





The 22nd International Conference of Public Health Sciences

"Public Health and Public Health Sciences:
The Challenges of Changing Era"



CONFERENCE BOOK

The 22nd International Conference of Public Health Sciences "Public Health and Public Health Sciences: The Challenges of changing Era" A Virtual Conference

Organized by:

College of Public Health Sciences, Chulalongkorn University Thailand in Collaboration with WHO Collaborating Center for Research and Training in Public Health Development

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Anchalee Prasansuklab, Ph.D.	CPHS-CU, Thailand
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TABLE OF CONTENTS

		Page
CONFERENCE	PROGRAM	1
OUTSTANDING	GAWARDS	_
	2022 Distinguished College of Public Health Sciences Researcher Award	7
	2022 Distinguished Award for Thai Traditional Medicine	8
	2022 Distinguished Award for Substance Abuse, Alcohol & AIDS	9
	2022 Distinguished Alumni Award of the College of Public Health Sciences, Chulalongkorn University	10
	FESSOR EMERITUS CHARAS SUWANWELA, LECTURE	12
	"Mental Health and COVID-19"	
SYMPOSIUM I	Precision Public Health for a Resilient Society	14
SYMPOSIUM II	Integrative Healthcare in Indonesia: Potencies and Challenges	16
SYMPOSIUM III	Redirection of Public Health Education in a Changing World	17
ORAL PRESEN	TATION	
OP1	Effectiveness of a Health Talk Education Program on Human Papillomavirus (HPV) Knowledge, Attitudes, and Intentions to Vaccinate Children Among Mothers of Secondary School Boys in Thua Thien Hue Province, Vietnam	18
OP2	A Protocol Study: The Development and Psychometric Properties of Assessing Adolescent centered Internet Users Psychosocial and Occupational Performance	19
OP3	G6PD Deficiency Found in Mixed Ethnic Community in Transmigration Area, Nimbokrang District Papua Indonesia	21
OP4	Factors Associated with Behavioral Prevention of Cardiovascular Complications in Hypertensive Patients in Indonesia; A Systematic Review	22

	TABLE OF CONTENTS	Page
OP5	Investigation of Cotinine Levels among Thai Male Tobacco Farmers in Sukhothai Province, Thailand	23
OP6	Implementing an Integrated Noncommunicable Disease Care Delivery with Primary Health Care in The Philippines: A Qualitative Case Study	24
OP7	Newly Proposed Communication Form for Pre-radiotherapy Dental Clearance of Chonburi Cancer Hospital Network	26
OP8	Factors Associated with Food Safety Knowledge among Food Handlers in Surabaya Culinary Centers, Indonesia	28
OP9	The Clean and Healthy Behavior of Motorcycle Online Drivers in Samarinda, Indonesia	30
OP10	Mediation Effects of Premarital Sexual Permissiveness on the Relationship Between Expectations For Marriage and Marital Intention	32
OP11	Factors Associated with Complementary Feeding Practices among Aged 6 to 23 Months Old Children in Cikarang Timur, Indonesia	34
OP12	Impact of Higher Education on the Compliance of Nepalese Physical Therapists with Knee Osteoarthritis Clinical Practice Guidelines	36
OP13	COVID-19 Vaccine Adherence and Behavioral Changes of Community People in the New Normal Context of the Coronavirus Pandemic	38
OP14	Lower Extremity Kinematics and Kinetics During Walking: A Comparison between Khon Masked Dancers and Non- Dancers	40
OP15	Lumbar Multifidus Thickness is Associated with Lumbar Stability but Not Disability and Fear in Movement Control Impairment Subgroup of Chronic Low Back Pain	41
OP16	Epidemic Trend of Dengue under High Awareness and Border Quarantine in Taiwan	43

	TABLE OF CONTENTS	Page
OP17	Machine Learning Algorithm-Driven Prediction System for Early Diagnosis of Nasopharyngeal Carcinoma Using Medical Claim Database	45
OP18	Public Health Policies and Roles of Pharmacists in Pakistan	46
OP19	Metformin Activity on Longevity and Mitochondrial Unfolded Protein Response (UPRmt) across UPRmt Invoked C .elegans	48
OP20	Heavy Metals Contamination in Local White Rice: A Preliminary Study at Palembang, South Sumatra, Indonesia	50
OP21	The Impact on Air Pollution by of Epidemic Prevention Policy of COVID-19 in Northern Taiwan	52
OP22	The Effect of Covid-19 Prevention Policy on the Outpatient Visits of Depression Patients in Taipei of Taiwan	54
OP23	Knee Kinetics and Kinematics During Ten-Sao Dance: A Comparison Between Khon Masked Dancers and Non-Dancers	56
OP24	The Attitude towards Wife Beating: Do Young Men Act Differently?	57
OP25	Effectiveness of Palliative Learning Model Based On Transformational Learning Theory on The Achievement of Nursing Student's Competency	58
OP26	Adaptation of Sustainable Healthy Settlement to Social Cultural Life on Penyengat Island As a Cultural Reservation Area	59
OP27	Evaluation of The Impact of The COVID-19 Pandemic and Epidemic Prevention Policies on Psychiatric Outpatients	61
OP28	Medical Treatment for Acid Attack Survivors: A Cure or a Burden?	63

	TABLE OF CONTENTS	Page
OP29	Selfcare/Self-Development Interventional Guidebook for Refugee Adolescents: Steps Toward a Comprehensive Intervention Development	64
OP30	Relationship Between Gender Roles and Maternal Characteristics With Sexual Activityin Pregnancy at Sirampog Village, Brebes District, Central Java, Indonesia	66
OP31	Dose the Smokers Quit Smoking when the Cigarette Tax Increased?	68
POSTER PRE	SENTATION	Page
PP1	A Systematic Review on the Effectiveness of Topical Calcineurin Inhibitors in Vitiligo	70
PP2	Effect of Pharmacist's Involvement in Cross-Functional Team Clinical Care and Intervention on Medication Adherence and Clinical Outcomes of Outpatients with Diabetes	73
PP3	Health Protocol Campaign Message Model Covid-19 at Munggu Beach Bali During Pandemic	74
PP4	Assessing The Accuracy Of COVID-19 Rapid Antigen Test (RAT) Positive By Evidence-Based Medicine (EBM)	76
PP5	Characteristic Factors and Efficacy of Veins Image Acquisition Device : Preliminary Study	78
PP6	Development of Veins Image Acquisition Device	81
PP7	Development of Natural Aerosol Sprays Against Pyrethroid- Resistant Aedes Aegypti Mosquitoes, Vector of Dengue and Zika Viruses	84
PP8	Impact of Measures on Reducing Cumulative Case Numbers of the First Wave of COVID-19 in Thailand	86

	TABLE OF CONTENTS	Page
PP9	The Current Situation and Ideas for Development of Digital Literacy Skills among Village Health Volunteers in Pathumthani Province	87
PP10	Determination of Discriminating Lethal Concentrations of 5 Insecticides in Aedes Aegypti Mosquitoes	89
PP11	Association of Ambient Air Pollution Exposure with the Prevalence of Insomnia in Taipei City of Taiwan	91
PP12	Endotracheal Intubation in Patients with COVID-19 in Priest Hospital during COVID-19 Pandemic	93
PP13	Evaluation of the Measure to Monitor the Outbreak in Buntharik District, Ubon Ratchathani Province to Control the Situation and Prevent the Spread of the Coronavirus Disease 2019	95
PP14	Working Conditions and Work-Family Conflict Among Emergency Medical Technicians of Private Ambulance Compani in Taiwan	97
PP15	The Effect of Temperament and Early Life Environment on The Health Trajectory of Children	98
PP16	The Association Between Adverse Childhood Experiences and Antenatal Depression in Taiwan	99
PP17	Knowledge and Risk of Osteoporosis among Working Women Living in Klang Valley, Malaysia	100
PP18	Relationship between Work Burnout, Personality, and Intention to Stay among Home Care Aides in a Rural City	101
PP19	Atherogenic Index of Plasma: A Tool for Assessing Subclinical Atherosclerosis in Centrally ObesePerimenopausal /Menopausal Women	102
PP20	Behavioral Risk of Alcoholic Consumption and Emotional Ouotient in Medical Students	104

	TABLE OF CONTENTS	Page
PP21	Social Disparity of Delay or Avoidance of Medical Care Because of the COVID-19 Pandemic in Taiwan	106
PP22	Aspects of Family Planning in Croatia and Its Significance for Demographic Processes	108
PP23	Effectiveness of Health Education Intervention on Diabetes Mellitus among the Teachers Working in Public Sector Schools of Pakistan	110
PP24	COVID-19 Pandemic: How It Affects Women's Fertility and Cross-Border Reproductive Care	111
PP25	Effectiveness of Telemedicine in Type 2 Diabetes Mellitus, Bueng Kan Hospital	113
PP26	The Prevalence of Asbestos-related Diseases among Thai Ancient Goldsmith Workers in Srisatchanalai, Sukhothai Province	114
PP27	Relationship between eHealth Literacy and Knowledge of Cervical Cancer in Undergraduate Students	115
PP28	Factors Associated with Bereavement Among the Elderly in Bangkok, Thailand	117
PP29	Effect of Adaptive Seating in Postural Control among Children with Cerebral: A Systematic Review	118
PP30	Microscopic Leaf Constant Numbers of F. rumphii Blume Selected from Thai Traditional Herbal Formula for Diabetes Mellitus	119
PP31	The Symptoms Experienced During Chemotherapy of Indonesian Children with Acute Lymphoblastic Leukemia	120
PP32	The Impact on Outpatient Volume of Bipolar Disorder Patients in Taipei During the COVID-19 Epidemic Period	121

	TABLE OF CONTENTS	Page
PP33	The Relationship of Hemoglobin and Menstrual Cycle in Adolescent Putri Madrasah Aliyah Swasta in Nurul Iman Islamic Boarding School Sukamanah Village Cigalontang Regency Tasikmalaya Regency	123
PP34	Are Predisposing Factors Related to Health Seeking Behaviour Among Suspected Pulmonary Tuberculosis in The Community in Indonesia?	125
PP35	The Relationship Between The Dependent Burden Ratio, The Percentage of Poor People and Proper Sanitation With Life Expectancy In East Java	127
PP36	Instagram Utilization as a Source of Adolescent Reproductive Health Information	128
	SPONSORS	130

Conference Program

The 22^{nd} International Conference of Public Health Sciences "Public Health and Public Health Sciences: The Challenges of changing Era" Tuesday 4^{th} October 2022

A Virtual Conference

Organized by

College of Public Health Sciences, Chulalongkorn University, Thailand (Host)
Faculty of Health Science, Universitas Muhammadiyah Surakarta, Indonesia (Co-Host)
Department of Health and Welfare, University of Taipei, Taiwan (Co-Host)

08.00-08.30 **Registration**

08.30-09.20 Opening Session

Report

By Professor Sathirakorn Pongpanich, Ph.D.

Dean, College of Public Health Sciences, Chulalongkorn University Dr. Umi Budi Rahayu, S.Fis.,Ftr.,M.Kes

Dean, Faculty of Health Science, Universitas Muhammadiyah Surakarta Associate Professor Yeong-Ren Chen, Ph.D.

Chair, Department of Health and Welfare, University of Taipei

Welcome Remarks

 $\textbf{By} \, Professor \, Bundhit \, Eua\text{-}arporn, Ph.D.$

President, Chulalongkorn University

Opening Remarks

By Professor Pirom Kamolratanakul, M.D. Chairperson, Chulalongkorn University Council

Outstanding Awards Ceremony

2022 Distinguished College of Public Health Sciences Researcher Award under the Professor Emeritus Charas Suwanwela, M.D. Fund Presented by Professor Emeritus Charas Suwanwela, M.D.

2022 Distinguished Award for Thai Traditional Medicine

under the Prince KromLuang Wongsadhirajsanit Fund **Presented by** Professor Emeritus Wongkulpat Snidvongs, M.D.

2022 Distinguished Award for Substance Abuse, Alcohol &AIDS under the Associate Professor Vichai Poshyachinda, M.D. Fund **Presented by** Professor Emeritus Makumkrong Poshyachinda, M.D.

2022 Distinguished Alumni Award of the College of Public Health Sciences, Chulalongkorn University

Presented by Professor Pirom Kamolratanakul, M.D.

Academic Year 2021 Dissertation/Thesis Award

Presented by Professor Bundhit Eua-arporn, Ph.D.

2022 Distinguished Supporting Staff Award of College of Public Health Sciences, Chulalongkorn University

Presented by Professor Sathirakorn Pongpanich, Ph.D.

09.20-09.30	Groun	Photo
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09.30-10.00 The 19th Professor Emeritus Charas Suwanwela, M.D. Lecture:

"Mental Health and COVID-19"

By Dr. Amporn Benjapornpitak, M.D.

Director-General, Department of Mental Health Ministry of Public Health

Moderator: Professor Chitlada Areesantichai, Ph.D.

10.00 - 10.30 **Coffee Break**

10.30-12.00 **Symposium**: (**Main Room**)

Topic I: Precision Public Health for a Resilient Society

By Professor Chang-Chuan Chan, Ph D.

Distinguished Professor, Institute of Environmental and Occupational Health Sciences, National Taiwan University

Moderator: Associate Professor Wattasit Siriwong, Ph.D.

Topic II: Integrative Healthcare in Indonesia: Potencies and Challenges

By Dwi Linna Suswardany, S.KM., MPH

School of Public Health, Faculty of Health Science, Universitas Muhammadiyah Surakarta Indonesia

Moderator: Assistant Professor Pramon Viwattanakulvanid, Ph.D.

Topic III: Redirection of Public Health Education in a Changing World

By Professor Sathirakorn Pongpanich, PhD.

Dean, College of Public Health Sciences, Chulalongkorn University

Moderator: Associate Professor Nutta Taneepanichskul, Ph.D.

12.00-13.00 Lunch

13.00-14.20 **Outstanding Award oral Presentation (Main Room)**

13.00- 13.20 **Presentation 1**: Art Psychotherapy and Drug Dependent Treatment

By Ms. Janya Jettanasomboon

Social Worker, Thanyarak Songkhla Hospital

13.20 - 13.40 **Presentation 2**: Punjasri Herb Company Limited

By Mrs. Supatra Chansuvan

Managing Director, Punjasri Herb Company Limited

13.40 - 14.00 **Presentation 3**: Physical Activity Promotion Work in Thai Schools

By Associate Professor Narongsak Noosorn, Ph.D.

Dean, Faculty of Public Health, Naresuan University

14.00- 14.20 **Presentation 4**: The Impacts of Air Quality at Home on Health

By Associate Professor Nutta Taneepanichskul, Ph.D.

Lecturer, College of Public Health Sciences

Chairperson: Assistant Professor Montakarn Chuemchit, Ph.D.

Co-chairperson: Associate Professor Kanchana Rungsrihirunrat, Ph.D.

14.20 - 14.35 **Coffee Break**

14.35-16.35 Oral Presentation (Room 1-3) and Poster Presentation (Room 4-6)

Oral Presentation: Room 1

(Main Room) Public Health, Global Health, Health System Research,

Health Care Management, Sustainable Development Goal,

Communicable Diseases (CD) and Non-Communicable Diseases (NCD)

Population, Demography, Aging and Migration

(10 minutes presentation 2 minutes Q&A)

Presentation 1.1: Effectiveness of a Health Talk Education Program on Human Papillomavirus (HPV) Knowledge, Attitudes, and Intentions to Vaccinate Children Among Mothers of Secondary School Boys in Thua Thien Hue Province, Vietnam (OP1)

By Duc Nguyen Minh

Presentation 1.2: G6PD Deficiency Found in Mixed Ethnic Community in Transmigration Area,
Nimbokrang District Papua Indonesia (OP3)
By Muhammad Fajri Rokhmad

Presentation 1.3: Implementing an Integrated Noncommunicable Disease Care Delivery With Primary Health Care in The Philippines: A qualitative case study (OP6)

By TJ Robinson T. Moncatar

Presentation 1.4: Newly Proposed Communication Form for Pre-radiotherapy Dental Clearance of Chonburi Cancer Hospital Network (OP7)

By Dr. Thanate Kamoldisai

Presentation 1.5: COVID-19 Vaccine Adherence and Behavioral Changes of Community People in the New Normal Context of the Coronavirus Pandemic (OP13) By Dr. Muhammed Ashraful Alam

Presentation 1.6: Knee Kinetics and Kinematics during Ten-Sao Dance: A Comparison between Khon Masked Dancers and Non-Dancers (OP23)

By Pakamas Jearudomsup

Presentation 1.7: The Attitude towards Wife Beating: Do Young Men Act Differently? (OP24) By Desy Nuri Fajarningtiyas

Presentation 1.8: Adaptation of Sustainable Healthy Settlement to Social Cultural Life on Penyengat Island as a Cultural Reservation Area (OP26)

By Indra Martias

Presentation 1.9: Evaluation of the Impact of the COVID-19 Pandemic and Epidemic Prevention Policies on Psychiatric Outpatients (OP27)

By Chun-Ta Li

Presentation1.10: Medical Treatment for Acid Attack Survivors: A Cure or a Burden? (OP28) By Lindawati

Chairperson: Associate Professor Samuel Shih-Chih Wang, Ph.D.

Co-chairperson: Mitoriana Porusia, SKM MSc

Committee: Anchalee Prasansuklab, Ph.D.

Oral Presentation: Room 2

Sexual and Reproductive Health, Gender and Sexuality, Violence Against Women and Children, STIs and HIV/AIDS, Health Behaviors, Substance abuse, Addiction studies, Mental Health, Health Promotion (10 minutes presentation 2 minutes Q&A)

- Presentation 2.1: A Protocol Study: The Development and Psychometric Properties of Assessing Adolescent centered Internet Users Psychosocial and Occupational Performance (OP2)

 By Senthil Vadivel
- Presentation 2.2: Factors Associated with Behavioral Prevention of Cardiovascular Complications in Hypertensive Patients in Indonesia; A Systematic Review (OP4)

 By Israfil Israfil
- Presentation 2.3: Investigation of Cotinine Levels among Thai Male Tobacco Farmers in Sukhothai Province, Thailand (OP5)

 By Anu Surach
- Presentation 2.4: Mediation Effects of Premarital Sexual Permissiveness on the Relationship Between Expectations for Marriage and Marital Intention (OP10)

 By Nguyen Nguyen Trong
- **Presentation2.5**: Factors Associated with Complementary Feeding Practices among Aged 6 to 23 months old children in Cikarang Timur, Indonesia (OP11)

 By Ghina Nur Afra
- Presentation2.6: Epidemic Trend of Dengue under High Awareness and Border Quarantine in Taiwan (OP16)

 By Yeong Ren Chen
- Presentation2.7: The Impact on Air Pollution by of Epidemic Prevention Policy of COVID-19 in Northern Taiwan (OP21)

 By Jia-Yi Lu
- Presentation 2.8: The Effect of Covid-19 Prevention Policy on the Outpatient Visits of Depression Patients in Taipei of Taiwan (OP22)

 By Chai-Yu Chang
- **Presentation 2.9:** Selfcare/Self-development Interventional Guidebook for Refugee Adolescents: Steps Toward a Comprehensive Intervention Development (OP29)

 By Dr. Marjan Mohammadzadeh
- Presentation 2.10: Relationship between Gender Roles and Maternal Characteristics With Sexual Activityin Pregnancy at Sirampog Village, Brebes District, Central Java, Indonesia (OP30)

 By Evi Soviyti

Presentation2.11 Dose the smokers quit smoking when the cigarette tax increased? (OP31) By Pei-Ching Chen

Chairperson: Vinami Yulian, PhD

Co-chairperson: Assistant Professor Tzu-Hsuen Yuan, Ph.D. **Committee**: Assistant Professor Tepanata Pumpaibool, Ph.D.

Oral Presentation: Room 3

Universal Health Care Coverage, Social Security Scheme, Health Economic, Health Policy and Administration, One Health, Zoonoses and Antimicrobial Resistance, Environmental and Occupational Health, Workplace Hygiene and Safety, Global warming, Disaster management, Digital Health and Technology, Public Health Sciences (10 minutes presentation 2 minutes O&A)

- Presentation 3.1: Factors Associated with Food Safety Knowledge among Food Handlers in Surabaya Culinary Centers, Indonesia (OP8)

 By Pradevi Milafitri Farista Ananto
- Presentation3.2: The Clean and Healthy Behavior of Motorcycle online drivers in Samarinda, Indonesia (OP9)

 By Nur Rohmah
- **Presentation3.3**: Impact of Higher Education on the Compliance of Nepalese Physical Therapists with Knee Osteoarthritis Clinical Practice Guidelines (OP12) By Anuradha Shrestha
- Presentation3.4: Lower Extremity Kinematics and Kinetics during Walking: A Comparison Between Khon Masked Dancers and Non-Dancers (OP14)

 By Zin Wai Htet
- Presentation3.5: Lumbar Multifidus Thickness is Associated with Lumbar Stability but Not
 Disability and Fear in Movement Control Impairment Subgroup of Chronic Low
 Back Pain (OP15)
 By Soniya Maharjan
- Presentation 3.6: Machine Learning Algorithm-Driven Prediction System for Early Diagnosis of Nasopharyngeal Carcinoma Using Medical Claim Database (OP17) By Yu-Ning Chien
- **Presentation 3.7:** Public Health Policies and Roles of Pharmacists in Pakistan (OP18) By Tawseef Ahmad
- Presentation 3.8: Metformin Activity on Longevity and Mitochondrial Unfolded Protein Response (UPRmt) Across UPRmt Invoked C .elegans (OP19)

 By Anubhav Aryal
- **Presentation3.9:** Heavy Metals Contamination in Local White Rice: A Preliminary Study at Palembang, South Sumatra, Indonesia (OP20)

 By Dian Islamiati

Presentation3.10: Effectiveness of Palliative Learning Model Based on Transformational

Learning Theory on the Achievement of Nursing Student's Competency (OP25) By Ni Luh Putu Inca Buntari Agustini

Chairperson: Assistant Professor Wan-Lin Chiang, Ph.D.

 $\textbf{Co-chairperson:} \ Assistant \ Professor \ Dwi \ Rosella \ Komalasari, F.tr., M. Fis., Sp. \ Vest., Ph. Darbert \ Professor \ Dwi \ Rosella \ Komalasari, F.tr., M. Fis., Sp. \ Vest., Ph. Darbert \ Ph. Darbert$

Committee: Assistant Professor Anuchit Phanumartwiwath, Ph.D.

14.35-16.35 Breakout Room 4-6: Poster Presentation

Coordinator: Assistant Professor Pokkate Wongsasuluk, Ph.D.
Nuchanad Hounnaklang, Ph.D.
Onuma Zongram, Ph.D.
Narumol Bhummaphan, Ph.D.

Committee: Senior Lecturers

 $16.35\text{-}17.00 \quad Oral/Poster \, Presentation \, Outstanding \, Awards \, (Main \, Room)$

Closing Remarks

By Professor Sathirakorn Pongpanich, Ph.D.

Dean, College of Public Health Sciences, Chulalongkorn University

MC: Assistant Professor Kraiwuth Kallawicha, Ph.D. Assistant Professor Wandee Sirichokchatchawan, Ph.D.



2022 Distinguished College of Public Health Sciences Researcher Award



Assoc. Prof. Nutta Taneepanichskul, Ph.D

(Public Health), Chulalongkorn University; MPH Chulalongkorn University; BSC (Environmental Science), Chulalongkorn University.

Research Interest: Environmental Health, Environmental and Occupational Epidemiology, Health Impact Assessment, Biomarker of exposure assessment

Summary of Experience: My experience in environmental laboratory analysis and public health have drawn my interest to conduct multidisciplinary research linked between exposure assessment, biomarkers of exposure and health outcomes. The main theme of my ongoing projects is an urban air pollution such as volatile organic compounds and particulate matter. I have an experience on publishing my papers on both national and international journal. Currently, I play a role as a team member of Global Research and Training in Non-Communicable Diseases and Perinatal Epidemiology (GRAPE) at Harvard T.H. Chan School of Public Health.

2022 Distinguished Award for Thai Traditional Medicine



Punjasri Herb Co., Ltd. has been established on 18 October 2001 by Supatra Chansuvan. More than 80 kinds of products are currently available. We focus on the search for genuine Thai herbs through research in the laboratory of Punjasri to make natural products from organic agricultural plots. Additionally, there has been the dissemination of knowledge via radio, television, newspapers media. The preparation is combined with Thai medical science and naturopathy for use in making various products, ranging from goods used in daily life, cosmetics, healthy drinks, household products to traditional medicines. Besides, we give back to society every month continuously and attach the importance to maintaining the nation, religion and the monarch as well.

We focus on bringing herbs of Thailand through the process to produce with clean, safe, quality processing is regarded as a leader in the Thai herbal products made a genuine herbal products are suitable for all ages, all skin is safe for consumers. At a fair price As the words "Quality and Morality".

2022 Distinguished Award for Substance Abuse, Alcohol & AIDS



Present positions Social Worker

Н О	HANTIAN
1,41	ucation

2009 Master of Arts (Population and Social Research)

Mahidol University, Bangkok, Thailand

Bachelor of Arts (Psychology and Guidance) Prince of Songkla University

Training

2010

2017 "International Training Course of Drug Dependence Rehabilitation: Advance

Therapeutic Community" by PMNIDAT, Department of Medical Services, Thailand.

Services, Thailand.

2017 "Listen to Heart, Through Artwork" Thammasat University, Thailand.

2011 "Acting Your Inner Music: Music in Psychodrama & Individual & Group

Therapy Process" by Prince of Songkla University, Pattani Campus, Thailand

2010 "Art Therapy Short Course Training Program" (Art-based Assessment,

Treatment Planning, and Cases Consultation Practice) by Art Therapy

Demonstration Center, Rajanukul Institute, Bangkok, Thailand.

