lead to an increased number of cases of non-carcinogenic and carcinogenic.

Keywords: Cadmium, Smoking, Heavy Metals, Health Risk Assessment, Cancer risk

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(P15) Factors Affecting Knowledge about HIV/AIDS in Women of Reliable Age in North Sumatera Province in 2017 (2017 Idhs Data Analysis)

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ABSTRACT

Human Immunodeficiency Virus (HIV) / Acquired Immunodeficiency Syndrome (AIDS) continues to be a public health problem, especially a global problem. One of the efforts made in preventing and tackling HIV/AIDS is to do promotions in the form of increasing public knowledge as a whole about HIV/AIDS. Comprehensive knowledge about HIV/AIDS is a form of fighting and suppressing cases of HIV/AIDS. Based on data from the 2017 Indonesian Demographic and Health Survey, comprehensive knowledge about HIV/AIDS in the population aged 15-49 years is still relatively low, at 15%, while the target to be achieved in 2014 is 95%. The purpose of this study was to determine the factors that most influence knowledge about HIV/AIDS in women of childbearing age based on the 2017 IDHS data. This type of research is descriptive epidemiological research using a quantitative approach using data from the 2017 Indonesian Demographic and Health Survey (IDHS). analyzed by multivariate logistic regression. The results of the study found that there was a significant relationship between knowledge about HIV/AIDS in women of childbearing age in North Sumatera Province in 2017 with their latest education, economic status, place of residence, and exposure to mass media. The factor that most influences knowledge about HIV/AIDS in women of childbearing age in North Sumatera Province is exposure to mass media with an Odds Ratio value of 1.839. Therefore, it is hoped that the government will carry out health promotions and counseling related to HIV/AIDS more often, either in schools or in public places.

Keywords: HIV/AIDS; women of childbearing age; knowledge factor

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(P16) Influential Factors of Thai Older Adults' Intent to Receive Short-term Stay Service

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ABSTRACT

Background: Thailand is currently ranked the third most rapidly aging country in the world. The nation will become super aged society within the next 15 years. The population has been undergoing profound changes in the age structure provoking transitions in dependency. Inevitably, fewer younger generations are expected to support old adults. The proportion of older persons and potential support ratio make the government and its people seriously concern about population aging. The Community Integrated Intermediary Care (CIIC) service is a new model that includes screening and assessment of older people's needs, capacity building among family members for care, short-term stay facilities, and timely referral to other services. Short-stay service use can be a preventative and cost-effective measure against family burden. Respite care enables old people to stay at home longer and delays residential care admission.

Using the baseline data, this study seeks to show how Thai older persons are willing to use the formal care service provided in the vicinity of their residences before launching the trial to evaluate the effectiveness of the CIIC model and whether it results in better motor ability and quality of life of older adults and is sustainable and cost-effective.

Objective: The aim was to examine factors that affect intent of respite service users and their families in Thailand.

Methods: Data were randomly collected from residents aged 60 and older and their families in Maehia, Chiang Mai Province, Thailand with questionnaires. The sample size was 350. Basic statistical associations were initially evaluated by t-tests, Chi square tests and Mann-Whitney test.

Results: The average age of the older adults was 69.5 years. 153 participants (44%) were male and 197 (56%) were female. Among them, 95 (27%) wanted to use the service while 255 (73%) did not. House type, DM and leave were statistically significant.



Discussion: Only a little over a quarter of respondents wanted to use the service. Conventionally, families have been responsible for taking care of the elderly so it can be difficult to accept the new service. However, this study shows that there is potential to use the service when the burden is heavier. Conclusion: There is a tendency to avoid the service, yet potential needs can exist. It is essential to promote the usefulness of the service to reduce the burden of families.

Keywords: #facility care #older adults #short stay #Thailand #respite care

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(P17) Demographic Changes and Economic Growth: Empirical Evidence from Macau