Training for Trainer Workshop "The WHO ASSIST-BI" by Southern Academic

Network on Substance Abuse, Prince of Songkla University, Thailand

2005 English Course "Intensive Language Course" by Ministry of Foreign Affairs,

Bangkok, Thailand

2003-2004 "Therapeutic Community" by Daytop, New York, USA

2004 "English is a Second Language" by Sullivan County BOCES Adult Program

2003 "Art Feeling Workshop" by Daytop, New York, USA

Licensure Social Worker of Thailand, 2012-2024

Professional and Society Memberships Member of Thailand Association Social Worker

2022 Distinguished Alumni Award of the College of Public Health Sciences, Chulalongkorn University



Associate Professor Dr. Narongsak NoosornDean of the Faculty of Public Health, Naresuan University

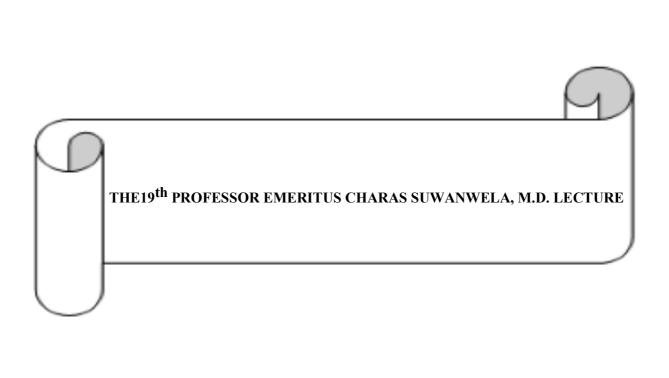
Associate Professor Dr. Narongsak Noosorn obtained a master's degree in Environmental Management Technology from the Faculty of Environment and Resources, Mahidol University in 1991 and a doctorate degree in Public Health from the College of Public Health Sciences, Chulalongkorn University in 2005. Associate Professor Dr. Narongsak Noosorn has currently been the Dean of the Faculty of Public Health, Naresuan University since 2019. Prior to becoming the Dean, he commenced his executive position as the Head of Occupational Health Department at Sukhothai Provincial Public Health Office in 1988. He has also held several administrative positions both in the Ministry of Public Health and the Ministry of Higher Education, Science, Research and Innovation during the past 20 years.

Associate Professor Dr. Narongsak Noosorn has an outstanding performance in management since 1988, starting from the position of the Head of Occupational Health Department at Sukhothai Provincial Public Health Office. He later became an Associate Dean for Research and Planning, Head of Health Promotion Department, Associate Dean for Academic Affairs, Head of Community Health Department, and the Dean of Faculty of Public Health, Naresuan University respectively. During his tenure in executive position, Associate Professor Dr. Narongsak Noosorn received several honorary awards both nationally and internationally, for instance an Outstanding Civil Service Award of Sukhothai Province in 2001, an Outstanding award of Head of Occupational Health Department at the National Level by Ministry of Public Health in 2003, an Outstanding Academic Staff award of Naresuan University in 2010 and 2016. He also became an Exchange Researcher under the cooperation between Thai Government and the Japanese Government in 2002. In 2021 he received an Outstanding Alumni award in Management from the Graduate School, Mahidol University and in 2022 the

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International Outstanding Award for Management in Health Promotion from The Greater Mekhong Subregion (GMS) Public Health Academic Network in the 12th International Conference on Public Health among GMS Countries: Improving Equity and Intersectoral Collaboration to Combat Life-Threatening Diseases, Health and Environmental Problems.

In addition, Associate Professor Dr. Narongsak Noosorn also has a large number of research papers at national and international levels as well as presented his research at various national and international conferences in several countries. He has written academic books and conducted outstanding works that benefit the organization and the nation, for example, the Chairman of Public Health doctoral program, the Executive Committee member and Co-Founder of the Bachelor of Public Health Program in Management and Elderly Health Care, the Executive Committee member and Co-Founder of Certificate Program in Elderly Health Management, the Executive Committee member and Co-founder of the Center for Research and Academic Operations on Tobacco Control in the Lower North at Naresuan University, the Executive Committee member and Co-founder of the Center for Innovation in Thai Traditional Medicine and Herbs at Naresuan University, the Qualified Professional Committee member, and the representative of university who provides health education for people in Area 2, the Planning Committee member for the Academic Cooperation Project between Naresuan University with Bhutan Royal Government Agencies, the Advisory Committee member on the implementation of the 13th National Research Conference for Academic Support Staff in Higher Education Institutes under the title of "Academic Mok'64: Develop research from a regular job to create innovation to excellence".



Mental Health and COVID-19

Dr. Amporn Benjapornpitak, M.D.

Director-General, Department of Mental Health Ministry of Public Health



Position Director-General, Department of Mental Health

Organization Department of Mental Health, Ministry of Public Health

Thai Royal Decoration

- Knight Grand Cordon (Special Class) of 28 July 2020 the Most Noble Order of the Crown of Thailand
- The Chakrabarti Mala Medal 28 July 2021 (the Thai order of merit)

Educational Background

- Doctor of Medicine (Honours), the Faculty of Medicine Ramathibodi Hospital, Mahidol University

Academic Works

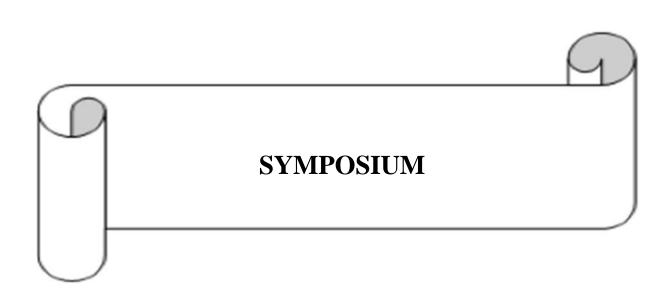
- Outstanding Female Doctor Award in Management of the Year 2022 from the Association of Female Doctors of Thailand under the Royal Thai Patronage
- The Shield of "Social Sacrifice" Award on the occasion of International Women's Day 2022 from Prime Minister, Mr. Prayut Chan-o-cha
- The Public Health Advisory Committee in Early Childhood Development Policy Board
- The Advisory Committee in the Promotion of Education for Persons with Disabilities Board

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- Sub-Committee on Project Direction of Spatial Education Management for Educational Equality
- Researcher and author of articles relating to stress and drug issues, and child and adolescent development, published in the Journal of the Psychiatric Association of Thailand and other publications
- Lecturer on the radio program "Mental Health and wellbeing" and the program "Child Mental Health", which is part of the campaign creative youth under the Bureau of Promotion of non-Formal and informal education, Ministry of Education Guest speaker on television, radio and variety in media field.

Work Experiences

- Medical Doctor at Ranong Hospital
- Study visit on Adolescent Medicine at Stanford University
- Reviewer of Journal of Adolescent Health
- Director of Mental Health 13, Department of Mental Health
- Director of the Office of Mental Health Development, Department of Mental Health
- Director of Rajanukul Institute, Department of Mental Health
- Deputy Director-General, Department of Health
- Inspector-General, Ministry of Public Health
- Director-General, Department of Thai Traditional and Alternative Medicine, Ministry of Public Health



Symposium Topic I

Precision Public Health for a Resilient Society

Professor Chang-Chuan Chan, Ph D.

Institute of Environmental and Occupational Health Sciences, National Taiwan University



Prof. Chang-Chuan ChanDirector, Center for Asia-Pacific Resilience and Innovation (CAPRI)
Chair, International Advisory Board, Asia-Pacific Hub

Chang-Chuan Chan is a Distinguished Professor at the Institute of Environmental and Occupational Health Sciences (formerly the Institute of Occupational Medicine and Industrial Hygiene), College of Public Health, National Taiwan University (NTU) (Council on Education for Public Health accredited). He was the ninth Dean of the College of Public Health and Director of the Global Health Center and Population Health Research Center at NTU. He is a member of the Association of Pacific Rim Universities (APRU) Global Health Program Advisory Group and the head of delegations for Taiwan in the M8 Alliance of Academic Health Centers, Universities and National Academies. He is also an advisor to the Taipei City Mayor, a member of the Taipei 2050 Vision Committee, and a member and Vice Executive Officer of the Council for Sustainable Development, Taipei City Government.

Chan has held prominent positions in international societies including councilor of the International Society for Environmental Epidemiology (ISEE) from 2015 to 2017, councilor of the International Society of Exposure Analysis (now International Society of Exposure Science) from 2008 to 2011, steering committee member of APRU Global Health Program from 2014 to 2016, a member of the

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board of directors at Association of Schools and Programs of Public Health (ASPPH), chair of the ISEE, Asia and Western Pacific Chapter (ISEE-AWPC) from 2016 to 2020, and chairman of the Taiwan Society for Risk Analysis from 2008 to 2015. He was the Director of the Institute of Occupational Medicine and Industrial Hygiene at NTU from 1999 to 2005 and Associate Dean of the College of Public Health, NTU, from 2011 to 2017.

Chan holds a Doctor of Science in Air Pollution Control and Master of Science in Industrial Hygiene and Air Pollution Control from the Harvard T.H. Chan School of Public Health and a Bachelor of Science in Public Health from NTU. He has been a leading researcher in air pollution for more than 20 years, focusing on environmental epidemiology, exposure and risk assessment, and global health governance, with collaborative projects in Malaysia, Thailand, Mongolia, India, South Korea, Japan, United States, and European Union, and has over 200 publications in SCI journals.

Symposium Topic II

Integrative Healthcare in Indonesia: Potencies and Challenges

Dwi Linna Suswardany, S.KM., MPH School of Public Health, Faculty of Health Science, Universitas Muhammadiyah Surakarta Indonesia



Dwi Linna Suswardany, S.KM., MPH

Head of Research and Training Center

Faculty of Health Science (FHS)Universitas Muhammadiyah Surakarta, Indonesia Head of Special Interest Group in Traditional, Complementary and Alternative Medicine The National Board of The Indonesian Public Health Association (PP IAKMI), Central Jakarta, Indonesia

Education

- 1. S1 Public Health UNDIP
- 2. S2 School of Pupolation Health, Faculty of Health Science University of Queensland, Australia

Knowledge field

- 1. Health Management and Policy
- 2. Traditional, Complementary, Alternative and Integrative Health Service Management

Symposium Topic III

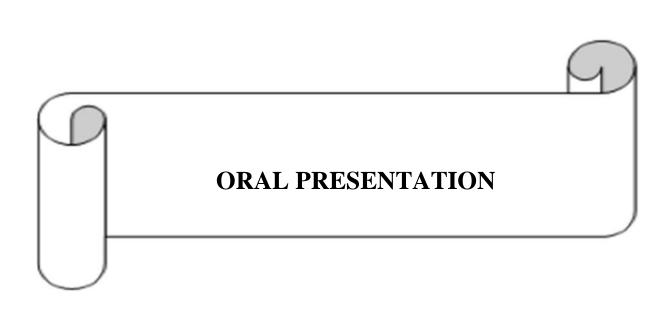
Redirection of Public Health Education in a Changing World

Professor Sathirakorn Pongpanich, PhD.

College of Public Health Sciences, Chulalongkorn University



Sathirakorn Pongpanich, Ph.D. is a professor in Health Economics and a Dean at the College of Public Health Sciences, Chulalongkorn University. He is invited to be a visiting professor at many universities and School of Public Health around the world and has served as thesis external examiner since 2000. He is the author and editor of 3 books, as well as numerous research articles. He conducted many researches in Public Health for Thailand Ministry of Public Health, Thai Health Promotion Foundation, World Health Organization (WHO) and others. His areas of interest include One Health, Sciences, Technologies and Innovations in Public Health, Cost of Treatment of Diseases, National Health Account, Tobacco Reduction Campaign, Negotiation and Public Health Administrations, Free Trade Agreement on Health and etc. He is, as well, known as one of experts in negotiation who is participating in important national and international negotiation arenas and offering negotiation training to health professionals in South and Southeast Asian region.



OP01

Effectiveness of a Health Talk Education Program on Human Papillomavirus (HPV) Knowledge, Attitudes, and Intentions to Vaccinate Children Among Mothers of Secondary School Boys in Thua Thien Hue Province, Vietnam

Duc Nguyen Minh 1,2, Nutta Taneepanichskul¹, Richard Hajek³

Background

The incidence of cancer related to human papillomavirus (HPV) that affects males is rising throughout the world. Currently, Vietnamese boys are typically not vaccinated against HPV while girls are. There are only a few studies pertaining to HPV vaccination among boys in Asian countries where parents play the most important role in deciding on such vaccination. We present here the first study to assess the effectiveness of a health talk education program on HPV knowledge, attitudes and intention to vaccinate children among mothers of secondary school students in the Thua Thien Hue province, Vietnam.

Methods

This was a quasi-experimental study. Two secondary schools in the Thua Thien Hue province, Vietnam were selected by purposive sampling. A total of 288 mothers of male students of two secondary schools were selected to participate, n=144 as controls and n=144 for the intervention arm for every school. Mothers of male students were invited to answer interview questions. The questionnaires covered social demographics, health history, HPV knowledge and HPV vaccination perception and intention. The study ran from September 2019 to January 2020.

Results

In total, 279 mothers finished the questionnaires. At the baseline, HPV knowledge in both groups was at the same level (p>0.05). One month after receiving the HPV health talk education, mothers of male students had much higher HPV knowledge than those who did not receive such HPV health talk education. The intervention group also had a much higher HPV vaccination intention than the control group (p<0.05).

Conclusion

Health education was shown in this study to be an effective method to increase HPV knowledge and vaccination intention among mothers of boys in Vietnam

Keywords: health talk education, human papillomavirus (HPV) vaccination, perception, intention, Vietnam

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OP₀2

A Protocol Study: The Development and Psychometric Properties of Assessing Adolescent centered Internet Users Psychosocial and Occupational Performance.

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Chennai, Tamilnadu 600128, India.

Introduction

Problematic Internet Use (PIU) among students has received a lot of attention in the present decade and it has the potential to become one of the major public health challenges in the near future. Individuals those who have used the Internet in the last three months are considered as Internet users. Adolescents are more prone to PIU and it depends on the patterns of internet usage and demographic variables. There exists a clear and a strong evidence research regarding the detrimental effects of excessive internet use on person's physical, mental, and social well-being, henceforth the current study also strongly support PIU among adolescents in all Indian states as a major public health concern. Among adolescents internet addiction and hyper sexuality (Sex addiction) has gained more research attention though addiction as a profession needs further investigation. The adolescent's refusal, decline and drop out from schools due to internet use marks the importance of occupational therapy setting.

In concern with the emerging issue in problematic use of internet among adolescents, there is an urgent need to develop and validate a tool to measure the occupational performance and psychosocial variables in addiction populations as a prerequisite for designing quality intervention modules. In this new era of internet use, there exists a clear contrast between excessive internet use from addiction and be wary of psychopathology. Taking this lead, there is a need to develop the Psychosocial and Occupational Performance Assessment for Adolescents Internet Users which will help to screen and to assess the severity level of internet addiction among adolescents.

Objectives

- 1) To develop psychosocial and occupational performance assessment for adolescents internet users in India.
- 2) To establish strong psychometric properties for the developed psychosocial and occupational performance assessment for adolescents internet users in India.

Methods

There are three main phases, each of which describes and explains population, sample, sampling technique, setting area, instrument, data collection, and data analysis.

Phase I: Concept formation and development of the test – the background analysis is carried out though review of literature and operation definition for construct of the test is framed. Then the test items are generated through focus group discussion and through conduction of semi structured interview from subject matter experts.

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Phase II: Pilot study to validate the developed tool's content through 1000 adolescents for preliminary samples analysis. The collected data is analysed though SPSS IBM 24. And item reduction and factor analysis is carried out.

Phase III: Psychometric properties are established though test-retest reliability, internal consistency reliability, concurrent validity, construct validity. The norms for developed test is also established.

Results

The study expects the developed tool will be helpful in screening and to assessing the severity level of internet addiction among adolescents. It will lead to development of intervention module for dealing with PIU in adolescents.

Conclusion and Recommendations

The anticipated conclusion of the study will be a pioneer of develop new tool in the field of occupational therapy professionals. The recommendation to find an intervention role with multiple co-morbid conditions offers great value.

Keywords: adolescents, psychosocial, occupational performance, internet users, psychometric properties.

Corresponding author: Senthil Vadivel, Ph.D. Scholar, Program in Biomedical Sciences, Department of Occupational Therapy, Faculty of Associated Medical Sciences, Chiang Mai University, Chiang Mai 50200, Thailand. Email: senthilvadivelpalanichamy@yahoo.co.in **OP03**

G6PD Deficiency Found in Mixed Ethnic Community Transmigration Area, Nimbokrang District Papua Indonesia

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Abstract

The case rate of *Plasmodium vivax* malaria among all malarias is increasing worldwide including in Papua. Treatment with primaquine remains one of the radical cures. However, primaquine can trigger severe hemolysis in glucose-6-phosphate dehydrogenase (G6PD) deficient patients. The population of mixed ethnicity in Nimbokrang's transmigration area carries high malaria burden. As in many countries the national malaria treatment guidelines recommend primaquine without routine G6PD deficiency screening test. This study aimed to observe the need of the G6PD deficiency test in a multi-ethnic population by testing the G6PDd among the local population. Total 200 participants were screened qualitatively using RDT both for G6PDd (HumasisTM) and malaria (AccessBio) in which microscopy was added for malaria detection. The result showed that 40 participants were indicated to be G6PD deficient with given prevalence was 20%, and coincidently 7 of them were infected by malaria. The collected data then underwent analyzed using fisher exact test and there was a significant value between G6PD deficiency and ethnicity (Papuan and Non-Papuan) within P value 0,001. In regards with the result, there were G6PD deficiency found in Nimbokrang district and because of *P.vivax* was quite dominant, a regular screening for G6PD needs to be administered in malaria guideline detection.

Keywords: G6PD deficiency, malaria, Multi-ethnicity, Nimbokrang, PapuA

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OP04

Factors Associated with Behavioral Prevention of Cardiovascular Complications in Hypertensive Patients in Indonesia; A Systematic Review

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Introduction

Hypertension is a chronic non-communicable disease that causes cardiovascular complications which are the main cause of patient death in the community. Stroke and heart attack are types of cardiovascular complications in hypertensive patients which are the main causes of death in Indonesia. Most cardiovascular complications in hypertensive patients can be prevented by increasing complication prevention behaviors such as a healthy diet, not smoking and alcohol, regular physical activity, adherence to hypertension medication, and blood pressure checks. However, the behavior of preventing cardiovascular complications in hypertensive patients in Indonesia is still not fully implemented properly.

Objective

This study aims to synthesize research findings on factors related to the behavior of preventing cardiovascular complications in hypertensive patients in Indonesia.

Methods

A systematic review. Search strategy was conducted on the Indonesian national journal database, namely "Garuda Database" and four international journal databases, namely Scopus, PubMed, Web of Science, and Science Direct with the keywords "hypertension" AND "complications" AND "Indonesia", and in the Indonesian national journal database it is written "komplikasi hipertensi". The inclusion criteria of the article were population: hypertensive patients in Indonesia, intervention; behavioral factors to prevent cardiovascular complications, comparison: none, outcome: behavior to prevent complications, study design: RCT, quasi-experimental, cross-sectional, case-control. The published year is 2017-2022.

Results

The results of the study found that factors related to the behavior of preventing cardiovascular complications in hypertensive patients were the patient's knowledge about hypertension, self-efficacy, and social support, namely family support and health worker support. Another factor that was also found was the individual's coping strategies in taking preventive measures to prevent cardiovascular complications.

Conclusion

Good patient knowledge about hypertension, self-efficacy, and social support from family and health workers resulted in good cardiovascular complications prevention behavior in hypertensive patients. Health promotive and preventive interventions must continue to be improved by involving the family as a patient support system.

Keywords: Behavioral, Cardiovascular, Hypertension, Indonesia

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Investigation of Cotinine Levels among Thai Male Tobacco Farmers in Sukhothai Province, Thailand

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Background

Thai Traditional tobacco cultivation in Sukhothai is an air curing type called Burley tobacco. The tobacco leaves have different properties than other types. It has high nicotine content. The tobacco poisoning is one of the greatest public health disasters. Thailand is one of the most famous tobaccogrowing zones. The farmers have been exposed to the nicotine in tobacco leaves and might be at risks to its health effects.

Objective

This study aimed to evaluate the salivary cotinine levels among male tobacco farmers.

Methods

A cross-sectional study was performed to describe the salivary cotinine levels among 62 participants who were between 20-40 years of age without reproductive disease, chronic disease, obesity, and psychiatric disease in Sukhothai Province, Thailand. Participants were interviewed using questionnaire regarding their demographic characteristics, work and personal protective behaviors related to nicotine exposure. Salivary samples were collected at picking tobacco leaves period in April 2022. Descriptive statistical was used for data analysis.

Results

The study showed that 40 (64.5%) male tobacco farmers had working experience more than 20 years. Regarding personal protective behaviors among all the participants, 37 (59.7%), 27 (43.5%), 22 (35.5%) and 5 (8.1%) male tobacco farmers had never worn a plastic apron, chemical-resistant rubber gloves, raincoat, and boots, respectively. In addition, salivary cotinine levels among male tobacco farmers, 37 (59.7%) male tobacco farmers were high nicotine exposure group, and 25 (40.3%) male tobacco farmers were low nicotine exposure group.

Conclusion

The result of several studies now suggests the need for public health intervention included education and prevention programs to reduce nicotine exposure from agriculture.

Keywords: Work-related musculoskeletal disorders, psychosocial factors, work productivity, and work ability, Garment factory workers

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Implementing an Integrated Noncommunicable Disease Care Delivery with Primary Health Care in the Philippines: A Qualitative Case Study

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Background and Objectives

Effective approaches on noncommunicable diseases (NCDs) requires a strong focus on primary care. However, in the Philippines, integration of NCD approaches into primary health care (PHC) is not yet fully established to bring about desired health outcomes of universal health care (UHC). Therefore, this study aims to describe the current status of integrated NCD care delivery systems at the primary care level.

Methods

A qualitative case study approach based on social constructivism theory was employed using data from 16 focus groups discussions (FGDs) composed of 68 health workers. A semi-structured interview guide was utilized to determine the experiences, challenges, enablers, and effects of an integrated NCD care delivery in primary health care among health workers working in selected primary care health facilities in one province in the Philippines. All interviews were audio-recorded and transcribed verbatim. An inductive content analysis using NVivo 12 was employed to distinguish and classify relevant thematic codes.

Results

It was realized that it is important to implement an integrated NCD care delivery within a PHC approach utilizing collaborative practice among health workers and health facilities at the primary care level that needs to be provided along with other essential public health programs. This is in keeping with health workers' responsibilities to provide comprehensive services resulting to accessibility and availability of health care services, increased client satisfaction, and better health outcomes. However, several health workers conveyed their inability to peform integrated NCD care delivery contributing to the frustration of patients with primary care health services resulting to widespread dependence on specialist care instead. This was attributed to various challenges in performing integration such as limited manpower, lack of knowledge and training on integrated care, insufficient supplies and equipment, inadequate health services, and disease-centric care system. Several determinants were perceived to enable implementation of an integrated NCD approach including presence of guidelines, prioritization of NCDs, provision of incentives, availability of integrated care models, and ensuring sufficient resources at the primary care level.

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Conclusion

The practice of integrated NCD care varies widely with some areas currently implementing integration, while others not yet able to perform NCD integration. Integration will be difficult to implement if barriers are not addressed. The operationalization of various facilitating factors must be ensured to successfully integrate NCD care delivery at the primary care level and thus ensure envisioned health outcomes.

Keywords: Noncommunicable diseases, health service delivery, primary health care, Philippines, Qualitative research

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Newly Proposed Communication Form for Pre-radiotherapy Dental Clearance of Chonburi Cancer Hospital Network

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Faculty of Dentistry, Thammasat University, Pathumthani, Thailand

Introduction

Ninety percent of head and neck cancer is squamous cell carcinoma and commonly treated by radiation therapy (RT). There are many complications from RT such as xerostomia, mucositis, trismus, dysphagia and the most serious complication is osteoradionecrosis (ORN). Referring head and neck cancer patients for dental clearance prior to receiving radiation therapy is recommended to reduce the risk of ORN. With novel radiotherapy (RT) technique (*i.e.*, Volumetric Modulated Arc Therapy: VMAT), it seems plausible to extract fewer teeth prior to the RT.

Objectives

The aims of this study were for 1) developing a more informative RT communication form between Chonburi Cancer Hospital and dentists of the same hospital network; and 2) testing the adoption rate of this newly proposed form with dentists working in these hospitals, who are responsible for providing pre-radiation dental clearance.

Methods

The communication form was created firstly based on a combination of adaptation of current referral form used by Chonburi Cancer Hospital and a literature review. Then, five experts (1 radiation oncologist, 2 ear-nose-throat surgeons and 2 dentists) working at Chonburi Cancer Hospital finalized the new communication form.

Next, we sent an online questionnaire survey to 81 dentists working in 32 hospitals under the administration of the Ministry of Public Health in Chonburi, Rayong and Chacheongsao. The questionnaire included 5-Likert Scales questions about Pre-RT dental treatment plans: one guided by the current and another by the newly proposed form; and questions based on Roger's "model of innovation decision process" measuring adoption of new device.

Results

The response rate of individual dentist was 61% (49 of 81 participants) and the response rate of hospitals contacted was 84% (27 of 32 hospitals). The newly proposed Pre-RT Communication Form had a high adoption rate (4.14±0.53 out of 5). However, 16% of the respondents still expressed concern about ORN and would like to extract more teeth. We speculated that this might stem from the lack of published evidence of effectiveness of VMAT on the reduction of ORN and, we found that 32 participants (65%) did not know the exact amount of radiation dose that would increase the ORN risk.

Conclusions

This newly proposed Pre-RT Communication Form provide more RT details which co-designed between interdisciplinary tumor team working in Chonburi Cancer Hospital. Although this newly proposed Pre-RT Communication Form has high adoption rate, there was the major concern about post-RT complication especially ORN.

This is the first study in Thailand to proposal a Pre-RT Communication Form application applicable to the new RT technique. It can potentially reduce the number of tooth extraction and improve the quality of life of head and neck cancer patients.

Keywords: Radiotherapy, Tooth Extraction, Osteoradionecrosis, Diffusion of Innovation

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Factors Associated with Food Safety Knowledge Among Food Handlers in Surabaya Culinary Centers, Indonesia

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Introduction

Food safety is an incredibly crucial issue for many countries, especially in Indonesia. Besides, the highest number of food poisoning outbreaks was found in East Java of Indonesia. Food handlers play an important role in the potentially spreading of microbiological hazards and contaminating the *food*. Poor food handling knowledge has been linked to poor food handling practices among *food handlers*. A culinary center is a popular place for dining among local citizens in Indonesia. Nonetheless, there is limited information on food handlers' knowledge of food safety in Surabaya culinary centers.

Objectives

The aims of this study were to examine the level of food safety knowledge and its associated factors among food handlers in Surabaya Culinary Centers, Indonesia.

Methods

This cross-sectional study design was carried out in all 40 culinary centers in Surabaya city, Indonesia. 483 food handlers were recruited by simple random sampling. Data were collected by face-to-face interview using a structured questionnaire on general characteristics, work and food safety training experience, and food safety knowledge. Data were cleaned and coded in Excel and analyzed with SPSS Version 28. Food safety knowledge was categorized into three levels as "Good knowledge" (>80% correct answer), "Moderate knowledge" (60%-80% correct answer), and "Poor knowledge" (<60% correct answer) followed Bloom's cut-off point. Frequency and percentage were reported for descriptive results. Adjusted odd ratio and 95% confidence intervals were reported for associated factors of good food safety knowledge with a significant level of 0.05.

Results

Food handlers were mostly 43 years old or below (56.3%), female (82.2%), married (55.3%), never smoked (81.4%), and graduated from grade 10 and above (81%). The majority of the food handlers had work experience of 1 year (71.6%) and never received any food safety training (76.2%). In this study, it was found that most of the food handlers (59.4%) had moderate food safety knowledge, followed by good food safety knowledge (35.8%), and poor food safety knowledge (4.8%). The results from the Chi-square test showed that gender, marital status, educational level, smoking status, work experience, and food safety training were significantly associated with the level of food safety knowledge. Further analysis with logistic regression showed that female food handlers were 3.417 times higher odds of having good food safety knowledge than males (AOR 3.417; 95% CI 1.862-6.270). Married food handlers were 2.084 times more likely to have good food safety knowledge than single (AOR 2.084; 95% CI 1.283-3.385). Food handlers who graduated with Grade 10 and above were 4.201 times more likely to have good food safety knowledge than those who graduated with Grade 9 and below (AOR 4.201; 95% CI 2.259-7.813). Lastly, food handlers who reported never smoking were 3.672 times more likely to have good food safety knowledge than those who smoked daily (AOR 3.672; 95% CI 2.006-6.724).

Conclusion

The results revealed that gender, marital status, smoking status, and educational level were associated with good food safety knowledge among food handlers in Surabaya Culinary Centers. This study also emphasizes that all food handlers may require adequate food safety training to enhance their knowledge. It is recommended that future studies should also focus on finding the factors associated with food safety attitude and practice among food handlers In Surabaya, Indonesia.

Keywords: Culinary center, Food handlers, Food safety, Indonesia, Knowledge

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The Clean and Healthy Behavior of Motorcycle online drivers in Samarinda, Indonesia

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¹Department Health Promotion, Faculty of Public Health Mulawarman University, Indonesia

Background

There are several occurrences in the transportation sector each year. Among accidents like passing out while driving, colliding with another car or motorcycle, or simply one. A road collision claims the lives of 1.35 million people annually, or one every 24 seconds, according to the 2018 WHO Global Status Report on Road Safety (GSRS). People's lives have changed as a result of the growth of internet transportation. Drivers who are transporting passengers must appear clean. For the comfort and safety of both themselves and their passengers, it is therefore essential to live a clean lifestyle. Healthy driving behaviors by the recommendations of the Ministry of Health of the Republic of Indonesia include eating vegetables, getting enough sleep, not consuming drugs and alcoholic beverages, checking vehicles, and always checking the condition of existing vehicles. However, Indonesia is currently lacking this relevant research. The research **aimed** to investigate how online drivers' behaviors of living a clean and healthy lifestyle related to vehicle accidents.

Methods

A sample size of 350 respondents was obtained from a population of 2,850 online motorbike drivers in Samarinda for a quantitative study using a cross-sectional technique. The following guidelines will apply when using the purposive sampling approach: three years or more since joining Gojek (one of the online application provider drivers), possess a card indicating that they are an active member and a residence in Samarinda City. Tests for reliability and validity have been run on the research questionnaire. Before completing the survey through the Google form that will be sent via WhatsApp, complete the informed consent form as a responder in the study. To gather data, five online driver collection sites were accessed. The questionnaire was filled out with the researchers' help by five enumerators. Cramer's V test with 95% CI was used to examine the data. The Ethics Commission of the Faculty of Medicine, Mulawarman University, has authorized the study tool designated with number 112 / KEPK-FK / VII / 2022.

Results

According to the data on the study's respondents' characteristics, 88.9% of the respondents overall were men and 11.1% were women. 54.3 percent of respondents, had continued to smoke. Only half of the respondents (93.1%) exercised for more than 30 minutes each day, and the majority (93.1%) slept for more than seven hours each night. 2.6% of respondents overall admitted to drinking just once a week. 36% of respondents said they had attended the safety talk before work. According to the results of the bivariate test, there is a substantial correlation between online motorcycle taxi drivers' compliance with PPE use at work and work accidents (p-value 0.008). The dependent variable is clean and healthy living behavior, specifically smoking behavior, and there are several independent variables (accident incidence, age, alcohol consumption, breakfast, length of sleep, PPE with safety talk) based on the findings of bivariate analysis using the Cramer V test.

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Conclusion

Compliance in utilizing PPE while working is determined by online drivers' clean and healthy lifestyle choices that correlate to accident incidences. This paper makes recommendations, such as mandating that employers hold safety briefings before the start of workdays and informing online drivers about the use of PPE at work.

Keywords: Behavior, Healthy Life, Online Drivers

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Mediation Effects of Premarital Sexual Permissiveness on The Relationship Between Expectations for Marriage and Marital Intention

Thuy-Trinh Ngo-Thi, Son Van Huynh, Nhu-Thuyen Dang-Thi, Bao-Tran Nguyen-Duong, Thuy-Tien Nguyen-Thi, Gallayaporn Nantachai, **Nguyen Nguyen Trong***, Vinh-Long Tran-Chi

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Background

Civilizational variations in socioeconomic factors such as education, occupation, and urban origins have led to a shift in attitudes regarding marriage in the majority of cultures. Marriage is an important milestone in the traditional Vietnamese family due to how it impacted the extended family and the kin network in addition to how crucial it was to the couple's long-term happiness. According to the Vietnam General Statistics Office, in 2021, the mean age of people to get marry was 28.30 for men and 24.05 for women, which is a much older age comparing to last century. Several researchers implied that marriage planners, especially young people are delaying their entry into marriage because of the protracted and less predictable transition to maturity. Besides that, premarital sexual factors may play a vital role in marriage and marriage intention, no study has explicitly examined this relationship to our knowledge. Undergraduate students have various opinion about premarital sexual activity and will likely get married on their own in the future. Therefore, we focus on investigating the influence of premarital sexual permissiveness on the relationship between expectation for marriage and marital intention among undergraduate students.

Objective

The purpose of this study was to investigate the direct and indirect effects of expectations for marital relationships and premarital sexual permissiveness on intent to marry of emerging adults. This study also examined the differences in marital intention between participant groups.

Methods

Our cross-sectional study was focused on emerging adults including 344 undergraduate students from universities in Viet Nam. The data cleansing and coding process were done in Excel. Independent sample Mann–Whitney, and Kruskal–Wallis were the non-parametric tools used to evaluate the differences of Intention to Marry among groups with independent characteristics. Because of reflective measurement models, mediating hypothesis relationships and non-normal data, PLS - SEM is selected to analyze the data.

Results

The main findings demonstrated that (i) sexual orientation have a significant effect on marital intention; (ii) individuals' expectations for marital relationship have a direct effect on marital intention; and (iii) premarital sexuality permissiveness mediates the relationship between expectations for marital relationship and marital intention. There are significant differences in the median score of Intention To Marry between different sexual orientation

Conclusion

The main finding of our research indicates that one's marriage-related expectation can predict his/her marital intention. Premarital sexuality permissiveness mediates the relationship between expectations for marriage and marital intention. These results also support the need for counselors and therapists who specialize in marriage to spend adequate time thoroughly understanding requirements and expectations of clients and their effects on clients' intention and attitudes toward marriage. Marriage could improve health outcomes in a variety of ways involving health behavior, health care access, mental health, physical health, and longevity. Understanding the role of premarital sex and sexual satisfaction could facilitate the development of interventions to enhance the emotional connection between couples and assist clients in the marriage decision-making process, therefore, improving individuals' health. Moreover, this would provide a potential approach to enhance marital rate resulting in public health increasement. Additional research is needed to examine how emerging adults form opinions more carefully about criteria and requirements for marriage and garner more insight into individuals' opinions about the effects and role of sexual intercourse before marriage to better understand their expectations.

Keywords: premarital sexual permissiveness, expectations for marriage, marital intention, marriage, sexual orientations.

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Factors associated with complementary feeding practices among aged 6 to 23 months old children in Cikarang Timur, Indonesia.

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Background

The first two years of life is a critical period for optimal growth and healthy development of children. Therefore, the World Health Organization (WHO) established the guidelines for Infant and Young Children Feeding (IYCF), which included the appropriate complementary feeding (CF) practices for children aged between 6 to 23 months old to prevent malnutrition such as wasting, underweight and stunting. However, there are still many young children with malnutrition in Indonesia, and limited information on complementary feeding practices especially in Cikarang Timur. This study mainly focused on four indicators of CF practices, namely introduction to solid, semi-solid and soft food (ISSSF), minimum dietary diversity (MDD), minimum meal frequency (MMF) and minimum acceptable diet (MAD).

Objective

This study aimed to examine the CF practices based on WHO Indicators for IYCF, and its associated factors among mothers of children aged 6 to 23 months old in Cikarang Timur, Indonesia

Methods

A cross-sectional survey was carried out among 325 mothers of children aged 6 to 23 months old who lived in Cikarang Timur, Indonesia. The mothers were selected by simple random sampling from the primary healthcare record. Face-to-face interview was conducted using a structured questionnaire to obtained children characteristics, maternal characteristics, household characteristics, and CF practices. Four indicators of CF practices included ISSSF, MDD, MMF, and MAD, were analyzed as "Yes or No". Data were coded into Excel and analyzed using SPSS version 28. Frequency and percentage were reported for descriptive data. Chi-square test and multiple logistic regression were performed to find associated factors. Adjusted odd ratio, 95% confidence intervals with a significant level of 0.05 were reported for each CF indicator.

Results

Children in this study were mostly male (57.2%), and aged between 6-11 months old. only 37 children (11.4%) had low birth weight, and 11 children (3.4%) had a birth length < 48 cm. Whereas, majority of the mothers (71.4%) had secondary education and above, aged \ge 20 years old (85.8%), and unemployed (95.7%). Most of the families in this study were ethnic Sundanese, and diverse Muslims. About 85% of children were from a nucleus family. Additionally, 72.6% of families had low income. The Chi-square test shows that only religion was associated with MMF. While educational level, ethnicity, religion, and occupational status were found to be associated with MDD. For MAD, the significant association were found among children' birth weight, educational level, ethnicity, and religion. Further analyses with multiple logistic regression found that Muslim mothers were 3.009 odds of practicing the MMF (AOR 3.009, 95% CI: 1.134-7.983). For MDD indicators, the result show that mother with other ethnicity than Sundanese and employed mother were 2.737 odds and 5.587 odds

respectively practicing dietary diversity to their child (AOR 2.737, 95% CI: 1.486-5.044; AOR 5.587, 95% CI 1.203-25.944). Similar results were observed for practicing MAD, mother with other ethnicity than Sundanese were 3.033 odd of practicing MAD (AOR 3.033, 95% CI: 1.632-5.638), and had secondary education and above were 1.690 odds of practicing MAD.

Conclusions

Suboptimal CF practices were found among children aged 6-23 months old in Cikarang Timur, Indonesia. These findings shows that a positive association between mother's education level and MAD practicing. Strengthening national policies to educate women at least to the secondary level might be a cost-effective intervention for improving IYCF practices. These results highlight the need to improve CF practices among mothers in the area.

Keywords: Associated factors, Complimentary feeding practices, Indonesia, Young children

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Impact of higher education on the compliance of Nepalese physical therapists with knee osteoarthritis clinical practice guidelines

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Introduction

Even though knee osteoarthritis (OA) is one of the most disabling diseases, it shows that physical therapists in Nepal were not using the clinical practice guidelines (CPGs) for musculoskeletal issues in a quality manner. Evidence-based practice (EBP) has been integrated into the teaching and learning process from the undergraduate level in Nepal, however, its inclusion in the curriculum at the university level does not guarantee its practical application. A prior study conducted in Nepal implied that although physical therapists with bachelor's degrees could possess the necessary understanding of evidence search, they might not have sufficient practical skills to put that knowledge to use.

Objectives

To investigate how education impacts physical therapists' compliance with knee OA CPGs.

Methods

A booklet including information about this survey research was distributed to Nepalese physical therapists with at least a year of experience treating patients with knee OA via an internet platform. The cover letter, study details, informed consent, and a link to Google Forms were all included in the survey package. The study was conducted over the course of three months, from January to March 2022. The survey recorded demographic data and assessed how physical therapists adhered to the CPGs and recent evidence. The survey questionnaire was validated by musculoskeletal health professional experts and was pretested by five physical therapists to ensure it was relevant and easy to understand.

The Likert scale was used to determine the level of agreement in the analysis. The mean score of \geq 0.7 from 1 was regarded as an acceptable degree of agreement. The level of compliance to 15 statements in this study was; 7 as low, 7–12 as moderate, and >12 as high. The compliance to knee OA CPGs across groups with master's and bachelor's degrees was compared using the analysis of covariance (ANCOVA) with experience and training used as the covariates.

Results

A total of 177 physical therapists responded to the questionnaire. Approximately 65.53% of the participants held a bachelor's degree, while 34.46% held a master's degree in physical therapy. Findings demonstrated that both groups of physical therapists complied with 5 knee OA CPG statements i.e., statements no 1, 7, 12, 13, and 15 (with the mean score of \geq 0.7) and that physical therapists with a bachelor's degree also complied with statements no 4. Both groups showed a low level of compliance with knee OA CPGs. A comparison of compliance to the knee OA CPGs between these two groups showed no difference in all statements except for statement no 9 [F (1,168) = 4.834, p = 0.029].

Conclusion

No difference in compliance was found between groups, suggesting that education had no impact on physical therapists' compliance with the treatment recommendations from CPGs. Improving the course content in the curriculum to provide the importance of applying empirical evidence to clinical practice for physical therapists is necessary.

Keywords: Education; Compliance; Clinical practice guidelines; Knee osteoarthritis; Physical therapy

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COVID-19 Vaccine Adherence and Behavioral Changes of Community People in the New Normal Context of the Coronavirus Pandemic

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Background

Coronavirus disease 2019 (COVID-19) is the deadliest pandemic in the 21st century and it's still a major health crisis globally. Considering the longer duration of the national COVID-19 vaccination program and widespread nature of the pandemic, it is necessary that people equally comply with both vaccine and non-therapeutic health protective behaviors against COVID-19.

Objective

The study investigated the public adherence to vaccination and behavioral changes against COVID-19 and their determinants in Bangladesh in the new normal context of the pandemic.

Methods

The study was conducted during the first half of 2022 among 940 rural and urban adults of Dhaka and Chattogram divisions selected by multi-stage sampling. Data were collected through face-to-face interviews using a pretested questionnaire. Hierarchical regression was performed to predict significant predictors and the causal model of COVID-19 prevention behavior was also tested and justified through structural equation modeling (SEM) based on the theory of planned behavior (TPB).

Results

Nearly half of them (48.2%) showed poor vaccine adherence and health practices regarding COVID-19 prevention and only around one-fourth showed good level of health practice. Majority of the respondents (86.7%) used face masks during the pandemic crisis but only 12.7% of the respondents used it regularly. Less than half of the respondents (44.9%) took COVID-19 vaccines regularly. Not only the background factors but also knowledge (p<0.001), attitude (p<0.01) and intention (p<0.001) regarding COVID-19 prevention were significant to predict the vaccine adherence and healthy health practices in hierarchical regression. Self-control significantly influenced COVID-19 prevention behavior directly and through intention showing the highest effect (p<0.001) in SEM. Attitude (p<0.01) and self-control (p<0.001) showed significant direct effects on intention in causal relationships.

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Conclusion

Adequate knowledge, positive attitude, proper motivation and positive intention can encourage adults more to ensure vaccine adherence and their healthy behavior regarding COVID-19 prevention. The theoretical model of the study was effective to explain vaccine adherence and COVID-19 prevention behavior of people in a more rational way and policies based on this model could be adopted to improve the current status of preventive health practices.

Keywords: Vaccine adherence, behavioral change, COVID-19 prevention

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Lower Extremity Kinematics and Kinetics During Walking: A Comparison between Khon Masked Dancers and Non-Dancers

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Abstract

Khon masked dance is one of the famous Thai traditional dance that requires long-term training. One of the essential training position is performed in the squat position which can affect basic activity especially walking pattern of dancer. This study aimed to compare the lower extremity kinematics in the sagittal, frontal, and transverse planes during walking between Khon masked dancers and nondancers. Twenty healthy males participated in this study (10 Khon masked dancers and 10 healthy males) were participated in the study. Professional Khon masked dancers who had at least 5 years dancing experience of giant or monkey role play and all participants were 20 to 40 years' healthy male with body mass index (BMI) 18.5 - 30 kg/m². Participants walked at a self-selected speed on the 9meter walkway in the 3D motion analysis setting. Kinematics variables included the angles of pelvic tilt, obliquity, and rotation, hip and knee flexion/extension, adduction/abduction, and internal rotation/external rotation, and ankle dorsiflexion/plantarflexion were collected and analysed. Kinetics variables included anterior, posterior, medial, lateral, and vertical forces were also monitored. Data were then statistically analysed between professional dancers and non-dancers by using the independent sample t-test with a level of significance at p<0.05. There was no significant difference in all testing variables between the two groups of participant. However, Khon masked dancers were revealed higher anterior pelvic tilt angle at terminal swing and external rotation angle at terminal stance, hip flexion angle at mid-swing, knee flexion angle at loading response, and adduction at mid-swing. Gait pattern in Khon mask dancers demonstrated increased pelvic anterior tilt in conjunction with the increased lumbar lordosis. This study demonstrated that long-term Khon training were not affected gait pattern in the dancers. However, more sample size is still necessary in the future to investigate a clearer picture of gait alteration in Khon masked dancers.

Keywords: Khon masked dancers, kinematics, kinetics, gait analysis.

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Lumbar Multifidus Thickness is Associated with Lumbar Stability but not Disability and Fear in Movement Control Impairment Subgroup of Chronic Low Back Pain

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Background

Global burden of disease data shows low back pain as the fourth leading cause of disability. Lumbar multifidus muscle (LM) deficit is one of the underlying mechanisms for compromised spinal stability causing chronic low back pain (CLBP), particularly in the movement control impairment (MCI) subgroup. Although evidence demonstrated the association between CLBP and kinesiophobia, there is insufficient evidence regarding the roles of LM in lumbar stability, disability, and kinesiophobia.

Objectives

This study aimed to determine the associations between LM function and clinical outcomes (lumbar stability, disability level, and kinesiophobia).

Methods

33 participants with CLBP during remission and having MCI were recruited. The sample size was not calculated because this study was a part of an intervention study with a pre-specified sample size. Rehabilitative ultrasound imaging was used to measure LM thickness at rest and maximum voluntary isometric contraction and was further used to calculate percent LM thickness change (%LM). An electromagnetic motion tracking system was used to measure lumbar stability at lumbar levels L4 and L5 during rest and leg raise positions of prone instability test. These data were used for the lumbar stability index. Thai-version Oswestry disability index (ODI) and Tampa scale of kinesiophobia (TSK) were used to assess disability and kinesiophobia, respectively. Spearman's rank correlation coefficient was used to assess statistical associations.

Results

The mean duration of CLBP was reported to be 3.5 years with mean recurrent episodes of 9 times within the last 6 months. The participants had a minimal disability with an ODI percentage ranging from 4% to 12% and low to high levels of kinesiophobia with TSK scores ranging from 35 to 44. Additionally, findings demonstrated a significant moderate positive correlation between %LM and lumbar stability index at L_5 ($\rho = 0.42$, P<0.05) and a trend at L_4 ($\rho = 0.32$, P<0.08), while %LM was not significantly associated with disability and kinesiophobia (P>0.05).

Conclusions

Association between %LM and lumbar stability index suggests the role of LM in providing stability to the lumbar spine. No significant association between %LM and other clinical outcomes suggests clinicians should consider LM deficit might not be key to decreasing disability and fear of movement, and additional interventions may be needed to treat this subgroup of CLBP.

Keywords: Multifidus, Lumbar stability, Movement control impairment, Low back pain

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Epidemic Trend of Dengue under High Awareness and Border Quarantine in Taiwan

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Background

Dengue fever is transmitted to humans through virus-infected *Aedes aegypti* and *Ae. albopictus* mosquitoes. The most important breeding sites for *Aedes* mosquitoes are all artificial containers with water. In Taiwan, we have imported dengue cases every year from 1989-2022. All Indigenous dengue cases are original from imported cases. However, the imported case was not necessary to induce indigenous cases all the time in Taiwan.

Objective

This paper intends to find out the importance of high awareness of clean-up the artificial water containers and dengue cases follow in dengue control.

Methods

We analyze the government publications about all dengue and indigenous data from 1989 to 2022 with Pearson correlation coefficient and regression analysis.

Results

We find the relationship between imported and indigenous cases is 0.331 (p>0.05) during 1989-2022 whole period. When broke it down to three period, correlation coefficient in 1988-2001 is 0.404(p>0.05), 2002-2015 is 0.579 (p<0.05), and 0.495(p>0.05) in2016-2022. We estimate that after high epidemic, government and people all have high awareness for breeding sites clean-up and pesticides control, and vice versa. After long time no or low number of cases, they have low awareness. High dengue epidemic had outbreak in 2014 and 2015. More imported case brings more indigenous case. There were no or low cases after high outbreak in 2016-2022. Therefore, environmental awareness to clean-up the breeding sites and following the imported cases efficiently are two critical dengue prevention measures. Once the imported dengue cases be quarantined enough time and cured in hospital, it decreased the transmission of dengue. In regular border quarantine, screening to identify dengue in airport and success to track to community before COVID-19 pandemic on 2020 were below 40%. In other words, most of dengue cases were missed after entrance from airport into community. During the COVID-19 pandemic period, 14 days border quarantine was implemented in Taiwan. Because of decreasing number of passengers, strict border quarantine in 2020~2022 (up to Jul. 2022), the imported cases decreased to 64, 12, and 16, and Indigenous cases decreased to 73, 0, and 0.

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Conclusion

According to 2020 statistics, if there were no good quarantine and breeding sites cleaning, outbreak of dengue will happened after imported case. From international reality, it is impossible to continue 14 days border quarantine or restrictions on traveler enter into Taiwan forever. Once the traveling become normal, how to encourage and reward the suspecting dengue cases are very important for dengue control. So does breeding sites clean-up and mosquito surveillances.

Keywords: Dengue fever, breeding sites clean-up, quarantine, Aedes mosquito.

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Machine Learning Algorithm-Driven Prediction System for Early Diagnosis of Nasopharyngeal Carcinoma Using Medical Claim Database

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Background

Nasopharyngeal carcinoma (NPC) manifests vague initial symptoms and signs. Delaying diagnosis of NPC causes increased morbidity and mortality. Previous studies have shown that patients with NPC have an average duration of symptoms of 8 months before diagnosis, with the longest possible delay of up to 3 years. This study hypothesized that categorizing individual healthcare-seeking patterns using a medical claim data-based intelligent decision support system (IDSS) may shorten the diagnostic process of NPC.

Methods

This study compared claim data from patients with NPC and non-NPC in a population-based health insurance database from 2001 to 2008. We compared the performance of five machine learning algorithms, namely LightGBM, XGBoost, MARS, RF, and Logistics, to establish optimal prediction models for early detection of the occurrence of NPC.

Results

Using a minimum of 13 features, two ensemble learning models—LightGBM and XGBoost, had maximum predictive power. The calculated areas under the ROC curve of LightGBM and XGBoost models for the validation set and the unbalanced test set were 89.4%, 89.3%, 82.4%, and 82.3%, respectively.

Conclusions

LightGBM and XGBoost-driven NPC-IDSS may assist in shortening the diagnostic process of NPC. Patients who exhibited high-risk categories in the IDSS deserve timely referral.

Keywords: nasopharyngeal carcinoma; machine learning; delaying diagnosis. **Corresponding author:** chienyuning@gmail.com (Y.-N. C.); hychiou@tmu.edu.tw (H.-Y.C.); Tel.: +886-2-2871-8288 (ext. 3105) (Y.-N. C.); +886-37-206166 (ext. 36300) (H.-Y.C.)

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Public Health Policies and Roles of Pharmacists in Pakistan

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Introduction

The notion that healthcare is a public good emerged at the end of the 19th century in Europe. In Pakistan, the public and private sectors are both involved in healthcare system. The country's constitution states that, with the exception of territories under federal control, the provincial governments are primarily in charge of overseeing national health policy. Historically, the provision of healthcare has been governed jointly by the federal and provincial governments, with districts generally in charge of the execution. The Drug Regulatory Authority of Pakistan (DRAP) Act 2012 established the federal regulatory agency charged with the regulation of medications throughout the country. In accordance with the Act, regulations cover all aspects, including pharmacy, clinical, hospital, and community levels for both basic services (such as dispensing, procurement, storage, distribution of therapeutic products, and counselling) and enhanced medicine services (such as pharmaceutical care, pharmacovigilance, pharmacoepidemiology, pharmacoeconomic, and services offered at drug information and poison centers). The higher education commission (HEC) established the Department of Pharmacy Practice in Pakistan's private and public universities in 2014 to improve pharmacists' clinical experience.

Objectives

This review study examines the role of pharmacists in the development of public health policies in Pakistan focusing on aspects pertaining to the conceptualization, development and implementation. The goal of the study is to understand how health policies are established, how they're enforced, as well as role of pharmacists in Pakistan's healthcare system.

Methods

The databases PubMed/Medline, Embase, Scopus, Web of Science, and Google Scholar were searched for publications published in the English language between January 2000 and September 2021 using the keywords Public Health, Health Policy, Pharmacist, and Pakistan. Along with articles that have been thoroughly searched, relevant national documents were also included, such as the Pakistani national health strategy, national action plan, management and control plans for TB, polio, and malaria, as well as national quality improvement initiatives developed by the Pakistani national institute of health. Public health policies in Pakistan are presented as systematic reviews, observational research, and cross-sectional studies, as well as the linked (professional, public policy, and political) aspects. The exclusions include studies published prior to January 2000, brief communications, and conference proceedings. Articles unrelated to the professional, governmental, or political influences on health policies are not included.