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ABSTRACT

In the past four decades, Macau has witnessed vigorous economic growth and massive demographic changes. Apart from the population size and age structure changes, the sex ratio (male divided by female) has declined substantially. The falling sex ratio has synchronized with the burgeoning service sector, which highly depends on the labor force, especially female workers. In this study, we focused on Macau from 1982 to 2019 to investigate the impact of demographic changes on Macau's GDP growth. We set a five-year time lag for the dependent variable, GDP. Due to the data limitation, we constructed two regression models covering the period from 1982 to 2019 and 1992 to 2019. The data of the two models are from the same datasets. The first model included sex ratio in total population, life expectancy, TFR, government expenditure on education, dependency ratio, the sex ratio in the working-age population, and male and female working-age populations as independent variables. The second model replaced the working-age population with the labor force participation rate and replaced the sex ratio in the working-age population with the sex ratio in the labor force. We found that demographic changes substantially contributed to Macau's economic growth between 1982 and 2019. The first regression model suggested that a lower sex ratio in the working-age population positively affected the GDP ($\beta = -9.9$; $p = 0.006$, $CI = [-16.8, -3.1]$). However, there was no strong evidence to prove that the increasing female working-age population contributed to the GDP growth ($\beta = -5.4$; $p = 0.120$; $CI = [-12.2, 1.5]$). The results of the second model indicated that a higher female labor force participation rate had a positive impact on the GDP ($\beta = 6.3$; $p = 0.010$; $CI = [1.8, 10.9]$), while the male labor force participation rate had the opposite effect ($\beta = -8.0$; $p = 0.003$, $CI = [-12.7, -3.2]$). The difference in the results of the two models implied women's increasingly important role-playing in Macau's economic activity. This study recommended the government carry out gender budgeting to increase female labor participation and expend more on education.

Keywords: Macau, demographic change, economy, population, labor force participation

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(P18) Access and Use of Mobile Phone in Rural Mountainous Community in Nepal

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ABSTRACT

Introduction: Mobile phone technology has in recent years and reached all corners of the globe including the less developed countries and their rural areas and for many it has become an integral part of today's lifestyle. In the last three decades, mobile phone coverage has extended to 90% of the population globally.

Studies have showed that modern information communication technology (ICT) has significantly bridged the rural-urban divide and overcome the geographical barriers to access health services by rural populations. ICT provides cost effective and feasible means to improve rural health.

Despite this, the distribution, access and exploitation of this technology is not homogenous everywhere and there is a need to determine patterns of use and access in remote areas. In this article, we explore the access of mobile phones in a rural community in Nepal and analyze the usage patterns.

Methodology: This data is analyzed from a household census carried out in Bagmati Rural Municipality, a remote mountainous area on the southeast of the Kathmandu Valley inhabited by Tamang-speaking and Nepali-speaking ethnic groups. This data was collected from 6-16 January, 2022 as a part of community diagnosis activities carried out by medical students at Patan Academy of Health Sciences.

Results: Of 2443 respondents, 49.1% were female and 60% of them spoke Tamang as their primary language. There was no significant differences in ownership of mobile phones by gender or language spoken, but it progressively decreased as age increased from young adulthood (95%) to middle age (92%) and old age (83%). The use of messaging decreased progressively with age and was inversely related to the level of schooling. In contrast, use of data services was more widespread although it also decreased with lower education and higher age. Ninety percent of the respondents used mobile phones for the purpose of socialization and less than 1% reported it being used for healthcare. Despite this, 90% of the respondents reported that they would trust a mobile based healthcare and would wish it to be used for infectious disease outbreaks and maternal health.

Conclusion: Although overall mobile phone ownership was high, use of data and messaging services were lower, particularly in older and less educated group. There is potential of utilizing it for health services in more educated and younger populations, particularly in the areas of communicable diseases and maternal health.

Keywords: Rural community, access and use pattern, mobile phone, Nepal

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(P19) Case Analysis of Rabies Transmitting Animal Bites (GHPR) in North Tapanuli Regency, North Sumatra Province in 2016-2020 : Spatio-Temporal Epidemiological Study

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ABSTRACT

Background: Rabies is a zoonotic disease that is included in the priority strategic disease in Indonesia.

Objective: The purpose of this research is to describe cases of GHPR and to map rabies endemic areas in the North Tapanuli Regency in 2016-2020.

Methods: This type of research is epidemiology descriptive quantitative with an ecological study design, using a sample in the form of reports on the discovery and treatment of rabies cases in the North Tapanuli Regency in 2016-2020. Data analysis made with Choropleth Maps, using QGIS Version 1.8 and GeOda Version 1.18. Spatial autocorrelation analysis carried out using the Moran's I and the LISA test.