Findings

The results show that Pakistan's planning and policy-making for the healthcare sector are competent at the planning stage but not at the execution stage. The Peoples Health Scheme of 1972, the National Health Policies of 1990,1997,2001, and 2009, Vision 2030, and the National Health Vision 2016–2025 are models of national policies. Pakistan's Planning Commission and Federal Ministry of Health (now the Ministry of National Health Services, Regulations, and Coordination) are responsible for developing the country's health policies, but the provinces are responsible for planning and execution as well. In a newly decentralized structure, the districts also get responsibility for implementation. A set hierarchy of steps is used by the Ministry of Health to execute all the Policies.

The public health responsibilities for individual pharmacists vary, depending on their background, skills, education, and place of employment. Nonetheless, they all share the same goal of enhancing public health regardless of whether they are working independently or alongside administrators and other healthcare professionals. Pharmacists have a variety of responsibilities in Pakistan's public health initiatives, such as antimicrobial stewardship, infection control, preventing drug abuse and misuse of controlled substances, managing drug product shortages, encouraging tobacco cessation, and emergency planning and response.

Conclusion

To sum up, Pakistan's health policy still needs some work for it be totally evidence-based, coherent, dynamic, all-encompassing, and pragmatic. The challenges associated with implementation are largely due to the fact that policies are formulated on the basis of assumptions rather than reliable empirical data. Additionally, more than half of pharmacists work in community pharmacies, which is a crucial component of population healthcare. Sadly, well-articulated plans from the government to strengthen and include the community pharmacists' role in public health policy are nonexistent. The seventy-five-year history of health planning in Pakistan has been marked by a variety of initiatives at different points, but it has always required a solid and clear process.

Keywords: Public Health; Pharmacist; Health policy; Pakistan.

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Metformin Activity on Longevity and Mitochondrial Unfolded Protein Response (UPR^{mt}) across UPR^{mt} Invoked *C* .elegans

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Introduction/Background

Metformin, a first line drug for the treatment of type 2 diabetes mellitus, also has been implicated to slow down ageing in various organisms including *C elegans*. It has been shown that the drug tends to accumulate in mitochondria. Recently, the mitochondrial unfolded response (UPR^{mt}) was shown to affect lifespan in UPR^{mt} activated worms. UPR^{mt} is mitochondrial stress response pathway instigated in response to alleviate mitochondrial proteostasis. Under stressed conditions, *atfs-1*: a transcription factor involved in regulating UPR^{mt}, relocalizes to nucleus to enhance the expression of mitochondrial chaperones and detoxifying enzymes operating in metabolic networks. We, therefore, surmised that metformin might affect ageing by exerting its effect on UPR^{mt}.

Objective

To investigate the interaction of metformin with UPR^{mt} on lifespan of worms.

Material(s) and Method(s)

Synchronized 100 to 150 wildtype (N2) worms were used for lifespan study, which were scored for their viability everyday by gentle touch. The UPR mt was induced by feeding the nematodes with dsRNA-producing (RNAi) bacteria including *ech-6*, *pdhb-1*, *and wah-*1 along with empty vector (EV) as a control. IPTG (isopropyl β -D-thiogalactoside) at 5 mM was used to activate dsRNA synthesis in RNAi bacteria. Double RNAi was initiated by mixing bacteria at 1:1 concentration. Metformin at final concentration of 50 mM was supplemented onto the cultured agar. UPR mt activation and its interaction with metformin was observed using the reporter strain hsp-6p::GFP. Image J (fiji) software was used to calculate the integrated pixel density of the acquired fluorescent images and normalized by the number of worms per condition. The experiment was conducted in triplicate for every condition. Lifespan experiments were analyzed by Mantel-Cox log-rank test and the experiments pertaining to UPR mt were analyzed by t-test.

Results

The activation of UPR^{mt} was observed in *ech-6*, *pdhb-1*, *and wah-1* RNAi worms by detection of fluorescence from the reporter strain hsp-6p::GFP. Lifespan of *ech-6* and *pdhb-1* RNAi worms were found to be significantly reduced in comparison to EV. In contrast, *wah-1* RNAi worms had significantly extended lifespan. Moreover, RNAi knockdown of *atfs-1* which leads to inactivation of UPR^{mt} (confirmed by dimming of fluorescence in the reporter strain hsp-6p::GFP) further shortened the lifespan of N2 worms with respect to EV. Upon blocking UPR^{mt} by *atfs-1* RNAi, the lifespan reduction conferred by *pdhb-1* RNAi was significantly rescued towards normal lifespan. Metformin significantly increased lifespan in wildtype worms fed with OP50 bacteria as well as EV. Metformin, however, significantly decreased the lifespan of all RNAis except *pdhb-1*, where it had no significant change in lifespan. Metformin also significantly suppressed the UPR^{mt} at different adulthood days in *ech-6* and *wah-1* RNAi.

Discussion and Conclusion

Metformin increased lifespan in N2 under OP50 and EV fed conditions, which is consistent with previous reports. The variable nature of lifespan in UPR^{mt} invoked worms (*ech-6*, *wah-1* and *pdhb-1*) reciprocates with the complex nature of UPR^{mt} in relation with lifespan. Metformin suppressed UPR^{mt} in *ech-6* and *wah-1* regardless of decreased lifespan. It implies that metformin might exert toxic effect in these worms. The effect was still the same even after blocking UPR^{mt} by *atfs-1* RNAi in both *ech-6* and *wah-1* and is indicative of the interaction of metformin with the pathway where these genes exert their function. The lifespan phenotype conferred by UPR^{mt} in *pdhb-1* was partly abolished when fed together with *atfs-1* RNAi. This indicates the clear role of UPR^{mt} in lifespan regulation pertaining to UPR^{mt} activated worms. Moreover, upon double RNAi feeding of *afts-1* with *ech-6* or *wah-1*, completely blocked the UPR^{mt}, which validates our lifespan experiments involved with double RNAi. Interestingly, metformin did not change the lifespan of *pdhb-1*, which suggests that the drug might exert its effect by downregulating the function of *pdhb-1*.

Keywords: Metformin, C. elegans, Ageing, Unfolded Protein Response

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Heavy Metals Contamination in Local White Rice: A Preliminary Study at Palembang, South Sumatra, Indonesia

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Introduction

Heavy metal pollution is still one of the environmental concerns in society. The contamination can be through water, soil, air, and food. One of them is heavy metal contamination in paddy fields and rice. Heavy metal pollution in agricultural products such as rice comes from the use of pesticides, fertilizers, and natural soil with pH conditions. White rice is a commonly eaten rice type by people in Indonesia, especially the people of Palembang The consumption of rice can be a source of heavy metal contamination in the community.

Objectives

This study aims (1) To determine the concentration of heavy metals and (2) To find the non-carcinogenic and carcinogenic risks from local white rice consumption in Palembang, South Sumatra, Indonesia.

Methodology

Rice was collected from the three largest local markets in the city of Palembang with a total sample of 6 local white rice samples, 100 mg/sample. There were 2 types of local white rice that commonly consume namely Pandan Wangi and Pulen rice. The initial stage of the analysis was sample preparation where the rice is transformed into a flour-like shape, then followed by the digestion stage. The final stage was the analysis of heavy metals in rice using the inductively coupled plasma optical emission spectrometry (ICP-OES) method.

Results

The results of both Pandan Wangi and Pulen rice showed all the concentrations of arsenic (As), cadmium (Cd), lead (Pb), and copper (Cu) were below the detection limit. All rice samples found As, Cd, and Pb lower than standard, which were 0.800 ug/gr, 0.038 ug/gr, and 0.839 ug/gr, respectively. Meanwhile, copper (Cu) was found in Pandan Wangi rice with an average concentration of 0.89 ug/gr, ranging from 0.26 to 1.62 ug/gr. In Pulen rice, copper (Cu) was found with an average concentration of 1.12 ug/gr, ranging from 0.95 to 1.17 ug/gr. Risk assessments showed there was a non-carcinogenic effect for adults and kids which HI were 13.394 and 9.822 respectively for Pandan wangi rice and 13.397 and 9.824 respectively for Pulen rice. On other hand, the assessment showed the same results of TCR between Pandan wangi rice and Pulen rice. The results showed there was a carcinogenic risk, in which TCR were 8.03 x 10⁻³ for adults and 2.94 x 10⁻² for kids.

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Conclusion

Risk assessment showed that both types of rice have potential risk even though the concentrations of rice were lower than standard. Health risks in kids were known to be higher than in adults. Heavy metals in rice should be reduced by controlling the use of pesticides and fertilizers during the rice planting process. In addition, people in Palembang might be reduced the amount of rice consumption to reduce health risks.

Keywords: heavy metal, contamination, rice, Indonesia

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The Impact on Air Pollution by of Epidemic Prevention Policy of COVID-19 in Northern Taiwan

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Background

Since 2020, in order to prevent the spread of COVID-19, various countries implemented various non-pharmaceutical interventions (NPIs), which affected human activity behavior. Past studies have found that the implementation of different NPIs can cause significant changes in air pollutant concentrations.

Objective

This study aims to investigate the changes in concentrations of NO₂ and PM_{2.5} as well as possible influencing factors during the level 3 alert period of the COVID-9 pandemic in northern Taiwan in 2021.

Methods

Using the monthly average of hourly data from 18 central air quality monitoring stations of the Environmental Protection Administration in northern Taiwan from 2015 to 2019 for Theil-Sen trend estimation. The data from the same period in 2019 was applied to estimate the predicted concentrations of NO₂ and PM_{2.5} during level 3 alert period in 2021 (May 16 - July 25). The predicted concentrations of NO₂ and PM_{2.5} were further compared with the actual concentrations to calculate the percentage difference. In addition, Google Mobility Trends was used to estimate the changes in the stream of people during the level 3 alert period.

Results

The actual concentration of NO₂ (9.7 ppb) in Northern Taiwan was significantly lower than the predicted concentration (13.4 ppb) by 27.3% (95%CI: -25.1% ~ -29.78%). The percentages of trend difference in NO₂ at 16 of 18 stations were significantly reduced with the range from -15.6% to -42.9%. Among the stations, one traffic station was with the largest decreased concentration from the predicted 26.9 ppb to the actual 15.3 ppb. And, one park station was with the significantly largest raised concentration, which increased by 5.9% (95%CI: 0.5% ~ 11.9%). The actual concentration of PM_{2.5} in Northern Taiwan (8.93 μ g/m³) increased by 1.3% (95%CI -5.4% ~ 7.3%) compared with the predicted concentration (8.82 μ g/m³), which was no statistical significant. 9 of 18 stations were significantly decreased with the decreasing percentage from -1.6% to -33.4%. Among the stations, one ambient station, which is an important transportation hub in northern Taiwan, was with the largest decreased concentration from the predicted 12.1 μ g/m³ to the actual 8.1 μ g/m³. Mobility trends showed that the stream at Taiwan's public transit stations during the level 3 alert period was decreased by an average of 56% when compared to the period before the level 3 alert. In addition, retail and recreation decreased by 45.6%, grocery and pharmacies stores decreased by 4.6%, workplaces decreased by 21.6%, and residential areas increased 16%.

Conclusion

Changes of human activities resulted in a decrease in traffic and a significant decrease in concentration of NO₂. The emission of PM_{2.5} originates from human activities, so its overall concentration is not much different from the predicted concentration. However, the impact of changes in stream of human can still be found in different types of areas. In the future, it could clarify the patterns of traffic and stream of people changes during COVID-19 pandemic period to further adjust relevant traffic policies to effectively improve air pollution in the post-epidemic era.

Keywords: COVID-19, NO₂, PM_{2.5}, NPIs, Air pollution

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The Effect of Covid-19 Prevention Policy on the Outpatient Visits of Depression Patients in Taipei of Taiwan

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Background

The local Covid-19 epidemic situation in Taiwan was stable in 2020, and it was outbreak around May 2021. Therefore, Taiwan implemented the Nationwide level 3 alert from May 15, 2021, to July 26, 2021, and people started working from home and not going out unless necessary. Several studies have shown that the lockdown caused by Covid-19 had reduced the utilization of outpatient medical services. However, depression is a disease that requires regular return visits to prevent the disease from worsening. As a result, it is important to find out if the Covid-19 epidemic in Taiwan changes the outpatient visits status of depression patients.

Objective

The aim of this study is to observe the trend change of outpatient visits of depression patients affected by the Covid-19 pandemic status and prevention policy in Taipei of Taiwan.

Methods

We collected medical records during 2019-2021 from *Sondge* Branch (psychiatry specialization) of Taipei City Hospital. The depression cases were defined by ICD-10 codes (F32-F33). The differences in basic characteristics of patients over three years were examined by the one-way ANOVA or Chisquare test. We compared the difference in the average monthly outpatient volume between 2020 and 2021 by using t-test. We further divided three periods (before, during, and after the level 3 alert) to analyze the difference in the average monthly outpatient volume among the three periods by one-way ANOVA. And, we estimated the differences in average outpatient visit times over three years by conducting one-way ANOVA. We also selected new depression cases to calculate the rates of new to all cases before and after the level 3 alert in 2021, and we observe the rates in the same periods in 2020.

Result

The age of the patients decreased year by year, and there were significant differences among the three years $(53.05\pm17.41 \text{ vs } 51.17\pm19.246 \text{ vs } 50.87\pm19.502, \text{p}<0.001)$. There were no significant differences in the sex ratio among the three years. The average monthly outpatient volume of depression in 2020 was 980.58, which was significantly higher than those of 868 in 2021 (p=0.002). Further analysis showed that the outpatient volume during the level 3 alert was significantly lower than in the period before and after the level 3 alert. The decreasing average outpatient visits times for patients were found in 2019, 2020 and 2021 (6.31, 6.04 and 5.61, respectively), and the value of 2021 was significantly lower than those of other two years (p-values both < 0.001). In addition, the rate of new to all cases after the level 3 alert increased by 2.0% when compared to that before the level 3 alert in 2021, and the increasing rate between the same two periods in 2020 was 0.6%.

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Conclusion

From this study, it can be found that the use of hospital outpatient services for depression patients decreased during the level 3 alert period and the rate of new cases increased after the level 3 alert and that Covid-19 prevention policy has caused instability in the frequency of patient return visits, which may worsen the disease condition in the future. On the other hand, the development of new depression patients by the Covid-19 pandemic still needs more concern and followed up. As a result, it is important for the authorities concerning to develop an appropriate alternative to outpatient services such as online medical services.

Keywords: Covid-19, depression, outpatient, medical services.

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Knee Kinetics and Kinematics during *Ten-Sao* Dance: A Comparison between Khon Masked Dancers and Non-Dancers

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Abstract

The Khon masked dance is an authentic Thai classical performance that has been relinquished for centuries. "Ten-Sao", the basic training movement is maintained in the semi-squat or knee flexion and varus with toes out throughout the performance. The excessive knee flexion and varus position could exhibit an impact force and stress on the knee structures and leads to knee injury risk. The evidence of Ten-Sao related to the knee kinetics (knee joint force and ground reaction force) and kinematic (knee joint angle) information remains far from obvious. This research presented the comparisons of kinetics and kinematics over the starting and leg raising phases of Ten-Sao between Khon masked dancers and non-dancers. Twenty healthy males, including Khon masked dancers (n = 10) and non-dancers (n = 10) participated in the study. All participants performed *Ten-Sao* 10 cycles, then the kinetics and kinematics of starting and leg raising phases were investigated using force plates and 3D motion analysis. For kinetics, the findings showed lower knee anterior (p = 0.009) and compressive (p = 0.001) joint forces in Khon masked dancers when compared to the non-dancers at the starting phase. Moreover, Khon masked dancers showed lower medial (p = 0.012) and vertical (p < 0.001) ground reaction forces at the starting phase. For kinematics, Khon masked dancers had lower knee varus angle (p = 0.038) at the starting phase but had higher knee internal rotation angle (p = 0.028) at the leg raising phase. The reduced joint force and ground reaction force are achieved by decreasing knee varus and external rotation, both of which contribute to less stress on the knee structures and involve the dance technique. However, leg raising with a high knee internal rotation could be a cause of increased compression and tension on the knee joint. The results obtained from this study might provide the knee biomechanics evidence of *Ten-Sao* and be used in prevention, development and teaching movements.

Keywords: Thai Traditional Dance, Khon Masked Dance, Knee Joint, Biomechanics, Injury Prevention

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The Attitude towards Wife Beating: Do Young Men Act Differently?

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Introduction

Wife beating is a major issue of intimate partner violence in Indonesia. Many studies have tried to figure out women's acceptance and factors associated with wife beating. Commonly known as the perpetrators, identifying men's attitude towards wife beating from the men's perception is also important to obtain another understanding. In contrast, there is still a lack of references to men's attitudes toward it, especially in the Indonesia context. In the last ten years, the prevalence of justifying wife beating among men has remained stagnant at 17%. With a quarter of the country's population consisting of young people, it is interesting to examine whether the attitude towards wife beating varies by age or not. This study then aims to assess the association of socioeconomic characteristics with men's attitudes toward wife beating.

Methods

The Indonesia Demographic and Health Survey (IDHS) 2017 dataset was used for this study. This current study included 10,009 married men aged 15 – 54 years. The statistics descriptive was used to present the prevalence of wife beating justification regarding the age group. A binomial logistic regression was employed to examine the association of respondents' age and socioeconomic characteristics with their attitude towards wife beating justification.

Results

Men from the youngest age group (15-29~years) were the most prevalent to justifying wife beating (22.99%). Across the age groups, the most common reason for wife beating justification was neglecting children. It was confirmed that age was significantly associated with men's attitude towards wife beating justification. The likelihood of wife beating justification decreased as the respondents' age increased, indicating younger men were more tolerant of accepting wife beating than their counterparts. Some socioeconomic characteristics also significantly affected attitude towards wife beating. Men in rural areas were 1.26 more likely to agree with wife abuse than their counterparts. Men who owned a mobile phone were 1.24 times more likely to justify beating wives. Men from poor families tended to justify wife beating than their counterparts. Moreover, men who had a bank account were 0.88 less likely to justify beating their wives than those who did not have.

Conclusion

Based on age, men acted differently towards wife beating. The younger they were, the more tolerant of wife beating they were. Those who lived in rural areas, owned a mobile phone as one of their communication tools, were poor and had no bank account tended to endorse wife beating more than their counterparts. Community programs related to intervention and the prevention of wife abuse are needed to increase men's education and awareness of gender equality, which influence patriarchal values.

Keywords: beating wife, wife abuse, men's attitude

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Effectiveness of Palliative Learning Model Based on Transformational Learning Theory on The Achievement of Nursing Student's Competency

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Introduction

The problem faced by nursing students is the achievement of nursing students' competence which is found to be less than optimal. One of the obstacles identified as the cause is that the learning model applied is still using the traditional conventional model. Palliative care requires implementing a learning model that emphasizes authentic relationships. Therefore, it is necessary to implement learning that prioritizes authentic relationships

Objective

This study aims to see the effectiveness of the palliative learning model based on transformational learning theory to increase the nursing student's competencies in palliative care.

Methods

The study was conducted quasi-experimental with a control group design. The total sample of 52 students for each group. The variables in this study were the TLT-based palliative learning module and nursing students' competencies. The instrument used was a TLT-based palliative learning module and Nursing Student Competency Achievement questionnaire. The statistical test used Generalized Linear Models Repeated Measure (GLM-RM). This research has received ethical approval from the ethics committee.

Results

The results showed an effect of applying the TLT-based palliative learning module on the achievement of nursing students' competence in palliative care (p=0.000).

Conclusion

The application of the TLT-based palliative learning module has been proven to increase competency achievement for nursing students in palliative care. Learning media and competencies regarding palliative care can contribute to increasing the achievement of nursing students' competencies in palliative care.

Keywords: Clinical Competency, learning, nursing students, palliative

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OP26

Adaptation of Sustainable Healthy Settlement to Social Cultural Life on Penyengat Island as a Cultural Reservation Area

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Abstract

Penyengat Island is a small island that is subject to cultural values and has been designated as a cultural heritage by the government of the Republic of Indonesia. The problem in the arrangement of healthy settlements on Penyengat Island is that some residents have built settlements in the former remnants of existing cultural heritage buildings; This is due to the increase in population, resulting in increased population settlements that threaten the existence of existing cultural heritage sites. This study aimed to offer the arrangement concept of sustainable healthy settlement based on the socio-cultural life in the community so that the existence of cultural heritage sites can be maintained. This article used a qualitative descriptive method with data collection techniques through library research with an empirical study approach. The results showed that the socio-cultural life on Penyengat Island was a very valuable asset that became the local wisdom of the local area. The concept of sustainable healthy settlements in terms of socio-cultural dimensions on Penyengat Island is a harmonization between aspects of healthy settlements in terms of ecological dimensions and cultural values that are still preserved on Penyengat Island.

Introduction

Penyengat Island is an exotic island and very thick with Malay history where the size is 2000 m long and 850 m wide. Penyengat Island is designated as a cultural heritage because it has two strategic values in the history of Indonesia. First, Penyengat Island was the stronghold of Raja Haji Fisabilillah during the war against the Dutch (1782-1784). Second, Penyengat Island is in the center of Malay civilization which is rich in culture and contributed to the development of Malay literature and Indonesian literature. Research by Ramelan et al. 2017, shows that the settlements and residences of the people of Penyengat Island are very close to the existing cultural heritage sites, but now people are actually building houses on the remaining footprints of the buildings from the cultural heritage. The coastal area of Penyengat Island, which is a tourist destination, certainly has quite dense activities such as ecotourism areas, marine transportation activities, construction of tourist parks, temporary shelters (TPS) for garbage and household activities that throw waste into the waters. Community activities around the coast of the island have contributed to the decline in water quality (Rosdatina et al, 2019). Various problems that exist on Penyengat Island, especially those related to the health of residential areas and the preservation of cultural heritage, of course require comprehensive handling. Penyengat Island, which has become an international historical tourist destination, if the settlements are not arranged in such a way, will cause many environmental problems and ultimately reduce the health status of the community.

Objectives

This study aimed to offer the arrangement concept of sustainable healthy settlement based on the sociocultural life in the community so that the existence of cultural heritage sites can be maintained.

Methods

This study uses descriptive qualitative research methods that focus on conditions and empirical/natural object data collected collectively with literature and documentation. The analytical method used in this research is the analysis of data reduction, data presentation, and drawing conclusions.

Results

Penyengat Island has dozens of heritage sites and are surrounded by people who are believed to be descendants of cultural supporters who produced the material cultural heritage. The problem is whether the local community is willing to preserve and understand that the material cultural heritage can provide great benefits. The entire culture on Penyengat Island cannot be separated from the history and heritage of the ancestors that are still preserved by the local community, among others: (1) Malay customs at the wedding ceremony on Penyengat Island. (2) The uniqueness of Penyengat Island is the location of its language, which is Malay. Despite much urbanization, Malay culture and language cannot just disappear. (3) The art of Malay culture on Penyengat Island begins with a dance accompanied by musical instruments wrapped in regional and modern customs that add new flavors. (4) The religious system has penetrated the customary system starting from worship, death ceremonies, prayer readings, and marriages. The concept of sustainable healthy settlements in terms of socio-cultural dimensions on Penyengat Island is a harmonization between aspects of healthy settlements in terms of ecological dimensions and cultural values that are still preserved on Penyengat Island.

Conclusion

Based on the findings and the existing conditions of residential settlements on Penyengat Island, it was concluded that population growth resulted in the expansion of settlements, this resulted in the distance between settlements and cultural heritage sites being very close. A concept of sustainable healthy settlement arrangement is needed on small islands such as Penyengat Island so as to create harmonization between population growth, settlements and the preservation of cultural heritage. The goal is to improve the welfare of the community which in turn will improve the health status of the people in Penyengat Island.

Keywords: healthy settlement, sustainable, social, cultural

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OP27

Evaluation of the Impact of the COVID-19 Pandemic and Epidemic Prevention Policies on Psychiatric Outpatients

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Background

In December 2019, the first case of the novel coronavirus was discovered. The COVID-19 virus gave rise to an unprecedented pandemic global. The first wave in 2020 did not occur as expected in Taiwan. However, under the attack of the coronavirus variant Delta in 2021, the COVID-19 epidemic broke out. The government implemented the Nationwide level 3 alert from May 15, 2021, to July 26, 2021. Previous studies have found that lockdowns and social distancing may put people with mental disorders at risk of worsening symptoms or relapses. As a result, the lockdown caused by Covid-19 reduced outpatient medical services utilization. It is very important for psychiatric outpatients who maintain a stable condition by keeping regular revisits. Therefore, the impact of the Covid-19 pandemic and epidemic prevention policies in Taiwan may affect the regular revisits of psychiatric patients.

Objectives

This study explores, analyses, and compares the situations of regular revisits of psychiatric outpatients in Taipei City with the impact of the COVID-19 pandemic in Taiwan and the epidemic prevention policies.

Methods

We collected medical data during 2019-2021 from Sondge Branch (psychiatry specialization) of Taipei City Hospital. Outpatients visited in 2019, were over 20 years old, had regular revisits for medicines for more than 280 days, had no hospitalization or emergency records, and the main diagnosis of mental illness of ICD-10 as our research objects. To analyze and compare the differences between the two periods in 2020 and 2021. Analyze the instability rates for different diseases were examined by the Chisquare test. For the outbreak of the epidemic in 2021, we divided three periods (before, during, and after the level 3 alert) to compare the non-revisit rates by Chi-square test.

Results

Based on 2019 records, 7,508 eligible study subjects were screened. In 2020, there were 1577 (21%) patients who were unstable (with less than 280 days of revisit, or records of emergency or hospitalization record), and the other 5931 stable ones (79%); another 1,124 (19%) were unstable in 2021. Unstable 1577 ones in 2020, only 22% returned to steady. Among the 7,508 study subjects, three types of disorders accounted for the highest proportions: schizophrenia 41%, depression 22%, and bipolar disorder 12%. In 2021, the rate of irregular revisits for diseases was 15.2% for schizophrenia, 22.6% for depression, and 19.9% for bipolar disorder, with significant differences (p<0.01). Further analysis for 5,931 stable cases in 2020 with was observed their non-revisits rate during the three periods of the outbreak in 2021. Among the stable patients, the proportion of non-revisits rate was 0.4%, 1.9% (p<0.01), and 0.4% (p<0.01). For unstable patients, the non-revisits rate was 25.6%, 55.2% (p<0.01), and 54.9%.