Results: The results showed that GHPR cases tended to increase from 2016-2020, with more cases in men and the 1-10 year age group. For the last 5 years, Pahae Jae District has been an area with a high endemicity of GHPR cases. Analysis Moran's I test shows that there is no spatial autocorrelation in the case of GHPR in North Tapanuli Regency for the last 5 years with value approaching 0. Based on the LISA significance maps, in 2016, there was only 1 sub-district that had spatial autocorrelation with other sub-districts that had close together. In 2017 is 3 sub-districts, in 2018 and 2019, there were 2 sub-districts and in 2020 there was only 1 sub-district.

Conclusion: The government is expected to implement a rabies control and prevention by prioritizing areas with high endemicity, such as providing vaccinations for HPR, preventing HPR elimination, and educating the public about rabies.

Keywords : *Rabies; spatial; choropleth.*

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(P20) Association between Loneliness and Related Factors among University Students during COVID-19 Pandemic in Bangladesh

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ABSTRACT

Loneliness is a state of mind wanting human contact but ending up feeling alone. The factors associated with loneliness is rarely studied and researched, especially in the pandemic period. University students are one of the vulnerable groups to be affected by loneliness. This is the time when teenager turn to adolescents and many factors within and around them changes. This study aimed to analyze the association between loneliness and related factors among Bangladeshi University students. A cross sectional survey was conducted in May 2022 among BRAC University students in Bangladesh. A total of 245 responses were received through convenience sampling. The questionnaire consists of demographic factors, i.e., age, gender and BMI; relationships; health behaviors; UCLA loneliness scale. The prevalence of loneliness among the university students were 67.8. Logistic regression analysis was used to measure the association between loneliness and the related factors. It was found that loneliness was significantly associated with students ≥ 22 years old (Unadjusted OR= 2.57, 95% CI=1.09- 6.03). Having a bad relationship with family is also found to be a significant risk factor for loneliness (Unadjusted odds ratio=2.82, 95% CI = 1.37-5.79). This study suggests that age and relationship with family are the only factors that affects loneliness among university students in Bangladesh. Our study indicated that the prevalence of loneliness was significantly high among university students. The educators concerned should reach out and provide counseling consultations to the high risk groups, especially students with age ≥ 22 years old and those having bad relationships with family.

Keywords: loneliness, gender, family relationships, student

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(P21) Prevalence of Food Insecurity and it's Predictors amongst Adolescents Living in Urban Slum Settlements of Dhaka, Bangladesh during the Era of COVID 19 Pandemic

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ABSTRACT

Background: With the ongoing COVID 19 pandemic, food insecurity worldwide has worsened. In Bangladesh, a country already suffering from high rates of hunger and starvation, millions of people from low income families have been pushed backed to poverty as a result of economic recession with children and adolescents being the biggest victim to this crisis. Adolescence is known to be phase of rapid physical and mental development in our lives. Adolescents in low income countries suffer from anemia, stunting and poor mental wellbeing. Food insecurity is attributed to poor growth and development. While studies have always focused on food insecurity levels in 'households' and 'younger children', they have widely ignored food insecurity amongst adolescents who are most vulnerable to its dire consequences, especially those from poor socioeconomic backgrounds and low income countries.

Objective: To determine the prevalence of food insecurity and its predictors amongst adolescents living in urban slums of Dhaka, Bangladesh.

Method: The cross-sectional study was conducted among adolescents aged 12-18 years old living in slum settlements of Dhaka. Data was collected using a questionnaire to gather information regarding their personal and household characteristics and food insecurity level from the period of April-May 2022 and face to face interview method was used to complete them. Descriptive, bivariate and ordinal logistic regression were used for data analysis.

Results: A total of 313 completed data were used for analysis. 62% of participants were females and 38% were males. 24.6% of adolescents suffered from no/mild food insecurity, 46.3% suffered from moderate food insecurity and 29.1% suffered from severe food insecurity. Younger age, lower education level, female household head, low household head education and history of COVID 19 infection in family members were determined as the predictors of food insecurity.



Conclusion: This study showed that there was high prevalence of food insecurity amongst adolescents living in urban slum settlements of Dhaka. The study also identified factors that are associated with food insecurity in adolescents. The study concludes that interventions are necessary to address food insecurity amongst adolescents which can be effective in improving the overall mental and physical outcomes especially in those from poor socioeconomic backgrounds.