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Conclusion

Affected by the severity of the COVID-19 pandemic and the epidemic prevention level policies, the possibility of irregular revisits of psychiatric outpatients has increased. Patients with different diagnoses have different rates of instability, but patients with schizophrenia seem to be relatively stable. When the epidemic situation is severe, stable patients will be slightly affected, and they will return to stable revisits when the level 3 alert is lifted. On the other hand, the non-revisit rate of unstable patients will increase significantly during the level 3 alert. Even after the third level alert was over, the situation of revisit could not be improved immediately. It is worth noting that when the unstable state of the patient occurs, the probability of returning to stability is not high, and most of them remain in an unstable state. In the future, under the development of the COVID-19 epidemic and changes in epidemic prevention policies, it is still necessary to further observe and analyze the changes in the condition and medication of psychiatric patients.

Keywords: psychiatric, outpatients, COVID-19, return visit

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OP28

Medical Treatment for Acid Attack Survivors: A Cure or a Burden?

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Abstract

Acid attack, a heinous form of violence, remains an issue in India. Acid is highly corrosive and destructive; it could cause survival victims to suffer long-term treatment. This study used a qualitative nature with interviews and documentation study to explore the challenges acid attack survivors face in obtaining medical care. Though there are directions to hospitals to provide care to acid attack survivors, they face hardships in getting adequate treatment. Most government hospitals provide free medical care, but private hospitals often charge the total cost of treatment. Another constraint is the availability of specific surgery facilities (e.g., eye and plastic surgery) that could be located thousands of miles from the survivors' residences. No scheme provides payments for treatments to other state institutions/hospitals. Thus, getting proper care in a hospital is a daunting task, particularly with treatments spanning a few months to several years involving enormous costs. Therefore, policies related to treatment for survivors must also concern their ability to access adequate health care facilities and proper compensation for sustainable living.

Keywords: acid attack, medical treatment, violence against women and girls

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OP29

Selfcare/self-development Interventional Guidebook for Refugee Adolescents: Steps Toward a Comprehensive Intervention Development

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Background

Today, the refugee challenge is one of the most complicated humanitarian issues the world is facing as approximately every 2 second, an individual is displaced coercively. Since 2015, nearly 70.8 million individuals have been forced to leave their homes because of war, lack of safety and insecurity, almost half of them is under the age of 18. Keeping these facts in mind, adolescents, in their transition from child- to adulthood, are faced with plenty of challenges to obtain and develop a wide range of skills to establish a foundation for a healthy adulthood. The combination of (specially forced) migration and adolescence increase the risk of psychological problems among refugee children and adolescents. Overall, it has been approximated that more than 90% of refugee children and adolescents that need mental health services, never receive them. Thus, the time for decreasing adolescents' psychological problems is limited and any delay in effective actions significantly increases the time span of recovery and severity of the problems. Along with the significant increase in the number of refugees all around the world, investigating effective ways to improve their health status has grown. However, there is still a substantial gap regarding the presence of effective, evidence-based educational and therapeutic interventions among this vulnerable population. On the other hand, the success of broad-based health strategies depends on having a logical and reliable foundation (such as pilot studies) and needs to be integrated with all the available capacities. In this regard, the refugees' potential should not be underestimated. According to this view, reframing the nature of the issue to enable refugee adolescents through empowering them might be an effective "master plan" in overcoming their challenges.

Objective

With the long-term goal of improving wellbeing and quality of life, this multi-method study aimed to develop a self-care and self-development intervention guidebook for refugee adolescents. The project focused on three main work packages: 1. assessment of needs and knowledge concerning self-care and self-development; 2. development of a guidebook to promote self-care and self-development for refugee adolescents; and 3. assessment of the guidebook validity. For the first work package, an intra-triangulation approach including three qualitative methods [in-depth interviews, focus group discussions and photovoice] were used. The collected data were analyzed using cross-cultural and multilingual approach to thematic analysis, known as meta-theme analysis. The results of the first stage were utilized for developing the guidebook in the second (main) work packages following the "theory of planned behavior". The guidebook fidelity was assessed based on the National Institutes of Health Behavior Change Consortium fidelity framework in the last workplan. In addition, to assess the guidebook's content validity, the Content Validity Index approach was performed.

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Results

Empowering refugee adolescents with self-care /self-development skills can help them to sustain their wellbeing and better manage the challenges in their new situation. This project led us to the study's ultimate objective as developing the first ready-to-run guidebook designed to use refugee adolescents' own potentials to improve their mental and behavioral health. Finalizing this guidebook can be a significant step forward to allow refugee adolescents to take control over their lives and gain access to broadened abilities needed in the pathway to successful adulthood.

Conclusion

The guidebook can provide an opportunity to shift from ambition to accessible health targets for all, and most valuable of all, it can have an affirmative effect on the lives of this vulnerable population. Although the study is conducted in Germany, it is designed to be adjustable and have the potential to be used in other host countries.

Keywords: Refugee adolescents, Intervention development, Self-care, Self-development

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OP30

Relationship Between Gender Roles and Maternal Characteristics With Sexual Activityin Pregnancy at Sirampog Village, Brebes District, Central Java, Indonesia

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Introduction

Indonesia still upholds customs and culture. Gender roles relate to a person's attitudes and behavior that are shaped by the social environment. The traditional model views femininity and masculinity as two contradictory differences. Meanwhile, the modern model views that a woman or a man can have both femininity and masculinity (androgynous) traits, which are hereinafter referred to as sex roles. Masculine and feminine are also said to be stereotypes, attachments to individuals / groups. Gender inequality where many roles that must be carried out by women compared to men. Women are considered as obligations and do not even have protection at work even women's productive roles are less valued than men's productive roles, this causes complications during pregnancy, childbirth and postpartum such as bleeding and prolonged labor due to anemia in pregnancy, pre-eclampsia, abortion, infection and other comorbidities. Lack of knowledge in pregnant women can cause several psychological conditions when carrying out sexual activities during pregnancy, for fear of hurting the fetus or causing abortion, besides that some women feel embarrassed if they want to invite their partners to have sexual activities while pregnant. Several factors related to sexual activity are maternal characteristics including education, parity, employment status and gestational age.

What is meant by gender roles in sexual activity during pregnancy are: the nature of women based on gender roles (feminine and masculine) especially in starting sexual activity during pregnancy and based on maternal characteristics.

Objectives

To estimate the prevalence of sexual needs during pregnancy in Sirampog village, Brebes district, Central Java, Indonesia, and identify gender roles and maternal characteristics.

Methods

The research method uses quantitative analytics with a correlational research design and a cross-sectional approach. The population was as many as 146 pregnant women and sample technique using total sampling. The instrument uses a questionnaire. Univariate analysis was carried out with frequency distribution and bivariate with Spearman Rank analysis.

Results

The results of univariate analysis: from 146 pregnant women, most of them have the nature of women based on gender roles feminim as much as 129 (88.4%), low education as many as 78 (53.4%), parity multipara 74 (50.7%), pregnant women did not work 82 (56.2%), and most of in the 2nd trimester of pregnancy, 64 (43.8%), the sexual activities were carried out 1-2x/week (82.2%). The results of the bivariate analysis: gender roles and sexual activity (p-value = 0.504), characteristics: education (p-value = 0.462), occupation (0.398) and parity (p-value = 0.958), and gestational age (p-value=0.002).

Conclusion

Based on these results, there is no relationship between gender roles and characteristics of pregnant women (education, parity, employment status) with sexual activity during pregnancy, and there is a relationship between gestational age and sexual activity during pregnancy. Suggestions for pregnant women can increase knowledge about sexual activity during pregnancy through information media such as the internet so that they can carry out healthy sexual activities. Health workers provide health services regarding the fulfillment of sexual needs for pregnant women, such as counseling or health education

Keywords: Gender roles, characteristics, sexual activity

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OP31

Dose the smokers quit smoking when the cigarette tax increased?

Li-Chuan Chang¹, Yue-Chune Lee², **Pei-Ching Chen³***

Introduction

In June 2017, the Taiwanese government raised the cigarette tax per pack of cigarettes from 11.8 NTD to 31.8 NTD, a nearly 63% increase. The raised 20 NTD cigarette tax was all used for the long-term care fund.

Objectives

The purpose of this study was to investigate whether adult smokers in the three-year period 2016-2018 were affected by the increase in cigarette tax in 2017 and quit smoking.

Results

Data were obtained from the annual national cross-sectional telephone interview survey of Taiwan Adult Smoking Behavior Surveillance System (ASBS) during the period of 2016 to 2018, and ASBS is used to monitor tobacco use and trends in adults over 15 years old. The study sample consisted of ever-smokers over the age of 18 each year, excluding those who had quit smoking more than 1 year prior to the survey. The dependent variable was quit smoking which defined as the smoker currently no smoking. The independent variable is the year, 2017 is the year of the cigarette tax increase, 2016 is the year before and 2018 is the year after the cigarette tax increase. Pooled analysis of three years data was analyzed using logistic regression to estimate quitting status after the cigarette tax increase. Analysis was weighted by the previous year population distribution. Other control variables included gender, age, marital status, education level, job, personal monthly income, household secondhand smoke exposure, and self-perceived health.

Results

The study found that the number of smokers in the three years from 2016 to 2018 has dropped obviously from 3574 to 2894. In addition, the quit rates of smokers also increase significantly from 12.1% in 2016 to 19.2% in 2017. Logistic regression after controlling for other variables, the increase in cigarette tax in 2017 resulted in a significant increase in smoking cessation among smokers compared with 2016 (OR=1.6), but a significant decrease in smoking cessation in 2018 (OR=0.8). Males (OR=0.6), those had a job (OR=0.8), and those exposed to secondhand smoke (OR=0.5) were less likely to quit smoking. Elder (OR=1.9), those were married (OR=1.8), and those with a higher (OR=2.7) or middle (OR=1.7) educational level were more likely to quit smoking.

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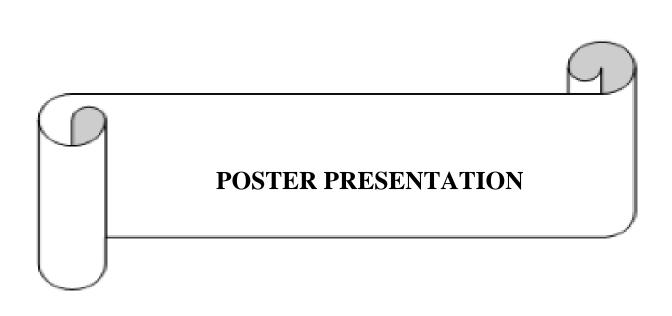
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Conclusion

It appears that the expectation of a price increase was sufficient to prompt many people to quit smoking, not only the number of smokers drop but so the quitting rate of smokers up, except for 2018. We suggest that the government should continue to promote smoking cessation and raise tobacco taxes gradually to reduce the smoking rate and the number of smokers. The content of this research may not represent the opinion of the Health Promotion Administration, Ministry of Health and Welfare.

Keywords: quit smoking, cigarette tax, smokers.

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A Systematic Review on the Effectiveness of Topical Calcineurin Inhibitors in Vitiligo

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Introduction

Vitiligo is a pigmentary skin disease that affects both sexes equally and has an estimated incidence of 1-2 percent of the world's population. It is characterized by areas of depigmented skin caused by the loss of melanocytes. Potent topical corticosteroids, narrow-band UVB irradiation, and topical psoralen with UVA light are some of the current re-pigmentation treatments (topical PUVA). The use of corticosteroids is restricted due to the risk of adverse effects such as skin atrophy. Narrow-band UVB therapy necessitates expensive equipment and highly experienced workers, whereas PUVA has been linked to cancer induction. New medicines that are both safe and effective are desperately needed. The topical calcineurin inhibitors pimecrolimus cream 1 percent (Elidel®) or tacrolimus ointment 0.1 percent and 0.03 percent (Protopic®) have recently been demonstrated to be effective in the treatment of vitiligo. Calcineurin inhibitors act on T cells and mast cells, reducing T-cell activation and cytokine production and blocking mast cell degranulation from releasing pro-inflammatory mediators. In the treatment of vitiligo, topical calcineurin inhibitors are used as a second-line drugs. However, no comprehensive assessment of all efficacy has been made. The topic has piqued the curiosity of researchers.

Objectives

This study aimed to review literature systematically on the effectiveness of topical calcineurin inhibitors in vitiligo.

Methods

A systematic search of databases that satisfied the criteria for inclusion and exclusion. PubMed was used to find relevant information. Keywords like topical calcineurin inhibitors and vitiligo were discovered by a comprehensive database search. We looked for randomized controlled studies that looked at topical calcineurin inhibitors for vitiligo and were written in English. Two separate writers reviewed the title, abstract, study quality, and data extraction, with disagreements resolved through consensus-forming conversations and, if required, referral to a third reviewer.

Results

A systematic search of databases revealed that 4 articles met the inclusion and exclusion criteria from 33 articles. The result showed that topical calcineurin inhibitors be effective for the treatment of vitiligo. (Figure 1)

33 Articles Identified by Searching the MEDLINE database through PubMed



24 Articles Excluded at the Title

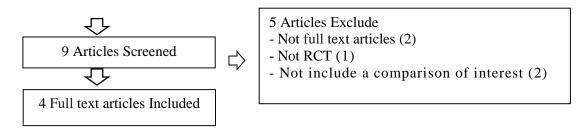


Figure 1 Flow diagram: Identification and screening of studies for systematic review.

Quality assessment results

The Cochrane Handbook for Systematic Reviews of Intervention 4.2.6 found four publications to be of good quality in terms of RCT quality. (Figs. 2 and 3).

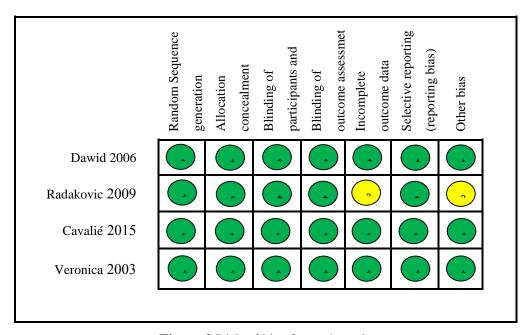


Figure 2 Risk of bias for each study

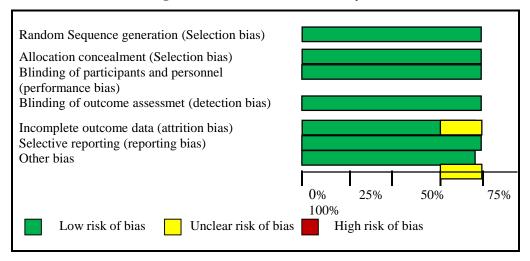


Figure 2 Risk of bias of all included studies

Conclusion

Vitiligo can be treated with topical calcineurin inhibitors as an alternative. However, randomized controlled studies are still needed to collect and analyze data for meta-analysis, as well as to establish the efficacy of topical calcineurin inhibitors.

Keywords: Calcineurin, Vitiligo, Effectiveness, Topical, Systematic Review.

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Effect of Pharmacist's Involvement in Cross-functional Team Clinical Care and Intervention on Medication Adherence and Clinical Outcomes of Outpatients with Diabetes

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Introduction

Patients with diabetes often have multiple medication use problems, which results in wasting medical resources. Hence, in clinical care provision, combining teams of different professions is often necessary for patients to receive more comprehensive care. If pharmacists were included in clinical care teams, medication use problems and medication adherence behaviors of patients with diabetes should be improved; thereby, improving the clinical outcomes and achieving better disease control.

Objective

This study aimed to investigate the effect of pharmacists' involvement in cross-functional team clinical care and intervention on the resolution of medication use problems, medication adherence, and clinical outcomes improvement in outpatients with diabetes.

Methods

This is a longitudinal study that adopted the non-equivalent control group design. From March to December 2021, a total of 70 patients with diabetes from a regional teaching hospital in Taipei City were selected as the study participants via convenience sampling. The study was conducted using a non-randomized controlled pre- and post-test design; whereby, the experimental group included pharmacists in the cross-functional team clinical care and performed 60 min of intervention, while pharmacists were not included in the care team for the control group. The study tools included the eightitem Morisky Medication Adherence Scale questionnaire and monitoring of clinical outcomes.

Results

The study results were analyzed using generalized estimating equations. After controlling the equation for the "group" and "duration," pharmacists' involvement in cross-functional team clinical care for the resolution of medication use problems in patients with diabetes was β =3.97, p<0.001; medication adherence behavior was β =1.94, p=<0.001; and clinical outcome (using low-density lipoprotein as the clinical treatment indicator) was β =-12.93, p=0.009. All of which had significant positive effects.

Conclusion

Pharmacists significantly improve the medication use problems, medication adherence behavior, and low-density lipoprotein levels in patients with diabetes through their involvement in the crossfunctional team clinical care provision. It is recommended that medical institutions should include pharmacists in the clinical care team. Additionally, the results presented were only from a short-term study. Therefore, conducting a long-term study in the future to further validate the prolonged effect is recommended.

Keywords: diabetes, pharmacist, adherence, behavior, clinical outcomes

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Health Protocol Campaign Message Model Covid-19 At Munggu Beach Bali During Pandemic

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Introduction

This protocol is intended for all parties without exception, from managers, owners, associations, employees or tour guides, guests or visitors, and community groups to the government in each region. The COVID-19 pandemic has provided us with an important opportunity to change our lifestyle habits and their surroundings, from how we consume tourism objects, and how we explore the natural resources in these tourist destinations. Sustainable tourism development is not only important to implement, but also must be planned for future tourism development (Windi & Wardani, 2020). Munggu Beach is a tourist area located in Munggu Village, Badung Regency, Bali. As an area that has been developed into a tourist village, Munggu Village has developed both in terms of facilities and tourist attractions, one of which is the construction of toilets in the Munggu Beach area for tourists who come to visit. Various infrastructure developments are carried out to support and support the development of tourism in this area. Munggu Beach is visited by many tourists on Saturdays and Sundays, so the tourism-aware group of Munggu Village needs to create an appropriate COVID-19 health protocol campaign message model in the area. Here is a picture of the situation at Munggu Beach.

Objective

Designing a COVID 19 health protocol message model campaign

Methods

The research method used in this study is a qualitative method (qualitative research). The process carried out in qualitative research includes the formulation of problem formulations and procedures, data collection is carried out based on the natural setting of the participants, inductive data analysis is built from general to specific themes, and finally the researcher makes interpretations of these data.

Results

The messages conveyed during this health protocol campaign were disseminated by highlighting the affective side or feelings felt by the community and tourists around the Munggu Beach Area, in order to achieve maximum and more optimal distribution of communication messages. The message formed can be in the form of a message that can cause a sense of alertness, anxiety, and concern for the safety and health of yourself and those closest to you, of course this form of campaign message will convey the affective feeling of the purpose of the campaign message to Munggu Beach tourists. In other words, it is hoped that tourists who enter the campaign target can understand and feel that when they ignore the existing health protocols, they not only threaten their own safety and health, but also those around them. Apart from this, of course, the media for distributing information is also an important aspect in this health protocol campaign. Campaign messages delivered through flyers are targeted to be able to reach all levels of tourists and people who currently do not have access to internet coverage, as well as social networks. This is also considered for procurement because according to Mr. Putu Suada as Chair of the Munggu Beach POKDARWIS, internet network access in the Munggu Beach area and its surroundings, often experiences internet network disturbances. Meanwhile, the use of social media

Instagram and websites is sought so that tourists from various parts of the world can easily access information about the health protocol campaign that applies to Munggu Beach before making a visit. By providing easy access to information, tourists can prepare in advance and can comply with the health protocols that have been set. Indirectly, this will reduce the risk that may be posed by tourists who do not get any information regarding the health protocols that exist on Munggu Beach. When all stages in the health protocol campaign design at Munggu Beach have been carried out, the final result is an increase in behavior change for the better related to compliance with the existing health protocols at Munggu Beach, both from local tourists and international tourists.

Conclusion

Campaign messages in an effort to change tourist behavior related to the COVID-19 health protocol at Munggu Beach during the pandemic can finally be conveyed through several supporting media/channels such as leaflets/flyers, Munggu Beach social media, and the Kijapali website (We Take Care of Bali's Beaches). In the end, it was felt that the procurement of this campaign was obligatory, considering the effect that it wanted to cause was urgent. The importance of delivering the message of the health protocol campaign is also as a precautionary measure and increasing vigilance in an effort to reduce the possibility of transmitting the virus to all tourists and managers when they are or are visiting Munggu Beach. With this research as an initial benchmark for conducting campaigns on health protocols more routinely at Munggu Beach, the POKDARWIS Pantai Munggu team is advised to be more careful and regular in the dissemination of existing health protocol campaign messages. Furthermore, the public and tourists who want to visit are also advised to be able to comply with all the rules that have been set, both from the management of the tourist attractions, as well as the local government. Finally, the central government's contribution to the health protocol campaign at tourist attractions is recommended to be further enhanced and emphasized, given the lack of direct contribution from the government regarding this matter, especially in several tourist destinations in Bali.

Keywords: Campaign; communication model; tourism; COVID-19

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Assessing The Accuracy of COVID-19 Rapid Antigen Test (RAT) Positive by Evidence-Based Medicine (EBM)

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Introduction

From May 2021, COVID-19 began to spread around the world. Taiwan has adopted strict control strategies, including land, sea and air blockades and international exchanges, but it can still not resist the spread of the epidemic. The outbreak of COVID-19 began in March 2022. The daily number of newly confirmed patients from 20,000 to 90,000 due to high infection rates and a sharp policy shift. 2022.05.26 Changed to a positive COVID-19 Rapid Antigen Test (RAT) as a confirmed case.

Objective

Due to changes in Taiwan's diagnostic policy, various imported rapid antigen tests (RATs) for COVID-19 significantly differ in precision and accuracy. Therefore, we wanted to use Evidence-Based Medicine (EBM) to assess the accuracy of positive COVID-19 rapid antigen tests (RATs).

Methods

Step 1: Ask answerable questions

P Suspected COVID-19

I Rapid Antigen Test

C Real-Time Polymerase Chain Reaction

O Diagnosis of SARS-CoV-2 or COVID-19

Step 2: Acquire the track the best evidence

- 1 Use the evidence database to search the literature for 2018 to 2022, including published and unpublished studies results.
- 2 Enter keywords: COVID-19 diagnostic accuracy and rapid antigen detection tests.
- 3 Accessss database: Summary Clinical Texts: Best Practice (24 Items)

DynaMed (2 Items)

EBM Guidelines (1 Item)

Systematic Guidelines: Guidelines in McMaster PLUS (0 Items)

Systematic Reviews: ACP Journal Club (0 Items)

McMaster PLUS (1 Item)

4 DynaMed database: 0 Items

Trip database: Systematic Reviews 21 Items PubMed database: Systematic Reviews 13 Items

5 There are two articles in full compliance with the PICO; We selected one report based on the research design, the publication age, and free full-text search availability.

Results

Step 3: Appraise Critical Evaluation

Article Title: Diagnostic Accuracy of Rapid Antigen Tests for COVID-19 Detection: A Systematic Review with Meta-analysis.

Arshadi M, et al. Front Med (Lausanne). 2022. PMID: 35463027 Free PMC article.

According to the 2011 Oxford Level of Evidence, the level of evidence for this systematic

review and meta-analysis is 1a.

Step 4: Apply to integrate assessment with patient preferences Diagnostic Accuracy of Rapid Antigen The pooled sensitivity and specificity of the RAT were 69% (95% CI: 68–70) and 99%

(95% CI: 99–99). The PLR, NLR, DOR, and AUC estimates were found to be 72

(95% CI: 44–119), 0.30 (95% CI: 0.26–0.36), 316 (95% CI: 167–590), and 97%,

respectively. The AUC estimates in this report also represented a high level of test accuracy. Deek's test result indicated no likelihood of publication bias (P > 0.05). The sensitivity of RAT was slightly higher in symptomatic (65%) than in asymptomatic patients (64%).

Step 5: Audit evaluates the effectiveness In many patients with suspected COVID-19, RAT can quickly confirm whether the diagnosis is approved and is less expensive than RT-PCR. The accuracy was 71% for CT>25 and 67% for CT>26.

Conclusion

In Taiwan, the current diagnostic criteria are confirmation of RAT positivity, expediting the diagnosis of suspected COVID-19 patients. It is faster and cheaper than using RT-PCR as the sole diagnostic criterion. However, if there are apparent symptoms of COVID-19 and the RAT is negative, further confirmation by RT-PCR is still required.

Keywords: COVID-19, Evidence-Based Medicine (EBM), rapid antigen tests (RATs), rapid antigen detection tests (RADTs), RT-PCR

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Characteristic Factors and Efficacy of Veins Image Acquisition Device : **Preliminary Study**

Karuna Chuntum¹, Nuttanicha Muangmool ², Kanlayarat Kamlangluea³, Samart Sinton⁴

Introduction

In the blood draw, the venipuncture will be strapped to the arm to allow the vein to bulge so that the puncture can see the location of the blood vessel. This method requires the experience and expertise of the piercer. Blood is drawn for young patients, the elderly, obese, dark-skinned, or patients who cannot stand still and do not cooperate. As a result, it is difficult to find blood vessels and challenging to insert a needle. So the researcher built a vein imaging device. To help draw blood more safely and quickly. The vascular imaging device uses the principle that hemoglobin absorbs near-infrared light better than other tissue cells. They used a near-infrared camera Sent to Raspberry Pi, which serves as an image processing center. To be sent to the display in real time.

Objective

To investigate the characteristic factors that correlate with the identification of vein venipuncture sites

Method

- 1. The development of a Veins Image Acquisition Device: In the procedure executed by this system, the sample's skin is exposed to the near-infrared (NIR) light transmitted from an 850 nm 12 W 24-LED array. Following this, Raspberry Pi 4 Model B, connected with NoIR Camera Board, is utilized as image acquisition equipment to capture the NIR illuminated skin area. Next, the raw data will be transferred to the computer to perform the filtering and processing technique before being displayed on the monitor.
- 2. Veins Image Acquisition Device Test: The researcher tested the device in two different sites, the arm, and forearm of 10 volunteers, for the assessment process (because the arm and forearm were used in laboratory testing and intravenous route for therapy). The subjects' demographics, such as gender, age, height, and weight for the body mass index (BMI), including skin tone, were considered as parameters. A tourniquet was not used during the experiment to maintain the non-skin contact technique. The human testing was performed per the Chaiyaphum Rajabhat University's ethical standards regarding personal data protection and a subject's confidentiality.
- **3. Image Processing:** To increase image clarity, the researcher used the ImageJ program to use the recorded images to find the Imin and Imax values and calculate the %Contrast.
- 4. Statistical analysis:
 - 4.1. Descriptive statistics. Number, percentage, mean, and standard deviation were analyzed. Of personal characteristics such as gender, age, height, and weight (To calculate the body mass index: BMI)
 - 4.2. Pearson correlation analysis was used to analyze the relationship between BMI and %Contrast of the arm and forearm.

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Results

1. After the design and construction of the vein imaging device are completed, as shown in Figure 1.



Figure 1 Veins Image Acquisition Device

- 2. Veins Image Acquisition Device Test:
 - 2.1. Personal characteristics of a sample of 10 people

Table 1 Personal characteristics

no	sex	age	height	weight	BMI	Interpret
1	Female	7	120	19	13.19	thin
2	male	11	132	31	17.79	thin
3	male	16	160	47	18.36	thin
4	Female	42	183	66	19.70	normal
5	male	42	156	80	32.87	very fat
6	Female	46	173	91	30.41	very fat
7	male	46	153	45	19.22	normal
8	male	54	157	72	29.21	fat
9	Female	65	170	59	20.42	normal
10	male	69	165	65	26.71	fat

2.2. Vein Imaging Device Test Results: pictures of veins on the arm and forearm

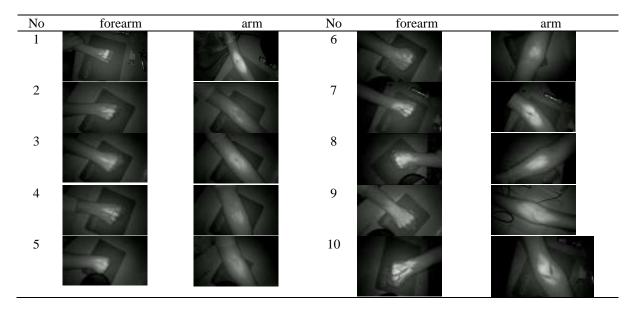


Figure 2 pictures of veins on the arm and forearm

2.3. Relationship between BMI and %Contrast

Table 2 Relationship between BMI and %Contrast

	arm	forearm
p-value	0.1052	0.3870
r	0.4337	0.1040

Conclusion

The correlation between BMI and % image contrast at the back of the hand and forearm was found to have very little correlation. The correlation coefficients were 0.104 and 0.438, respectively, and there was no significant difference at the 0.05 level.

Keywords: Venipuncture, Near-Infrared, Image Processing, Vein-visualizing Device

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Development of Veins Image Acquisition Device

Nuttanicha Muangmool¹, Karuna Chuntum², Kanlayarat Kamlangluea³, Samart Sinton

Introduction

The venipuncture tourniquet increases venous filling and makes the veins more prominent and easier to enter. However, this method requires the experience and expertise of the driller, especially for pediatric patients, elderly, obese people, dark-skinned people, or patients who cannot stand still and do not cooperate. As a result, finding veins and challenging to pierce a needle was difficult. Therefore, the organizer has created a vascular imaging device. To help the blood draw is safe and more quickly. The principle of the vein image acquisition device is based on hemoglobin absorbing near-infrared light more than surrounding tissue. The image was captured by a near-infrared (850 nm) camera, which Raspberry Pi controlled. The central image processing unit can display the image in real-time.

Objective

To develop a low-cost Vein-visualizing Device utilizing the near-infrared region (NIR)

Methodology System Design

In the procedure executed by this system, the sample's skin is exposed to the near-infrared (NIR) light transmitted from an 850 nm 12 W 24-LED array. Following this, Board Raspberry Pi 4 used for coding and processing, connected with Raspberry Pi Camera Module 2 NoIR (The details are as follows: sensor resolution 3280 x 2464 pixel, sensor image area 3.68 x 2.76 mm, Pixel size 1.12 μ m x1.12 μ m, Video mode 1080p30,720p60, and 640 x 480p60/90), it is a camera to take pictures of veins, and it is utilized as an image acquisition equipment to capture the NIR illuminated skin area. Next, the raw data will be transferred to the computer to perform the filtering and processing technique before being displayed on the monitor. (Figure 1)

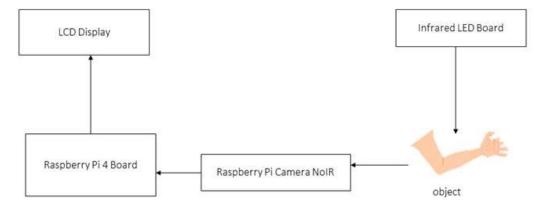


Figure 1 Schematic showing the operation of the device

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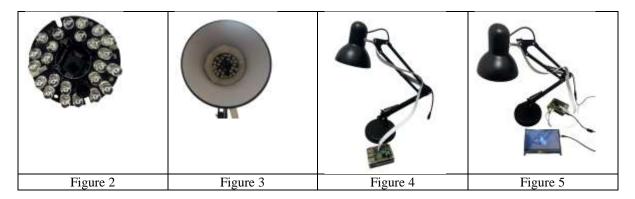
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Device design with its components

- 1) Assemble the camera and infrared. (Figure 2)
- 2) Bring the camera and the board together with the lamp. (Figure 3)
- 3) Connect the Raspberry Pi Camera Cable to Board Raspberry Pi 4 and Raspberry Pi Camera Module 2 NoIR. (Figure 4)
- 4) Connect the LCD Display to Board Raspberry Pi 4 and set the camera to take a picture of the veins and display the image on the LCD Display. (Figure 5)



The algorithm development

A study of Python programs to use in the operation of equipment and image processing. The command code is used to take pictures of veins.

How to test device features

1) Measure the area where the device can capture the closest image. (Figure 6)





Figure 6

2) Measure the area where the device can capture the furthest distance. (Figure 7)





Figure 7

3) Measuring the distance from the camera to the skin nearest and farthest. (Figure 8)





Figure 8

4) Test device features in normal light. (Figure 9)





Figure 9

5) Experiment with photographic equipment on the arm and dorsal hand. (Figure 10)





Figure 10

Result

The developed Vein-visualizing Device with the NIR and reflected light principle with low energy was efficient for real-time peripheral subcutaneous vein imaging without applying a tourniquet.

Conclusion

In addition, it might be a guiding device in locating the vein, with a meager cost compared to the commercially available vein finders.

Keywords: Venipuncture, Near-Infrared, Image Processing, Vein-visualizing Device

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Development of Natural Aerosol Sprays Against Pyrethroid-resistant Aedes Aegypti Mosquitoes, Vector of Dengue and Zika Viruses

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Introduction

The Aedes aegypti mosquito is the primary vector of dengue and Zika viruses. Although there is currently dengue vaccine with the trade *name* Dengvaxia available, it provides 65% protection to vaccinees. In addition, insecticide resistance in Ae. aegypti populations is reported across Thailand that causes ineffective prevention and control of the diseases. The present research pays attention to natural products used as insecticide which have low environmental impacts because of shorter latency.

Methods

Six study areas located in Phitsanulok, Chumphon, Chanthaburi, Kanchanaburi, Nakhon Ratchasima and Nakhon Pathom were chosen for the collection of Ae. aegypti mosquitoes in 2019 based on dengue case report between 2014 and 2018 and report of insecticide resistance in Ae. aegypti mosquitoes. The mosquito larvae were collected by droppers in 17.8-47.7% of total households per study area. The F1 female progeny derived from field-caught Ae. aegypti mosquitoes was exposed to 10 individual pyrethroid insecticides at the discriminating lethal concentration (2× LC99 for each insecticide against the susceptible Ae. aegypti laboratory mosquitoes): 0.08% Alpha-cypermethrin, 0.09% Bifenthrin, 0.674% Bioresmethrin, 0.22% Cypermethrin, 0.118% D-trans Allethrin, 0.084% Prallethrin, 0.05% Deltamethrin, 0.05% Lambda-cyhalothrin, 0.75% Permethrin, 0.076% S-bioallethrin for the insecticide susceptibility status by WHO test procedure. Mean mortality rates in the mosquitoes were analyzed and compared by one-way ANOVA and Bonferroni's multiple comparison tests. The insecticide susceptibility and resistance status of mosquitoes was determined according to the WHO criteria as follows: 1) Mortality between 98-100%: Susceptibility to insecticide, 2) Mortality between 90-97%: Presence of resistant genes in the mosquitoes must be confirmed and 3) Mortality less than 90%: Confirmation of existence of resistant genes in the mosquitoes. Four formulations of natural aerosol sprays; formulation 1 containing 1.0% Citral, 0.41% Citronellal, 0.52% Citronellol, 0.612% Geraniol, and 0.75% L-Linalool, formulation 2 containing 2.0% Citral, 0.41% Citronellal, 0.52% Citronellol, 0.612% Geraniol, and 0.75% L-Linalool, formulation 3 containing 4.0% Citral, 0.41% Citronellal, 0.52% Citronellol, 0.612% Geraniol, and 0.75% L-Linalool and formulation 4 containing 8.0% Citral, 0.41% Citronellal, 0.52% Citronellol, 0.612% Geraniol, and 0.75% L-Linalool were developed against the pyrethroid-resistant mosquitoes. The aerosol was sprayed at 1.0±0.1 g into glass chamber containing 20 unfed females. The mortality rate of mosquitoes was determined at 24 hours. For field evaluation, the natural aerosol was sprayed at 1.0±0.1 gram into the paper cups containing field-caught Ae. aegypti adults in six provinces covered with net fabric. The mortality rate of mosquitoes was determined at 24 hours.

Results

The results showed that $Ae.\ aegypti$ mosquitoes from all six provinces were resistant to 0.75% Permethrin, 0.674% Bioresmethrin, 0.118% D-trans Allethrin, 0.09% Bifenthrin, 0.084% Prallethrin, 0.05% Deltamethrin, 0.076% S-bioallethrin, 0.08% Alpha-cypermethrin, 0.22% Cypermethrin and 0.05% Lambda-cyhalothrin with mean mortality rates of $9.83\pm12.2\%$, $11.17\pm4.56\%$, $13.50\pm7.0\%$, $16.17\ \pm10.71\%$, $17.33\pm8.96\%$, $18.33\pm16.04\%$, $19.67\pm7.00\%$, $20.50\pm16.78\%$, $22.67\pm21.96\%$, $29.50\pm20.01\%$, respectively that were significantly different (p<0.05). The natural aerosol sprays of formulation 1, formulation 2, formulation 3 and formulation 4 provided the mean mortality rates of $27.50\pm6.24\%$, $75.83\pm14.48\%$, $91.67\pm8.04\%$ and $100\pm0\%$, respectively that were significantly different (p<0.05). The natural aerosol spray of formulation 4 provided a 100% mortality rate of $Ae.\ aegypti$ mosquitoes in dengue-risk areas of six provinces.

Conclusions

The developed natural aerosol spray of formulation 4 was effective against the pyrethroid-resistant Ae. aegypti mosquitoes with a 100% mortality rate in both laboratory and fields. The knowledge obtained from this study was transferred by training to the people and health care workers living in all six study areas. In addition, it will be used to develop further for more effective aerosol spray products against insecticide-resistant insect vectors in Thailand.

Keywords: Dengue, Zika, pyrethroid-resistant strains, natural aerosol sprays

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Impact of Measures on Reducing Cumulative Case Numbers of the First Wave of COVID-19 in Thailand

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Introduction

Non-pharmaceutical countermeasures (NPC) and lockdowns were adopted to combat the first wave of Coronavirus disease 2019 (COVID-19) in Thailand. The impacts and timing of when to implement such measures have been rarely demonstrated in Thailand.

Objective

We aimed to elucidate the impacts of NPC and lockdown for containing COVID-19 under various scenarios in Thailand.

Methodology

The daily information of infected patients was retrieved from the online database of the ministry between 31 January 2020 and 31 July 2020. The Autoregressive Integrated Moving Average (ARIMA) with intervention was used to analyze the effect of these public health measures. This model was built and used to forecast the daily case numbers under different scenario simulations using a dynamic method.

Results

Our study showed high adherence rates of the population to public health guidelines. The public health measure and lockdown was significant effectively reducing the daily COVID-19 infected cases by 32 cases. Based on the simulation, the sooner of enforcing the measures, the lower the cumulative COVID-19 cases.

Conclusion

The public health measure and lockdown significantly reduced the incident COVID-19 within the country. We suggest that the efforts with use of these non-pharmaceutical prevention measures still needed until effective levels of vaccination are achieved nationally.

Keywords: COVID-19, first wave, public health measures, lockdown, ARIMA

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The current situation and ideas for development of digital literacy skills among village health volunteers in Pathumthani Province

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Introduction

Village Health Volunteers (VHVs) are considered an important mechanism in driving public health works as community health managers. They are change agents with crucial roles in assisting individual, family and community in taking care of themselves. To enhance VHVs' skills to become VHVs 4.0, one of the essential qualifications is having digital literacy. However, only 14.12% of VHVs in Pathumthani used Smart VHV application. Therefore, we were interested in studying the current situation and ideas for development of digital literacy skills of the VHVs in Pathumthani Province.

Objective

To study the current situation and ideas for development of digital literacy skills among village health volunteers in Pathumthani province.

Methods

Two phases of mixed method research on the explanatory design were conducted. Phase I was a quantitative study. We sent questionnaire asking about personal data, situation of digital literacy skill and skill improvement interests in terms of usage, understanding and creation of digital technology to a sample of 410 VHVs in Pathumthani province chosen by simple random sampling technique. Data were analyzed using descriptive statistics. Phase II was a qualitative study to gain additional details about the situation and their interests. We conducted 6 focus group discussions with VHVs from 5 districts. Data were analyzed using content analysis methods. Three main issues that were discussed included usage, understanding, and creating digital technology.

Results

Phase I, 384 VHVs responded to the survey: 317 females (82.6%) and 67 males (17.4%). The largest age group was adult age 51-60 years (37.5%). Usage. Almost everyone used mobile phones or smartphones. They were likely to use social networks such as Line, Facebook and Instagram as means to contact and coordinate. Understanding. They had some understanding about how to use digital technology such as connecting to the internet, installing mobile applications, checking the reliability of health information, and saving data. Creation. They sometimes created some basic information using digital technology. Their greatest interest was to improve their digital technology usage skills.

Phase II. The average age of the group discussion participants was 53.3 years and 94.4 percent were female. Usage. Every VHV used mobile phones or smartphones to communicated with villagers, VHVs, and staff of sub-district health promoting hospital through Line application. Others mobile applications that they were required to use were VHV Online and Smart VHV. Understanding. VHVs tended to think carefully about the information they received before using or reposting it. They were able to send or delete messages, save images or video clips, and install applications. However, they needed helps in managing memory and checking the features of their smartphone. Creation. They could

create basic text messages, images, and video clips with an understanding of proper ethical consideration such as asking for permission before recording, and not disclosing patient information. The VHVs' ideas for development of their digital literacy skills were categorized into 3 issues. Usage. They wanted to learn how to use various menu commands, perform preliminary quality check and use various applications. They also requested supports for internet usage fee so they could work more efficiently. Understanding. They wanted to have more understanding about data management and security in the digital world. Creation. They expressed their interest in learning how to edit images and video clips. The also suggested that personal development on digital literacy skills should include continuous training, beginning with the leader of the VHVs who would later transfer the literacy to their team members.

Conclusion

Currently, VHVs have basic skills in usage, understanding, and creation of digital technology via smartphones. However, they still need additional trainings in all three areas to improve their digital literacy skills.

Keywords: village health volunteers, digital technology, digital literacy

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Determination of Discriminating Lethal Concentrations of 5 Insecticides in Aedes Aegypti Mosquitoes

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Introduction

Insecticides are used to control Ae. aegypti mosquitoes, vector of dengue and Zika viruses in Thailand. Determination of discriminating lethal concentrations of insecticides is important for monitoring of potential changes in susceptibility to insecticides in Ae. aegypti mosquitoes over time. Timely information can greatly help programmatic decision-making on insecticide resistance management strategies.

Objective

This research aimed to determine the discriminating lethal concentrations of 5 insecticides in Ae. aegypti mosquitoes.

Methods

The determination of discriminating lethal concentrations of 5 insecticides: fipronil is a member of phenylpyrazole, whereas bioresmethrin, d-trans allethrin, prallethrin and s-bioallethrin are members of pyrethroids were conducted in an insecticide-susceptible Ae. aegypti with over 20-year history of colonization following the standard WHO procedures. The insecticides were prepared in acetone as follows: 0.00625%, 0.0125%, 0.0188%, 0.025% and 0.05% for fipronil; 0.005%, 0.010%, 0.015%, 0.020% and 0.025% for prallethrin; 0.0125%, 0.025%, 0.05%, 0.075% and 0.1% for bioresmethrin; 0.010%, 0.015%, 0.020%, 0.025%, 0.03% and 0.035% for d-trans allethrin; 0.015%, 0.020%, 0.025%, 0.03%, 0.035% and 0.040% for s-bioallethrin. Filter papers sized 12 cm \times 15 cm were evenly impregnated with 2 ml of each concentration of insecticides and left to air dry for 2 min. The nonbloodfed, 3- to 5-day-old female mosquitoes from the plastic holding tubes (12 cm × 4 cm) lined internally with insecticide-untreated filter papers were transferred to the horizontal testing tubes lined internally with the insecticide-treated filter papers and exposed to each concentration of the insecticides for 1 h. Mosquitoes were transferred back to the holding tube vertically after 1 h of insecticide exposure for recovery, where 5% sucrose and 5% multi-vitamin solution was provided. Four replicates per concentration were performed. Acetone alone was used as negative control. The mortality rates of mosquitoes were determined at 24 h. The mortality data of between 5% and 95% were used for analysis. The 50%, and 99% lethal concentrations (LC50, and LC99) and 95% confidence limits were calculated from the baseline data using maximum likelihood estimates of parameters and log-probit regression analysis by SPSS. A doubling of the derived LC99 value was used as the final discriminating lethal concentration according to standard WHO procedures. The F1 female progeny aged 3-5 days from field populations of Ae. aegypti collected in 17.8-64.0% of total households per study area in 9 provinces between 2020 and 2021: Phitsanulok, Chumphon, Chanthaburi, Kanchanaburi, Nakhon Ratchasima, Nakhon Pathom, Lamphun, Trad and Maha Sarakham were exposed to 5 individual insecticides at the discriminating lethal concentration. Mean mortality rates in the mosquitoes were analyzed and compared by one-way ANOVA and Bonferroni's multiple comparison tests. The insecticide susceptibility and resistance status of mosquitoes was determined according to the WHO criteria as

follows: 1) Mortality between 98-100%: susceptibility to insecticide, 2) Mortality between 90-97%: presence of resistant genes in the mosquitoes must be confirmed and 3) Mortality less than 90%: confirmation of existence of resistant genes in the mosquitoes.

Result

The results showed that the discriminating lethal concentrations of fipronil, bioresmethrin, d-trans allethrin, prallethrin, s-bioallethrin were set at 0.14%, 0.674%, 0.118%, 0.084% and 0.076%, respectively. Those concentrations of fipronil, s-bioallethrin, d-trans allethrin, prallethrin and bioresmethrin gaved the mean mosquito mortality rates of 98.67 ± 1.91 , $24.56\pm19.51\%$, $18.56\pm15.00\%$, $17.67\pm12.77\%$ and $16.33\pm18.08\%$, respectively that were significantly different (p<0.05).

Conclusion

The determined discriminating lethal concentration of fipronil provided the susceptibility in field-caught Ae. aegypti mosquitoes, whereas those mosquitoes were resistant to bioresmethrin, d-trans allethrin, prallethrin, s-bioallethrin. It suggests that fipronil could be alternative to pyrethroids for the control of pyrethroid-resistant Ae. aegypti mosquitoes. However, the insecticides should be used sparingly and integrated with the safe mosquito control measures. The data on discriminating lethal concentrations of 5 insecticides and mean mosquito mortality rates were reported to District Public Health Offices and Tambon Health Promoting Hospitals in the study areas of 9 provinces for the control of pyrethroid-resistant Ae. aegypti mosquitoes.

Keywords: discriminating lethal concentrations, insecticides, Ae. aegypti mosquitoes

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Association of Ambient Air Pollution Exposure with the Prevalence of Insomnia in Taipei City of Taiwan

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Introduction

Air pollution and sleep are both important factors affecting human health, and ambient air pollution can cause central nervous system diseases and depressive symptoms. In advanced, it might lead to sleep-disordered breathing and nocturnal hypoxemia. Even, few studies have focused on the effect of air pollution on insomnia in the past, but such studies in Taiwan were limited.

Objective

In this study, we examined the associations between air pollution exposure and the prevalence of insomnia in Taipei City of Taiwan.

Methods

We conducted an observational study from January 2014 to December 2016 using a health information system of electrical medical records from Taipei City Hospital. This study collected patients from the internal medicine department of six Branch of Taipei City Hospital. Then, patients were grouped into insomniacs and non-insomniacs following the ICD codes (ICD9:780.52, 780.54, 307.41, 307.42, ICD10: G47.00, G47.01, G47.09, F51.01, F51.09) of primary insomnia diagnosis and the prescription times of anxiolytics and hypnotics during the observation period, with a total of 5108 study subjects. We collected study subjects' PM2.5, ozone, and NOx exposure data from the nearest air quality monitoring stations relative to study subjects' residential address. We estimated one-year average concentrations of PM2.5, ozone, and NOx before the first date of insomnia diagnosis and the last date of outpatient visit for insomniacs and non-insomniacs, respectively. Logistic regression analysis was analyzed to examine the effects of air pollution concentrations on insomnia risk by adjusting confounding factors. Stratified analysis was used to observe the effects of PM2.5, ozone, and NOx exposure on subgroups with and without major chronic diseases.

Result

One-year average PM2.5 levels for insomniacs was 25.5 µg/m3, whereas that for non-insomniacs was 18.67 µg/m3. After adjusting for age, gender, major chronic diseases, educational level, residence floor level, and road area within radius of 50 m, one-year average PM2.5 showed a significant risk of insomnia (the odds ratio 1.610, 95% CI [1.562,1.660]). After adjusting for age, gender, major chronic diseases, educational level, and other two air pollutants, one-year average PM2.5 (1.624, [1.570, 1.681] and one-year average ozone (1.198, [1.094, 1.311]) exposure showed a significant association with insomnia. As to subgroups with major chronic diseases show that both PM2.5 and ozone have significant risks for study subjects with chronic major diseases. The odds ratio of one-year average PM2.5 exposure for insomnia in the subgroup with major chronic disease was 1.657 (95% CI [1.599, 1.717]) and the odds ratio of one-year average ozone exposure was 1.190 (95% CI [1.084, 1.308]).

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Conclusion

This study demonstrated a significant association between PM2.5 and ozone exposure and the prevalence of hypnotic-treated insomnia by utilizing data from Taipei City Hospital from 2014 to 2016. And, the effect of PM2.5 and ozone on insomnia were significant in people with major chronic diseases. Future sleep-related health impact should be paid more attention on the potential effect by air pollution.

Keywords: air pollution, PM2.5, ozone, insomnia, hypnotic.

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Endotracheal Intubation in Patients with COVID-19 in Priest Hospital during COVID-19 Pandemic

Watchari toni

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Introduction

Coronavirus disease 2019 (COVID-19) is a new respiratory tract infection. In Thailand, it was first recognized on 12 Jan 2021. At Priest hospital first patient was identified on 17 march 2021. While most patients with COVID-19 have no or mild symptoms, severe cases develop acute respiratory failure and need endotracheal tube intubation, including patients who need general anesthesia for surgery.

Objective

We aimed to collect information of COVID-19 patients with endotracheal tube intubation included demographic patient data, techniques of intubation, complications after intubation and prevalence of COVID-19 associated infection to health care personnel performing intubation.

Methods

A retrospective study of all COVID-19 patients admitted and underwent endotracheal tube intubation in Priest Hospital between 1 January 2021 and 31 December 2021 were performed. Doctors and nurse anesthetists were intubation teams. They observed for symptoms of COVID-19 infection and they tested COVID-19 antigen test kit every week.

Results

There was a total of 752 COVID-19 patients with confirmed Sever Acute Respiratory Syndrome – Cononavirus-2 (SARS - CoV-2) infection by real time polymerase chain reaction (RT-PCR) admitted from January 1 to December 31, 2021. Of these, a total of 14 COVID-19 patients needed intubation. 13 patients were intubated due to acute respiratory failure and 1 patient was intubated for general anesthesia. All of the patients were male because they were monks. Endotracheal intubations were performed in a negative pressure isolation room or isolation room. The help care personnel used full personal protective equipment (PPE) in all cases. At minimum, the full PPE included a respirator with a rating of N95 or higher, gowns, gloves and eye protection. We performed endotracheal tube intubation with the use of video laryngoscope and endotracheal tube stylet in all cases. One case was failed to intubate under video laryngoscope, but the performer accomplished successful intubation using Macintosh laryngoscope. Six patients received hypnotic drugs and neuromuscular blocking agent for rapid sequence induction. Two patients received only sedative drugs for intubation and 6 patients did not receive any drug for intubation. After intubation, only one patient significantly showed desaturation (below 50%). Intotal, 9 help care personnel were intubation teams(4 doctors and 5 nurse anesthetists). None of them was infected with COVID-19 within 2 weeks after performing this procedure.

Conclusion

In severe cases, patients with COVID-19 infection may develop acute respiratory failure which need endotracheal tube intubation. Endotracheal tube intubation in patients with COVID-19 poses a risk of infection for the health care personnel involved in the procedure. In this study no the personnel performing intubation was infected with COVID-19. However, full personal protective equipment,

video laryngoscopy and proper medications were important components for patients and health care personnel's safety.

Key words: COVID-19, Priest, Intubation, Acute respiratory failure Author's *E-mail address:watcharitoni@gmail.com Preferred poster presentation.*

Evaluation of the Measure to Monitor the Outbreak in Buntharik District, Ubon Ratchathani Province to Control the Situation and Prevent the Spread of the Coronavirus Disease 2019

Thanong Khamsri¹, Kopkan Choopan²

Introduction

In Thailand, coronavirus disease 2019, or COVID-19, is probably going to get worse. As a result, it is the responsibility of various hospitals to provide COVID-19 patients with nursing care according to regulations meant to avoid hospital infections. The Buntharik district's coronavirus disease outbreak in 2019 presents a special set of circumstances for putting emergency response principles into action. Additionally, the Buntharik district is in charge of carrying out coronavirus 2019 control measures. It is a notion that entails cooperation across a wide range of parties, including organizations, people, and the general public, who may have varying degrees of operational preparedness. Furthermore, it was discovered that the effectiveness of the coronavirus control measures implemented in the region responsible for the Buntharik district had never been systematically evaluated. To address the question Are the operations being carried out achieving the desired goals or not? How about challenges? What rules should we follow to solve this issue? to gather empirical information that will be used to adjust policy management tactics.