Keywords: Adolescents, pandemic, food insecurity, slum, Dhaka

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(P22) Prevalence of Musculoskeletal Symptoms among Female Garment Workers in Khan Mean Chey, Phnom Penh city, Cambodia: A preliminary result from cross-sectional study

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ABSTRACT

Introduction: The musculoskeletal system permits the human body to move freely, musculoskeletal disorders (MSDs) harm body systems such as muscles, tendons, ligaments, cartilage, bones, joint, and/or nerves, affecting employee quality of life and performance losses. MSDs are a serious public health issue in both industrialized and developing countries. Cambodia's garment industry has played a significant part in the country's economy which accounted for around 15% of the overall gross domestic product and 50% of manufacturing jobs. Ninety percent of garment factory are located in Phnom Penh City. Women are the majority of garment workers in the production line. These workers typically work as a shift with longer working hours. With repeated working posture, worker may experience MSDs which consequently affect their quality of life and working performance. Therefore, it is important to understand the prevalence of MSD among this group of population in order to find the solution to protect their health.

Objectives: This preliminary study aim to investigate the prevalence of musculoskeletal symptoms among garment workers in Khan Mean Chey, Phnom Penh city, Cambodia.

Methodology: A cross sectional research design studied the prevalence of musculoskeletal symptoms among garment worker in Khan Mean Chey, Phnom Penh city, Cambodia from the April 2022 to May 2022. The data collection through face-to-face interviews female garment workers by using Standardize Nordic Questionnaire. The questionnaire was done with validation test with three key experts. Descriptive statistics was used to present the prevalence of MSDs among the female garment workers.

Results: A total of 87 female garment workers age between 18 – 52 years old (median \pm SD = 33 \pm 7.79) participated in this preliminary study. Results suggested that 62% reported at least 1 MSD symptom. The most prevalent MSDs in the previous 12 months shoulder pain (23%), follow by lower back pain (13%), neck pain (11.5%) and MSDs in last 7 days are shoulder pain (13.8%), lower back pain (11.5%), upper back pain, and feet pain (5.7%).

Conclusion: According to the preliminary results, MSDs is highly prevalent among the female garment workers. It is important to investigate further in the larger population with more information of working condition and its associated factors which can lead us to the proper preventive measure to protect the workers' health.

Keywords: Musculoskeletal disorder; garment workers; Cambodia

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(P23) Outpatient Satisfaction with Community Health Service Center using Servqual-ipa in Shanghai, People's Republic of China

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ABSTRACT

Background: Patient satisfaction survey has been highly valued, since satisfying the needs and expectations of patients had become an important strategy for survival in the healthcare market.

Objectives: 1. To assess the outpatients' satisfaction with a community health service center in Shanghai. And 2. To identify the key determinants of the outpatients' satisfaction and the directions of the community health services quality improvement.

Methods: A cross-sectional study was completed with 414 participants from the outpatients in a community health service center in Shanghai, in December 2021. The SERVQUAL scale was used to design the questionnaire in this study. The reliability and validity of the data were examined, and descriptive statistics was performed. The GAP analysis was used to reveal the gap between expectations and perceived satisfaction of medical services. In addition, the original importance–performance analysis (IPA) and revised IPA were used to analyse the results to obtain the priorities for improvement in the medical service quality and to compare the utility of the two IPA analysis methods.

Results: The reliability was 0.980, and validity was 0.946, $p < 0.05$. The mean values of patients' expectations and perceived satisfaction were 4.561 ± 0.502 and 4.577 ± 0.472 , respectively. According to the GAP analysis, the gap between perceived satisfaction and expectations was positive in 14 items and negative in 8 items. The negative gap was mainly concentrated in the dimension of empathy, which is about the individualized attention to patient. There was significant correlation between patients' expectations and perceived satisfaction, which did not meet the assumptions of the original IPA analysis. So the revised IPA analysis is more applicable than the original IPA analysis. The revised IPA showed that the up-to-date equipment (item 1 for tangibility) and giving patient individualized services (item 18 for empathy) located in the fourth quadrant (performance is low and importance is high).

Conclusions: The overall satisfaction of outpatients with the community health service center was high. However, the dimensions of tangibility and empathy needs to be further improved. The details are as follows: 1. the up-to-date equipment; 2. giving patient individualized services. In addition, the results of this study showed that the revised IPA analysis method is better than the original IPA analysis method.