Objective

To assess the effectiveness of the Buntharik District's area-specific COVID-19 control measures, operational awareness and resource support model, and performance as a result, including target group satisfaction.

Methods

Use the CIPP Model approach to achieve a continuous evaluation of all parts. Use both qualitative and quantitative research to gather information from the target group, which includes the operational team and management-level health staff, volunteers in public health, local government employees, and members of the public by using multi-stage cluster sampling and purposeful sampling. Data collection was conducted in September 2021. A total of 30 qualitative and quantitative informants were consulted to determine the sample size. Utilizing a drawing approach, three District Health Promotion Hospitals were selected utilizing area and sample randomization, multi-tiered group randomization, and eight sub-districts in the Buntharik district. Next, take into account the number of samples from Krejcie and Morgan's random tables.

Results

The findings indicated that during the initial three months, practitioners were not aware of centralized measures. The majority of them are only acknowledged at the management and responsibility levels. But over the next six months, because the Public Health Emergency Operation Center mechanism is used as a coordinating point, the team of operators at all levels is now aware of the procedures. Local government organizations also joined the network to play a significant part in fostering environmental stewardship. Upgrade the facilities, including the COVID-19 quarantine center, to improve and strengthen the operation. An average satisfaction rating with the COVID-19 control measures was

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discovered. The target population's overall level in the region in charge of Buntharik District was high (4.29 ± 0.59) , although the work team's level was moderate (3.45 ± 0.52) .

Conclusion

This resulted in the communities and individuals in the region responsible for the Buntharik District becoming completely dependent. The different performances of the Measure to Monitor the Outbreak in Buntharik District are related to the context, the leader's concern, the capacity of the team, budget, materials, attitude of the team, and social capital. Therefore, supporting the necessary resources at all levels is still needed. Moreover, the key to success should be applied for sustainability of the performance, including integration into routine work, learning to continue improving, the value of helping people, unity of the team, and effective utilization of limited resources.

Key words: Coronavirus 2019, Measures Evaluation, Measures Implementation

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Working Conditions and Work-family Conflict among Emergency Medical Technicians of Private Ambulance Companies in Taiwan

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Introduction

Emergency medical technicians (EMTs) play an essential role in the health care system, and their work conditions may affect their quality of life and even patient care. The working conditions of EMTs in private ambulance companies differ from those in public sectors, yet few studies have focused on these companies.

Objective

This study aimed to investigate the effects of the EMTs' working conditions within private ambulance emergency companies on work-family conflict in Taiwan.

Methods

A cross-sectional online questionnaire survey was conducted to collect data from the EMTs of private ambulance companies. The independent variables were working conditions, including working hours, patterns of off-/on-duty and overtime periods, salary, economic pressure, and the use of part-time jobs. The primary dependent variable was work-family conflict, which was assessed with the Work–Family Conflict Scale.

Results

There were 113 EMTs enrolled in this study (average age of 33.46 years, 84.07% male, and 35.4% married). Around 18 percent of EMTs reported that their educational levels were junior college, and 40% were college and above. The practice area of the samples in the north, central and southern regions were 56.63%, 18.58% and 15.92%, respectively. Multiple linear regression analysis found that the working hours and overtime of EMTs in private ambulance companies were significantly associated with work-family conflict scores. Specifically, the EMTs working under a 24-hour shift system had a significantly higher score of work-family conflict than those under an 8-hour shift system (β =2.79, p=0.007). In addition, the EMTs who worked overtime also had higher work-family conflict scores than those who did not work overtime (β =2.07, p=0.03).

Conclusion

This study suggests that working hours and overtime were likely to affect work-family conflict. Government should implement the labor standards act and strengthen labor inspection to improve the working conditions and manage the working hours among EMTs in private ambulance companies, that in turn could balance their work and family time.

Keywords: emergency medical technicians (EMTs), private ambulance company, working conditions, work-family conflict

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The Effect of Temperament and Early Life Environment on the Health Trajectory of Children

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Introduction

Both nature and nurture play a critical role in child health. Yet the long-term effects on child health trajectory remain unclear.

Objective

This study aimed to examine the relation of temperament and early life environment to the health trajectory of children from birth to school age.

Methods

Data from the Taiwan Birth Cohort Study, a nationally representative sample of 24,200 children who were born in 2005 was used in this study. Six waves of surveys were conducted at 6 months, 18 months, 3 years, 5.5 years, 8 years, and 12 years of age. The independent variables were child temperament, early poverty, and parenting. Child temperament was measured by a short-form questionnaire at 5 years of age, and categorized into three groups: easy, difficult, and intermediate. Early poverty was defined as a child who lived in a family with a monthly income of less than US\$1,000 before the age of 3 years. Parenting was measured using the Home Environment Index in the 3-year survey. The study's primary outcome was child health status as measured by the mother's report of the child's overall health from birth to 12 years of age. Group-based trajectory modeling (GBTM) was used to identify the different growth curves for the children's health trajectories. Descriptive statistics and multinomial logistic regression were conducted to estimate the relationship between temperament, early life environment, and children's health trajectories.

Results

Of the 17,342 children, 48.8% were in the stable low health trajectory group, 16.1% in the upward health trajectory group, 22.3% in the downward health trajectory group, and 12.8% in the stable high health trajectory group. Our findings indicated that both temperament and early life environment were predictors of children's health trajectories. For instance, children with difficult (odds ratio (OR): 3.55, 95% confidence interval (CI): 2.89-4.37) and intermediate temperaments (OR: 1.76, 95% CI: 1.59-1.94) had significantly higher risks for a stable low health trajectory from birth to school age than those with an easy temperament. Regarding the effect of early life environment, early child poverty was significantly associated with a stable low health trajectory (OR: 1.3, 95% CI: 1.14-1.49). Notably, exposure to good parenting was associated with higher odds of a stable high health trajectory.

Conclusion

The results support the importance of child temperamental traits and early life environment for later health trajectory in the Taiwan context. Future research should be conducted to clarify how different temperaments and family poverty in different life stages interact to influence the later health development of children.

Keywords: temperament, early life environment, health trajectory of children, birth cohort

The Association between Adverse Childhood Experiences and Antenatal Depression in Taiwan

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Introduction

Adverse childhood experiences (ACEs) are traumatic events that occur before 18 years old. These events may increase the health risks in adulthood and cause a variety of physical and mental disorders. ACEs are correlated with antenatal depression, and antenatal depression affects not only the mother herself, but even the physical and mental health of the fetus in the future. Yet, only a few studies have examined the association of ACEs with antenatal depression in Taiwan.

Objectives

The aim of this study is to examine the association between ACEs and antenatal depression in Taiwan.

Methods

An online survey was conducted using the World Health Organization Adverse Childhood Experiences International Questionnaire (ACE-IQ) and the Taiwanese Pregnant Women Adjustment Scale (TPWAS). Participants were asked to recall and self-report their childhood experiences (<18 years of age) together with their mental health status during pregnancy. ACEs were divided into 9 categories: emotional abuse, physical abuse, sexual abuse, household member treated violently, alcohol abuser in the household, householder with mental illness, parental separation or divorce, physical neglect, and bullying. Statistical analysis was conducted using linear regression with the depression score (measured using TPWAS) as the main outcome measure.

Results

A total of 456 women aged \geq 20 years with experience of childbirth responded. More than 85% had experienced at least one type of ACEs (57.5% 1–3 ACEs, 21.7% 4–6 ACEs, and 6.6% 7+ ACEs). Our findings indicate that women experiencing ACEs in childhood had a higher antenatal depression score (b = 5.21, p = 0.005) than those who never experienced ACEs. We also found that those who reported emotional abuse had the highest score for depression during pregnancy, followed by a household member treated violently, sexual abuse, and an alcohol abuser in the household. Moreover, women with more ACEs were more likely to suffer from perinatal depression. Relative to women with 0 ACEs, those with 7+ ACEs (b = 12.90, p < 0.001), 4–6 ACEs (b = 10.58, p < 0.001) and 1–3 ACEs (b = 2.28, p = 0.216) had higher scores for antenatal depression.

Conclusions

The findings of this study suggest that ACEs have a pervasive impact on mental health status during pregnancy. Therefore, early intervention to reduce ACEs, such as parenting support, economic and social services, or performing a developmental screening in early care and education, should be achieved to prevent women developing antenatal depression, which will in turn improve the health and well-being of people throughout the life course.

Key word: adverse childhood experiences, antenatal depression, physical and mental health

Knowledge and Risk of Osteoporosis among Working Women Living in Klang Valley, Malaysia

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Introduction

Osteoporosis is a skeletal disorder that affects millions of people everyyear by causing reduced bone density and micro-architectural deterioration to the bone tissue. Women have an high risk of developing osteoporosis with a ratio of 4 to1 compared to men. Well-developed knowledge and risk assessment were important in reducing the risk of developing osteoporosis through osteoprotective behaviour. Objectives: The objective of the study was to find out the knowledge and risk of osteoporosis among working women living in Klang valley. The study also explored the association between the sociodemographic background of the participants with their knowledge and risk of osteoporosis and association between knowledge and risk of osteoporosis.

Methods

A cross-sectional study was conducted among working women of University Tunku Abdul Rahman, Sungai Long campus who are living in Klang Valley via an online self-administrated questionnaire. A total of 158 respondents participated in this study. Validated Malaysian Osteoporosis Knowledge Tools (MKOT) were used to assess the knowledge on osteoporosis and Osteoporosis Self-Assessment Test for Asians (OSTA) tool was used for risk assessment. The Statistical Package for Social Science (SPSS) version 22 was used to analyse the data.

Results

The findings indicated that there was a moderate level of knowledge among the participants with overall knowledge scores of (Mean= 58.23, SD=17.86). The level of risk of osteoporosis among the participants was low risk with the OSTA score of (M=4.59, SD=3.131). There was a significant association between knowledge of osteoporosis and income level and occupation of the participants (p<0.05): higher income level, healthcare-related occupation, and academic staff are higher knowledge of osteoporosis. The risk of osteoporosis varied significantly with age of the participants (p<0.05) and there was a negative low correlation between knowledge and risk of osteoporosis among the study population (r = -0.229, p = 0.007).

Conclusion

In conclusion, the study participants possess a moderate level of overall knowledge of osteoporosis and a low risk for developing osteoporosis. It was recommended that health promotion programme with more focused delivery of knowledge to women may reduce the osteoporosis in women which has moderate knowledge Despite that, the understanding of osteoporosis was moderate, and community-based health promotion programmes emphasised on knowledge and risk of osteoporosis should be implemented wisely to increase the knowledge of osteoporosis among Malaysian women.

Keywords: Knowledge, Risk, Osteoporosis, Working women, Malaysia

Relationship between Work Burnout, Personality, and Intention to Stay among Home Care Aides in a Rural City

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Introduction

Home care aides are important for the delivery of long-term care services, but the supply of these workers is insufficient in Taiwan. Determining influencing factors on home-service workers' intention to stay may help stabilize this workforce and improve its service quality.

Objective

This study explores the relationships between social demographics, work burnout, personality, and intention to stay among home care aides.

Methods

The study was cross-sectional and used purposive sampling, interviewing 285 home care aides in Hualien County. A self-report questionnaire collected information on demographics, occupational burnout, personality, and intention to stay. All assessments showed the great reliability and consistency (all Cronbach's α values were between 0.8–0.9).

Results

The subscales for personal burnout, work-related burnout, and client-related burnout, along with all personality scales, were highly correlated with intention to stay, except for the openness trait (p < 0.05). Moreover, married, full-time employment, satisfied with the promotion system and current job as home care aides on the whole, lower levels of work-related burnout, and agreeable personality type were predictors (p < 0.05) of intention to stay.

Conclusions

The results suggest that home care agencies could improve work burnout. Additionally, personality screenings before hiring may also enable intention to stay. These results can be used as a reference for the future study of home care and in improving intention to stay for home care aides.

Keywords: home care aides, work burnout, personality, intention to stay

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Atherogenic Index of Plasma: A Tool for Assessing Subclinical Atherosclerosis in Centrally Obese Perimenopausal/Menopausal Women

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Introduction

Perimenopause/menopausal status are hormonal changes that have been linked to significant metabolic abnormalities, including changes in lipid parameter levels. Perimenopausal status age > 40 years and menopausal status those with no menstrual periods within the previous 12 months. Triglyceride (TG) levels may rise with menopause and highly correlated with increasing abdominal fat content and insulin resistance. Perimenopause/menopause are associated with an increased risk of obesity and a shift to an abdominal fat distribution, both of which are associated with an increase in health risk. The atherogenic index of plasma (AIP) is calculated as the log of [TG/High-density lipoprotein cholesterol (HDL-C)]. This mathematical relationship between TG and HDL-C has been used successfully as an additional index when assessing cardiovascular risk factors.

Objective

To assess AIP of centrally obesity perimenopausal/menopausal women for predicting atherosclerosis.

Methods

This is a cross-sectional study involving 114 perimenopausal/menopausal women aged 40 to 80 years who were recruited from cardiovascular clinics and menopause clinics and underwent carotid intima media thickness (CIMT) measurements at Suranaree University of Technology Hospital. Carotid artery scans were performed using a high resolution B-mode scanner, and CIMT greater than 0.9 mm is considered an indicator of early atherosclerosis. History taking included a personal and family history of chronic disorders and medication intake. Anthropometric measurements included height, weight, waist circumference (WC), and hip circumference (HC), with central obesity defined as a waist/hip ratio (WHR) greater than 0.85. The AIP risk used to assess cardiovascular risk is classified as low; AIP < 0.1, intermediate; AIP 0.1-0.24 and high; AIP > 0.24. AIP was calculated using log [Triglyceride (TG)/High-density lipoprotein cholesterol (HDL-C)]. After AIP was calculated to identify cardiovascular risk in centrally obese compared to non- centrally obese perimenopausal/menopausal women.

Results

A total of 114 perimenopausal/menopausal women were recruited. Perimenopausal/menopausal women who were centrally obese had an average age of 55.14 + 10.87 years, while non-centrally obese women had an average age of 49.90 + 7.57 years. WHR was used as an indicator of central obesity, and there was no statistically significant difference in lipid profile parameters between the two groups. The mean AIP in centrally obese women was 0.34, which was statistically significant higher than in non-centrally obese perimenopausal/menopausal women (p = 0.03) and had a significant correlation with atherosclerosis CIMT > 0.9 mm (p = 0.04), but no statistically significant difference was observed between centrally obese and non-centrally obese participants. The risk of AIP in centrally obese

compared to non- centrally obese perimenopausal/menopausal women were 18.03% vs 22.91%, 16.39% vs 35.41% and 65.57% vs 41.66 %, respectively. There was no difference in the lipid profile parameters between the two groups.

Conclusion

AIP can significantly add value when assessing the risk of developing atherosclerosis in centrally obese perimenopausal/menopausal women. Despite no difference in lipid profile, centrally obese perimenopausal/menopausal women may be at higher risk of subclinical atherosclerosis marker than non-centrally obese women. AIP, which is easily calculated from a standard lipid profile, can serve as an adjunct that significantly improves predictive value over individual lipids in centrally obese perimenopausal/menopausal women. AIP is a significant predictor of atherosclerosis.

Keywords: Atherogenic index of plasma, Subclinical atherosclerosis, Centrally obese, Perimenopausal women, Menopausal women

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Behavioral Risk of Alcoholic Consumption and Emotional Quotient in Medical Students

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Introduction

A study conducted in Thai medical schools found that medical students classified as having knowledge of the effects of alcohol use. However, it was discovered that the alcohol consumption of medical students in each region ranged from 6.4 to 26.6%. There are numerous factors that influence the consumption of alcoholic beverages, especially the stress of studying, particularly during the first three years of medical school. Emotional intelligence (EQ) is the role of social and emotional learning that integrates competence promotion for reducing risk factors and assists in fostering protective mechanisms for positive adjustment and has been shown to be a relevant construct during adolescence.

Objective

To study the relationship between risk factors for alcohol use and EQ of medical students and the factors influencing medical students' alcohol consumption.

Methods

A cross-sectional study at Suranaree University of Technology in 2021. Preclinical and clinical medical students were recruited to investigate correlation between emotional intelligence and alcohol consumption behavior. Questionnaires for demographic data, the Alcohol Use Disorder Identification Test (AUDIT), and EQ as a positive component (self-control, empathy, responsibility), smart motivation, making decisions and solving problems, relationship and happy life self-esteem, satisfaction with life, peace of mind). The statistical analysis was performed using percent, mean + SD. The independent t - test and chi-square test were used to test the factors associated with alcohol consumption.

Results

In a self-administered survey of 278 medical students, 91% completed the questionnaires. A 57.19% of participants were female. The average age was 21.2 years old; 74.46% had consumed alcohol; start drinking at 15-18 years old (55.07%), and less than 15 years old (12.08%). Factors influencing medical student's alcoholic consumption include social drinking with friends (44.29 %), curiosity (40%) and family drinking (13.81%). They continue to drink alcohol for social reasons (44.26%), curiosity (29.13%), and stress (8%) and frequency <1 per month (80. 29%). Factors influencing medical student's alcoholic consumption include negative effects on physical health (35.68%), cost (22.82%) and a negative social impact (16. 18%). During the COVID-19 pandemic era, there was no effect on drinking (34.55%) and significantly reduced alcohol consumption (25.09%). AUDIT scale 8 (97.84%), 8-15 (2.16%), >15 (0%), and EQ test in normal range (98%). Relationship between alcoholic consumption

and EQ domain such as good part; empathetic (p<0.05*) and happy life; satisfied with life (p=0.047*). The most common reason for alcohol consumption was social engagement, and the most common reason for not drinking was knowledge of the harmful health effects, which was not different from the normal situation. Half of medical students who participated in a 100% online study showed no effect on alcohol drinking behavior and one-third significantly decreased drinking during the Covid-19 pandemic era.

Conclusion

Most medical students have previously consumed alcohol, but there is a low risk of alcoholic addiction. Normal EQ in medical students, such as empathy and satisfaction with life, may have a protective effect in a health crisis. In medical students, EQ plays an important role in preventing alcoholic addiction. Policy recommendations to identifying and targeting training in lower scores of emotional intelligence components may be effective in preventing alcohol consumption in medical students.

Keywords: Alcohol consumption, AUDIT, Emotional Quotient, Behavioral risk

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Social Disparity of Delay or Avoidance of Medical Care Because of the COVID-19 Pandemic in Taiwan

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Introduction

The COVID-19 pandemic brought unexpected changes our daily life since 2019. The change included the disruptions in access to medical care such as outpatient visits, inpatient admission, and emergency medical care, and reduction of medical care utilization.

Objective

The objective of this study was to investigate the association of socioeconomic status of families and delay or avoidance medical care during the COVID-19 pandemic.

Methods

Data came from the Taiwan Birth Cohort Pilot Study (TBCS-P) which was designed to prepare for a large-scale longitudinal survey on a sample of the 2005 birth cohort in Taiwan. The study consisted of 1,395 children at 17 years of age who comprised a nationally representative sample of 2048 live births using two-stage stratified random sampling from the National Birth Report database in November and December 2003. Children's mothers or primary caregivers completed surveys between 6 months and 17 years of age, with a response rate of 78.2%. The dependent variable was whether they delayed or avoided medical care in clinics or hospitals during the COVID-19 pandemic, and the independent variable were socioeconomic status (SES) including family income, parents' educational attainments, and residential area. Multiple logistical regression was applied to explore the association of SES and delay or avoidance health care, controlling covariates such as children's sex, perceived health status.

Results

In general, a total of 23.0% of the children whose families have delayed or avoided medical care during the pandemic because of concerns about COVID-19. Furthermore, a total of 81.6% of participants whose families have delayed or avoided voluntarily medical care by themselves, and 12.5% of children whose families have delayed or avoided medical care from medical institutions. After controlling for children's sex, maternal nationality, and perceived health status, children's mothers with higher educational attainments (less than nine years, OR=0.4; 10-less than 12 years, OR=0.7), or lived urban areas (OR=1.9) were significantly associated with higher likelihood of delay or avoid medical care. In addition, the SES was not significantly associated with voluntary delay or avoidance medical care by themselves. However, children with good health status was significantly associated with higher likelihood of voluntary delay or avoidance medical care by themselves.

Conclusion

Our study found that socioeconomic status affects families' delay or avoidance of medical care because of the COVID-19 pandemic. We also reconfirmed that families with higher SES have more knowledge, money, power, and social network to avoid risks (ex. COVID-19) or take advantages. Providing accessible medical care such as telehealth or in-home health care could be an important strategy to tackle disparities of delay or avoid medical care across different socioeconomic groups.

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Keywords: child, COVID-19, medical care, disparities

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Aspects of Family Planning in Croatia and Its Significance for Demographic Processes

Asisstant Professor Monita Komusanac, PhD.

Summary: Modern family planning in Croatia includes thinking, deciding and taking measures in the reproductive age that seek to regulate the number and schedule of births and so far is exclusively educational and preventive issue. As such, the activity covers several subject areas such as preconception counseling, contraception, infertility treatment, sexually transmitted diseases, women's and mothers' health, unwanted pregnancies, abortions, etc. Institutional forms that deal with this issue try to influence harmonization of individual, partner (family) desires and values, economic opportunities, social life, work environment, etc. These are the basic components that influence family size decisions amoung young people and the direct impact of such decisions (without encroaching on personal rights or challenging the role of the state that can act affirmatively or negatively) is the long-term formation of trends in the natural movement of a population, especially in the area of births and fertility.

According to the UN, of the 1.9 billion women of childbearing age (15-49 years) worldwide in 2019, about 1.1 billion are in need of family planning, of which 842 million use various methods of contraception and 270 million have unmet need for contraception. According to the first results of the 2021 Census in Croatia, there are about 1.7 million women over the age of 15 in Croatia, of which about 807,000 are in reproductive age (15 to 49). It is indicative that currently in the field of women's health care in Croatia a total of 845 specialists and specialists in the field of gynecology and obstetrics are employed in 306 institutions. In other words, an average of 955 women of childbearing age have one specialist doctor which is a devastating figure on the availability of health care for the female population. In Croatia, in 2020, about 457,000 women used women's health services and in the same year over 1.7 million contacts were made (visits, examinations and consultations) (Croatian Health Statistics Yearbook, 2022). It is also significant that out of the total number of registered consultations (about 782,000), only about 11% are related to contraception, sterility and / or conception. Almost 44% of the total number of counseling sessions in the field of family planning were provided by beneficiaries between the ages of 20 and 29 and almost 77% between the ages of 20 and 39 (Croatian Health Statistics Yearbook, 2022). The number of abortions is also one of the indicators of the level of health care for women. Despite the continuous decrease in the number of abortions (both spontaneous and legally induced) in Croatia from, for example, 20,000 in 1995 to about 7,400 in 2020, the number of abortions at personal request (legal medically induced abortions) has increased to about 2,600 (almost 35%). More important is the fact that among women who reported abortions in 2020 almost 36% did not have live-born children and most were between 30 and 39 years old. The aim of this presentation is to analyze the level of widespread family planning process in Croatia based on spatial processing of data and publications in the field of women's reproductive health care, which, in addition to health, also have an advisory character. Based on presented data the level of access to women's health care is unsatisfactory and the use of counseling services in the field of family planning in Croatia is very low. Therefore, it is necessary to increase the availability of these services, considering that family planning is one of the

necessary aspects of defining the national population policy. With the increase in the number of counseling institutional forms in the field of family planning the possible positive effects on demographic processes in Croatia are expected.

Key words: family planning, Croatia, women health care, demography.

Effectiveness of Health Education Intervention on Diabetes Mellitus among the Teachers Working in Public Sector Schools of Pakistan

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Introduction

Diabetes Mellitus (DM) is considered as one of the major public health problems globally. Health education strategies can help in managing blood glucose level and complications among DM patients. Health education intervention is effective to manage and control the blood glucose levels among diabetic patients. This study explored the effectiveness of health education intervention on DM among school teachers in public sector schools of Pakistan.

Methods

This was quasi-experimental study where baseline & end line assessments were conducted on teachers of public sector schools of Sindh province, Pakistan, from October to December 2019. Pretested structured questionnaire was used in this study. Participants (n=136). were randomly selected from the list of government schools registered with district education department An intervention comprised of health education sessions with DM patients was undertaken after conducting baseline assessment followed by end line assessment. The institutional review board of Health Services Academy Pakistan ethically approved this study.

Results

All the respondents completed post-test with mean \pm SD age of participants being 39.2 ± 1.34 years. Female teachers comprised 65% out of which 70% were living in rural areas. Knowledge on DM pretest score was 20.03 ± 3.31 that increased in post-test to 49.11 ± 2.21 (p < 0.05). Mean score of information on symptoms and causes of DM was 1.98 ± 0.21 for pre-test whereas for post-test it was 4.78 ± 0.12 (p < 0.05). The effect of intervention was significant on diabetes related complications (p < 0.05), symptoms (p < 0.05), overall score (p < 0.05) and preventive practices (p < 0.05).

Conclusions

The study provides evidence of the importance and effectiveness of health education intervention related to diabetes among school teachers, which has a positive impact on the knowledge and practices. We concluded that the health education session sensitized the teachers and they can bring cogent changes to enhance their knowledge about diabetes and its risks.

Key words: Health education, Diabetes, Government schools, Prevention, teachers, Communicable diseases.

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COVID-19 Pandemic: How It Affects Women's Fertility and Cross-Border Reproductive Care

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Introduction

International commercial sperm banks and cross-border reproductive care have become products of technology and consumer society in the context of modernity. Their role and function in different societies is the main focus of my doctoral dissertation, especially their potential social impact on Asian cultural contexts, given the differences in regulations, culture, and evaluation in different countries. One of the key findings is that they have become a social and political solution for single women and lesbians to overcome fertility dilemmas and build families. However, with the spread of COVID-19 and changes in border policies, this phased solution to social infertility seems to be under scrutiny again.