Keywords: Patient satisfaction, SERVQUAL, Importance–performance analysis (IPA)

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(P24) Shedding Light on the Opposite Standpoint: Determining the Contributing Factors Regarding the Anti-vaxxers' Refusal to Get Vaccinated Against COVID-19

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ABSTRACT

This study sought to determine the contributing factors that play a part in the anti-vaxxers' refusal to get vaccinated against COVID-19. The anti-vaxxers' perception toward getting vaccinated can reflect their awareness of information and influence their attitude and possible cooperation in their actions. This research investigation utilized the descriptive research design and employed the purposive sampling method in choosing the 20 participants who were questioned using a semi-structured questionnaire. The information gathered was evaluated and categorized through thematization, where the following conclusions were drawn. The factors that can affect a person's willingness to get a jab of the immunization include social influences, beliefs against its efficacy, emotion, and health-related anxiety. It was revealed that the majority of the participants surprisingly had a positive attitude toward the vaccine. Yet most of the anti-vaxxers' also expressed their complete rejection of the idea of getting vaccinated, unless the government mandates vaccination imperative. Determining the outlook of the anti-vaxxers toward the idea of getting vaccinated is essential since it can reflect their awareness of information and can influence their attitude and possible cooperation in their actions. Based on the findings, the researchers concluded that building public trust and enforcing mandatory vaccination uptake are two methods that can be implemented to overcome the problem of anti-vaccination and vaccine hesitancy.

Keywords: vaccination, COVID-19, anti-vaxxers, factors,

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(P25) Mortality Trends from Diabetes Mellitus in the Philippines, 1960-2019

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ABSTRACT

Diabetes mellitus is a serious public health concern in the Philippines, despite local and national efforts to control and manage the disease. To the extent of the researchers' knowledge, there have been no published studies on the recent trends in diabetes-related mortality in the Philippines. Thus, the current study analyzed, and reviewed diabetes mellitus mortality statistics obtained from the Philippine Health Statistics (PHS) series over sixty years to thoroughly assess primary data for disease analysis and management. On a national scale, the diabetes mellitus mortality rate of the actual and forecasted data in the Philippines has gradually increased over six decades. The Philippines' mortality rate of diabetes mellitus increased from 1.12 to 32.2 per 100,000 from 1960 to 2019. The diabetes sex-specific mortality rate trend shows that females account for a slightly higher number of diabetes deaths than males in the Philippines. Meanwhile, people aged 70 and over have the highest diabetes age-standardized mortality rate while people aged 5 to 9-year-old have the lowest diabetes age-standardized mortality rate. These findings have significant implications for disease epidemiological surveillance, implying that the country should assess and prioritize the most effective health initiatives to reduce the burden of diabetes and mitigate other risk factors for all Filipinos.

Keywords: Diabetes mellitus, mortality, Philippines

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(P26) A Conceptual Model for Ayushman Bharat 2.0: A Proposal for Universal Healthcare

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ABSTRACT

Background- One of the most debilitating problems within the Indian healthcare scenario is affordability or the cost of healthcare. At 1.2% of its GDP, India spends far less on healthcare even compared to one the poorest nations of the world.

Objectives- The research expands on the scope of the Ayushman Bharat Policy into a Universal Health Care policy covering all economic strata of the Indian society. After studying the working of the various healthcare models present in the world, the research creates a unique Indian model that borrows functional elements from the different models to apply in the Indian scenario in order to achieve maximum efficiency. The primary objective is to develop upon the existing universal healthcare plan under Ayushman Bharat to make it inclusive of all citizens regardless of their economic status. The secondary objective is to increase the role of the individuals and private sector in the healthcare system through healthcare taxations. The tertiary objective is to set up medical administrative guidelines to ensure increased accountability and less delays in the health system.

Methods- Primary research through interviews with local urban government healthcare facilities around Gujarat. Secondary research through government reports, independently researched articles and UN reports.

Results- The model works on a single payer or two-tier system with federal dispersion of funds generated through various types of taxations. It also calls for the creation of health care guidelines, administrators and ICT departments. Price control is achieved by the government and co-existence of the public and private sector is in place which will give the private sector opportunities to flourish in the UHC as well. Thus, the model is designed to have multiplicity of services under one roof, respect for the patients with an empathetic delivery and a payment model for financial aid to the needy and community outreach along with quality care delivery.

Conclusion- To make health for all a reality, we need: individuals and communities who have access to top quality health services in order that they look out of their own health and the health of their families; skilled doctors providing quality, people-centric care; and policy-makers committed to investing in universal health coverage.

Keywords: Universal Healthcare, Healthcare Policy, Hospital Administration, Healthcare Models

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