Objective

The purpose of this short experience-based paper is to compare and discuss the state of cross-border reproductive care before and after the outbreak, and to point out the possible impact of the COVID-19 pandemic on women who rely on cross-border treatment.

Method

The analysis begins with an introduction that briefly presents some of the findings from my doctoral dissertation. It then critically reflects on the overall phenomenon during the COVID-19 pandemic, based on research and interviews from 2020 to 2022. The main methods and materials of this study are as follows. First, a text analysis method was used to analyze the social meanings of border policy texts of various countries. Second, Facebook community members associated with sperm banking and cross-border reproductive care were interviewed while observing the variability of medical mobility due to the COVID-19 pandemic as a complete observer.

Result

Although cross-border reproductive care has emerged as a social and political strategy for single women and lesbians to overcome their reproductive dilemmas and build families, this route of solving problems has changed since the COVID-19 pandemic. Border restrictions limit people's interactions, which means they are less likely to seek reproductive resources outwardly. As can be seen, the law has a far greater impact on the use of donor sperm and cross-border reproductive care than capital and wealth. This suggests that countries that do not yet broadly allow access to donor sperm and assisted reproductive technologies for diverse subjects need to address the most basic issues of legal revision to protect the fundamental rights of diverse subjects and demand reproductive justice.

Conclusion

I believe that the commercial sperm donor market and cross-border reproductive treatment are temporary alternatives, but still incomplete. There is still a need to go back to the starting point and reflect on the specific social conditions, regulations and cultures in different national contexts and, in particular, on the factors that contribute to social infertility and the scarcity of reproductive resources. In the face of the COVID-19 pandemic, some fundamental and important questions reappear before our eyes, testing individuals and the public with regard to making judgments and decisions in unknown situations, as well as dealing with new realities.

Keywords: border, COVID-19, dilemma, fertility, reproductive care

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Effectiveness of Telemedicine in Type 2 Diabetes Mellitus, Bueng Kan Hospital

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Introduction

Diabetes Mellitus, one of the non-communicable diseases that is the major cause of premature death. During the pandemic of COVID-19, It difficult to control Diabetes. Telemedicine is a new normal service that Bueng Kan Hospital has used during the pandemic.

Objective

This study aims to study the effectiveness of telemedicine in type 2 diabetes patients. The safety and illness cost evaluation are the secondary objectives.

Methods

This retrospective study was designed in the interrupted time series. The study was performed in two periods. In the first period, pre-telemedicine was between March and September 2021. The later period, telemedicine was between October 2021 and June 2022. The intervention of this study is telemedicine. This study was performed among type 2 diabetes patients that received telemedicine service in Bueng Kan Hospital, Thailand. The total population is 973 patients that were excluded from chronic kidney disease stage 5. Simple random was performed. The results were analyzed by percentage, mean, standard deviation, median, and interquartile range. The effectiveness of telemedicine in HbA1C decline was analyzed by segmented regression analysis. The safety of telemedicine was evaluated by hypoglycemic and hyperglycemic coma, analyzed by Exact McNemar significance probability. The cost of illness reduction was evaluated by Wilcoxon Signed-Rank test.

Results

A total of 217 patients were enrolled in this study. The findings showed that: (1) HbA1C decreased from baseline from 12.89% to 2.63% (95% CI: 0.05 to 5.21) statistical significantly (p-value<0.05); (2) no difference in acute complications after telemedicine; and (3) the cost of illness decreased by 490.28 baht after telemedicine statistical significantly (p-value < 0.001).

Conclusion

This study's results can conclude that telemedicine in type 2 Diabetes Mellitus patients is efficient, safe, and can reduce the cost of illness.

Keywords: Diabetes Mellitus, Telemedicine, Effectiveness, Safety, Cost

The Prevalence of Asbestos-related Diseases among Thai Ancient Goldsmith Workers in Srisatchanalai, Sukhothai Province

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Introduction

Sukhothai ancient goldsmith is one of the famous authentic ornaments. However, there are many hazards that goldsmith workers face such as chemical hazards such as metal fumes, silica and ergonomic hazards. Moreover, The Office of Disease Prevention and Control, Region 2 has examined the environment in the ancient goldsmiths and confirmed that the environment air example contains asbestos particles. One of the hazards rarely known in the Thai goldsmith industry is asbestos from a locally-made fireproof sheet in Srisatchanalai, Sukhothai province of Thailand. Asbestos results in severe and mostly irreversible diseases with poor prognosis such as asbestosis and mesothelioma, the cancer of the mesothelium of the lung.

Objective

To study the prevalence of asbestos-related diseases diagnosed using The ILO International Classification of Radiographs of Pneumoconioses film among Thai ancient goldsmith workers in Srisatchanalai, Sukhothai province under the Social Security Scheme.

Method

In retrospective cross-sectional studies, 57 goldsmith workers under the Social Security Scheme were interviewed and had chest radiographs taken. Asbestosis-related diseases were defined as International Labour Organisation Classification radiological profusion of 1/0 or greater with a history of asbestos exposure. All chest radiograph results were reported by NIOSH B Reader.

Result

Radiological findings of the 57 participants showed abnormal films compatible with asbestos-related diseases in 8.77% (5 cases), mean length of exposure equals 17.23 years (range from 1 to 33 years). The history of frequent usage of PPE is about 61.43 percent. We also found that the History of frequent usage and length of exposure are associated with abnormal chest film. (p-value <0.05)

Conclusion

Other than famous industry caused asbestosis such as insulate or vinyl floor tiles industry, some SMEs have silent killer physical hazards that have to manage and control. According to Occupational Medicine and Environmental Medicine Control Act recently launched in 2019. This study is the first Asbestosis Investigation in Thailand since the law was officially launched.

Keywords: Asbestosis, Goldsmith workers, Occupational Lung disease

Relationship between eHealth Literacy and Knowledge of Cervical Cancer in Undergraduate Students

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Introduction

Cervical cancer is the second most deadly cancer in women, it killed seven women a day. Cervical cancer is caused by HPV, human papilloma virus, infection. Even though this cancer seems hazardous disease but it is a preventable sexually transmitted disease by vaccination and condom. The dangerous of this type of cancer is it had no symptoms until the disease ran into the last stage that can not be cure. Normally cervical cancer was mostly found in women aged more than 50 years but it is found in younger women so far. In accordance with the increasing rate of sexual transmitted diseases (STDs) in teenagers ages between 15-24 years from 80 to 127 per 100,000 people. Moreover, the first sexual intercourse of Thai teenagers is 13-15 years. Undergraduate students are the interesting group of this research according to the data of the incidence of this type of cancer. In addition of overwhelming information in online searching that have fake news blend within, so how to know which data could be trust. Health information always has benefits if it is coming from the trusted sources like Ministry of public health or hospitals. Therefore, eHealth literacy is crucial skill for online searching information. Teenagers spend a lot of time social media with or without literacy so this study could be find out the relationship between eHealth literacy and knowledge about cervical cancer.

Objectives

To study relationship between eHealth literacy and knowledge of cervical cancer in undergraduate students

Method

The eHealth literacy of cervical cancer questionnaires was collected from Srinakharinwirot undergraduate students via online platform. Mainly sample group was focused on year 1to year 4 students in college of social communication innovation. The data were analyzed by descriptive statistics and the research was approved by the University's Ethical Committee since

Results

Samples were totally 318 students that replied questionnaires, there were mostly girls (77%) studied in year three (35%). No one in their family has cancer history and they have heard knowledge about cervical cancer from posters or pamphlets (42%) more than television or online media like Google, Face book or Twitter. Application Line was the first rank more than Instagram and You Tube that they spent time for 8 hours every day. Relaxing was the main purposed for using social media, like watching video clips, listening to music or plying game. The eHealth literacy score was 3.93 from 5 but they didn't trust health information from the internet. Mostly of students answered "not sure" or "don't know" about the knowledge of cervical cancer.

Conclusion

Undergraduate students have good level of eHealth literacy but cervical cancer might not in their interested health topics or media about cervical cancer would not have a lot in social media. In Thai society, STDs are not disclosed and shy to consult medical staffs. Undergraduate students should have more knowledge about cervical cancer for preventing silent disease. Therefore health promotion agency need to produce interesting online media that giving knowledge and stimulating them to have vaccine before sexual intercourse.

Keywords: relationship, eHealth literacy, knowledge, cervical cancer, undergraduate students.

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Factors Associated with Bereavement Among the Elderly in Bangkok, Thailand.

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Introduction

The elderly in a major metropolis caused several issues. Their grief at the loss of a loved one will only get worse. However, a few studies examined this aged group. According to certain studies, the elderly will experience more difficult life circumstances or commit suicide if their ability to cope with mourning is not improved. This study aimed to explore the bereavement and factors associated with bereavement among the elderly in the selected communities in Bangkok.

Methods

A cross-sectional study was conducted in the Eastern zone of Bangkok. Because of vulnerable issues and vulnerable target groups, a purposive technique was employed to select study participants. One hundred bereaved elderly aged 60 - 80 years who had bereavement from the death of their loved ones within 6 months were recruited to the study. The score of grief was assessed by face-to-face interviews using the questionnaire for around 30 minutes. To determine the type of grieving to which they belong, the Inventory of Complicated Grief (ICG) score was used. The participants were asked to complete the screening form and demographic form. The participants who were included in the study would further complete the inventory of complicated grief (ICG) form. Descriptive statistics were used to summarize the baseline characteristics of participants. Multiple linear regression analysis was performed to determine the factors associated with bereavement of the bereaved elderly.

Results

The results of the study showed that 56.7% of the participants have had bereavement. The mean age of the participants was 68.81 ± 6.23 years, more than half were female (57%). They were members of any community club (81%). One-third of them have received support from their children (35%). The relationships with the deceased were cousins (43%) Duration of death was 7-12 weeks (55%) and the cause of death was senility (30%). State to ICG they had a score of 25 to 71 ($\bar{x} = 47.65 \pm 9.67$). Multiple linear regression showed that the significant factors associated with bereavement were occupation, income, relationship with the deceased, importance of the deceased, duration of death, and the causes of death (p-value <0.05).

Conclusions

More than half of the elderly have had bereavement. The factors associated with bereavement are included occupation, income, relationship with the deceased, importance of the deceased, duration of death, and causes of death. To improve of their bereavement, the relevant factors must be concerned in order to prevent the elderly from the severity of complicated grief. For further study, large sample size is recommended.

Keywords: Bereavement, Bereaved elderly, Inventory of complicated grief, Associated factors

Effect of Adaptive Seating in Postural Control among Children with Cerebral: A Systematic Review

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Introduction

Children with cerebral palsy (CP) with Gross Motor Functional Classification System (GMFCS) level III to V have weak anti-gravity muscles. So, they required the adaptive seating system (AdSS) for postural control. Many studies reported positive results of AdSS on postural control. However, quality of studies is crucial to ensure the benefits of AdSS. Therefore, the effectiveness of AdSS on postural control should be reviewed with strong evidence.

Objective

To systematically review the effect of AdSS for postural control in CP children with GMFCS III to V.

Method

This systematic review followed the Preferred Reporting Guideline for Systematic Review and Metaanalysis (PRISMA) guideline. PubMed, Web of science, Embase, CINAHL, and Cochrane databases from year 1991 to March 2022 were used to search. 293 articles were found, among which 14 articles met inclusion criteria. Keywords used in search were CP, children, postural control or postural balance. Inclusion criteria were cerebral palsy participants with GMFCS III to V; aged <18 years; adaptive seating intervention; postural control outcome and papers in English. Exclusion criteria includes ambulatory CP, case series and case reports. Articles were independently reviewed, quality assessment done by 2 reviewers and verified by experts.

Result

14 articles were included, 3 were good quality, 8 fair and 3 poor. There were 5 cohort, 4 experimental, and 5 cross-sectional study and no RCT were found. Participants were GMFCS Level III to V with 51.9% male. These studies reported the benefits of AdSS on body functions activities, participation and environmental aspects.

Discussion

Current systematic review confirmed effectiveness of AdSS on postural control in CP children. Previous reviews did not confirm the effects of AdSS on postural control.

Conclusion

Fair to good quality studies demonstrated AdSS are effective on postural control however prospective RCTs is needed.

Keywords: Adaptive seating, postural control, cerebral palsy, children

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Microscopic Leaf Constant Numbers of F. rumphii Blume Selected from Thai Traditional Herbal Formula for Diabetes Mellitus

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Introduction

Diabetes mellitus is considered to be a chronic illness that usually requires long-term treatment. Among various medications, the Prince of Chumphon's (Moh Phon) herbal formula is the folk medicinal recipe that has been traditionally used to treat diabetic patients in Thailand. Ficus rumphii Blume is one of the medicinal plants mentioned in Moh Phon's herbal formula used for diabetes treatment. This plant belongs to the Moraceae family and commonly known in Thai as "Po-Ki-Nok". Regarding the efficacy and safety of herbal medicine, the quality control of crude herbal material is an important issue for concern, which the microscopic leaf constant number is one of parameters used for standardization of herbal drugs. Thus, this study aimed to determine the leaf constant values of F. rumphii in term of stomatal number, stomatal index, epidermal cell number, epidermal cell area and palisade ratio.

Methods

Fresh mature leaves of F. rumphii were collected from three different sources in Thailand and evaluated for leaf constant number parameters by using microscopic evaluation method.

Results

The result showed anomocytic stomata appeared on only upper epidermis of F. rumphii. The leaf constant number parameters were established including; stomatal number, stomatal index, epidermal cell number, epidermal cell area and palisade ratio which reveal specific microscopic of F. rumphii in Thailand.

Conclusion

This study is the first report of leaf constant parameter of Ficus rumphii Blume. in Thailand and could be used for the species identification of this medicinal plant.

Keywords: Ficus rumphii Blume, stomatal index, epidermal cell area, palisade ratio, leaf constant number

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The Symptoms Experienced during Chemotherapy of Indonesian Children with Acute Lymphoblastic Leukemia

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Introduction

Symptoms during acute lymphoblastic leukemia (ALL) treatments are common and are important clinical outcomes of childhood. Symptom management is a priority in the comprehensive care of children with cancer, yet the assessment of symptoms experienced by children with ALL during chemotherapy in Indonesia have received limited attention. This study was to examine the occurrence of symptoms on the Therapy- Related Symptom Checklist- Children (TRSC- C), reported by parents of Indonesian children undergoing chemotherapy for ALL.

Methods

Descriptive study conducted between January 2021 and May 2022. Mothers of 186 Indonesian children with ALL ages 2-17 years old undergoing chemotherapy for 3 months were recruited. Treatments responded identified with the TRSC- C Indonesian version.

Results

The children's mean aged was 8.64 (2- 17) years; 57.5% were diagnosed with standard risk of ALL; 63.4% were boys; 79% of children were in the maintenance phase. The mean score of total TRSC was 12.0806 ± 12.27474 , meanwhile, there was 97.3% of children had no and or mild symptoms. The symptoms experienced by more than 50% of children were only irritability (73.66). The other symptoms experienced by children were feeling sluggish (41.40%), loss of appetite (40.86%), nausea (40.32%), and pain (32.26%).

Conclusion

In general, chemotherapy after 3 months did not cause severe side effects of children with ALL, however irritability still was a prominent problem for children and need effective solutions from the health care providers.

Keywords: Acute lymphoblastic leukemia, children, symptom, ALL, side effects, chemotherapy

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The Impact on Outpatient Volume of Bipolar Disorder Patients in Taipei during the COVID-19 Epidemic Period

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Introduction

When the global COVID-19 broke out in 2020, Taiwan properly controlled the domestic epidemic situation. Since 2021, the number of confirmed cases in Taiwan has continued to rise, and the government implemented a level three alert in 2021 to prevent outbreak from disease spreading. Previous studies highlighted the harmful psychological effects of lockdown and social isolation on the general population, along with the worsening of symptoms and the risk of relapse in individuals with a previous mental disorder. Bipolar disorders are sensitive to factors that can disrupt biological and social rhythms. Taiwan's COVID-19 epidemic prevention policy may affect the behavior of seeking medical care of patients with bipolar disorder.

Objective

This study aims to use the outpatient volume of bipolar disorder patients in Taipei to observe whether their medical treatment and condition affected by COVID-19 epidemic status.

Methods

Using the data from 2019-2021 in Taipei City Hospital SongDe Branch (psychiatry specialization), to understand the differences in the volume of outpatient patients with bipolar disorder (ICD-10 F31) among 2019-2021 and to observe whether it change among the period of before, during and after level three alert by performing the Chi-square test. We observed the difference in the average monthly outpatient visits volume among three years by the one-way ANOVA. In addition, we selected new bipolar disorder cases to calculate the rates of new to all cases in 2020 and 2021, and we also observed the severity of new cases by the Chi-square test.

Results

The middle-aged group (45-64 years old) was with the highest outpatient volume of bipolar disorder patients, and there were significant differences in the age distributions among 2019-2021 (p<0.01). There were no significant differences in the sex ratio among the three years. The average monthly outpatient volume of bipolar disorder patients in 2021 was 966.5, which was significantly less than those of 1135.75 in 2019 and 1066.25 in 2020 (p<0.01 and p=0.043, respectively). Compared with the rate of new to all bipolar disorder patients in 2020 and 2021, the number of new cases in 2020 (18.6%) is significantly higher than that in 2021 (13.2%) (p<0.01). We divided new cases into two types of severity, moderate to severe bipolar disorder and other severity of bipolar disorder. The rate of moderate to severe bipolar disorder among new cases in 2020 (39.5%) was significantly more than that in 2021 (30.7%) (p=0.045).

Conclusion

From this study, we observed the average monthly outpatient visits for bipolar disorder from 2019 to 2021, we found that 2021 is lower than in previous years, which can indicate that when the epidemic gradually becomes severe, patients with bipolar disorder may reduce the frequency of medical visits. When comparing new cases in 2020 and 2021, it was found that the rate of new to all in 2021 was relatively low, and the rate of moderate to severe bipolar disorder among new cases between 2020-2021 changed significantly. In the future, the development of bipolar disorder patients, especially for new cases, by the Covid-19 pandemic still requires more attention and follow-up study.

Keywords: bipolar disorder, outpatient volume, COVID-19, Taipei.

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The Relationship of Hemoglobin and Menstrual Cycle in Adolescent Putri Madrasah Aliyah Swasta in Nurul Iman Islamic Boarding School Sukamanah Village Cigalontang Regency Tasikmalaya Regency

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Introduction

Adolescents are an asset to a nation; healthy youth will produce brilliant works for the future of a country. One of the problems faced by Indonesian adolescents is micronutrient nutrition, where 12% of male adolescents and 23% of female adolescents experience anemia, which is mainly caused by iron deficiency (iron deficiency anemia). Cases of anemia in adolescent girls in Indonesia amounted to 25.5% of 462 adolescents. The incidence of anemia in adolescents has increased significantly from the 2013 Riskesdas with 18.4% to 32% in the 2018 Riskesdas with the highest proportion of age experienced in the 15-24-year-olds. West Java Province 41.5% of anemia incidence in 2019, and the results of a preliminary study conducted by researchers on 10 teenage girls who were already menstruating at the Nurul Iman Islamic Boarding School, there were 3 people whose Hb levels were abnormal and experienced long menstrual cycles.

Objectives

To analyze the relationship between hemoglobin levels and the menstrual cycle in adolescent girls of Madrasah Aliyah Private at Nurul Iman Islamic Boarding School, Sukamanah Village, Cigalontang District, Tasikmalaya Regency in 2022.

Methods

This research is quantitative research with an analytical survey approach. The study design was cross-sectional. The research sample was 84 respondents who were taken by stratified random sampling with the inclusion criteria of respondents being girls who had menstruated, while the exclusion criteria were respondents who had gynecological problems. The data studied were hemoglobin levels measured using an electric Hb device and the menstrual cycle of respondents who were asked to use a checklist. Statistical analysis used is chi-square. The instrument used in collecting research data uses a checklist filled out by respondents.

Results

The results of the univariate analysis showed that 11 respondents (13.1%) had anemia, and 11 respondents (13.1%) had abnormal menstrual cycles, while the results of the bivariate analysis showed 11 respondents who had anemia, all of whom had abnormal menstrual cycles and of the 73 respondents who did not experience anemia all had normal menstrual cycles, with a p-value of 0.001 were 0.005, which means that there is a relationship between hemoglobin levels and menstrual cycles in adolescent girls.

Conclusion

There is a significant relationship between hemoglobin levels in MAS adolescent girls and menstrual cycles in MAS Adolescent Girls at the Nurul Iman Islamic Boarding School, Sukamananh Village, Cigalontang District, Tasikmalaya Regency in 2022. It is hoped that young women will always increase their knowledge about how to live clean and healthy behaviors to maintain the balance of hemoglobin levels every month and have a normal menstrual cycle. Boarding schools of Islamic boarding schools are expected to be able to provide solutions and various alternative actions related to the reproductive health of their adolescent female students, including by making adolescent reproductive health programs in collaboration with the Puskesmas, such as creating a youth reproductive health corner so that they can add insight and knowledge about menstruation, adolescent nutrition, and the cycle. menstruation can detect early if there are reproductive problems in young female students.

Keywords: Hemoglobin, Adolescent Girls, Menstrual Cycle.

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Are Predisposing Factors Related to Health Seeking Behaviour among Suspected Pulmonary Tuberculosis in the Community in Indonesia?

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Introduction

Tuberculosis (TB) is an infectious disease that is still a problem in Indonesia, this is due to the increasing number of cases from year to year. In Indonesia, an estimated 32% of cases are recorded as unreached or detected but unnotified. There are still around 54% of TB suspects who did not do a TB examination at health service facilities after being referred. Prompt diagnosis and early initiation of treatment remain key strategies for TB prevention and control. The main factors associated with delays include low access to health care, geographic barriers, low socio-psychological, education level, low awareness of TB, low knowledge, individual attitudes, and family history of the disease.

Objectives

To determine the predisposing factors that influence health-seeking behaviour in tuberculosis suspect patients.

Methods

A cross-sectional study was conducted with 432 tuberculosis suspect patient who recorded by TB cadres in West Java. The research sample has been obtained from six districts/cities in West Java (Cirebon, Kuningan, Tasikmalaya, Jakarta Utara, Karawang dan Subang). The data were collected employing interviewed sheets by using questionnaire instruments. The instruments used are from instruments (basic health research) which have been modified as needed and have been tested for validity and reliability. The data collection process is carried out by enumerator officers with direct interviews using an online questionnaire instrument via google form. Statistical analysis was using univariate, bivariate and logistic regression with alpha 5 %.

Results

Approximately 43 % of TB suspect who have had health examination at a health care facility. However, there are 57% who have not carried out the examination at a health care facility even though they have been educated by TB cadres. Predisposing factors that have a significant relationship with health seeking behaviour among suspected pulmonary tuberculosis, namely marital status (0.047), religion (0.003), education (0.028), income (0.017), ethnicity (0.000), occupation (0.003), information exposure (0.000) and history of TB in the family (0.000). While the predisposing factors that do not have a significant relationship, namely age (0.429), gender (0.593), knowledge (0.088) and attitude (0.653). There are four dominant variables that affect suspected TB behaviour in TB examination to health facilities, namely educational background, ethnicity, and family history of TB.

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Conclusion

The proportion of TB suspect who are seeking medical attention remains low. Educational background, ethnicity, and family history of TB are predisposing factor and determining factors of health-seeking behaviour.

Recommendation

The importance of involving the family's role in encouraging TB suspects to carry out health checks. In addition, it is still necessary to make health promotion efforts for them to understand the importance of health checks at health facilities in order to prevent the occurrence of more severe TB disease.

Keywords: Health-seeking, Behaviour, Tuberculosis, Suspect

The Relationship Between The Dependent Burden Ratio, The Percentage of Poor People and Proper Sanitation With Life Expectancy In East Java

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Introduction

The high degree of public health could be used as an indicator of the success of health programs and socio-economic development programs that would affect the life expectancy in a region. However, from 2014 to 2016 life expectancy in East Java still did not reach the target of the East Java Provincial Health Office strategic plan. This could be caused by the welfare of the people of East Java was still lacking.

Objectives

The purpose of this study was to determine the relationship between the ratio of dependents, the percentage of poor people and proper sanitation with life expectancy in East Java.

Methodology

The method used in this research was correlation that was using Pearson Product Moment Correlation for variable percentage of poor people and proper sanitation with life expectancy. As for the variable dependency ratio with life expectancy used chi squared. Before the data was correlated, data was converted into standard numbers using t-score.

Results

The result of the research showed there is no significant relationship between the ratio of dependent expenses and the expectation figure in East Java in 2016 at a significance level of 5%. There was a negative and significant relationship between the percentage of poor people and the expectation rate in East Java in 2016 at a significance level of 1%. There is a positive and significant relationship between proper sanitation and the expectation figure in East Java in 2016 at a significance level of 1%.

Conclusion

Based on the results of the research that has been carried out, it can be concluded that there is no significant relationship between the ratio of dependency ratio and the life expectancy. There was correlation between percentage of poverty and decent sanitation with the life expectancy

Keywords Dependency ratio, Poverty, Decent Sanitation, Life Expectancy

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Instagram Utilization as a Source of Adolescent Reproductive Health Information

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Introduction

Adolescents who are risky to be pregnant are about 1 million girls in the world. Based on IDHS 2017 report, Indonesia adolescent had ever done sexual intercourse in age 10-24 are about 1.5% of girls and 7.6% of boys. Consequently, it increases the risk of abortion, HIV AIDS, and sexually transmitted infection. The enabling factors can affect behavior is information. One of media that can share health information is instagram. One of the biggest instagram account in Indonesia that concern in reproductive and sexual health issue is Tabu.id.

Objective

This study is to describe how the benefit and satisfaction felt by followers of @Tabu.id account using use and gratification theory.

Method

The method is qualitative with a descriptive type using case study approach. Data analysis used OpenCode 4.02. The informants of this study were selected by purposive sampling that consisted of nine adolescents from @Tabu.id followers. Instrument of this study was an semi-structured interview guide as many twenty nine questions. The interview guide was created to collect data using in-depth interview techniques. Data analysis used thematic analysis.

Result

The results of this study explained that informants followed Tabu.id account because they felt that the content of reproductive health information was easy to understand, the messages were conveyed explicitly, non-judgmentally, according to the needs of adolescents, and some messages were produced in contemporary videos. The informants who are sexually active express that the contents help them to be more aware to use contraception, have sex safely, and get a consultation contact. For another informants express that the contents help them to be aware to their health and know more about reproductive health. The informants also share and discuss the contents to their friends.

Conclution

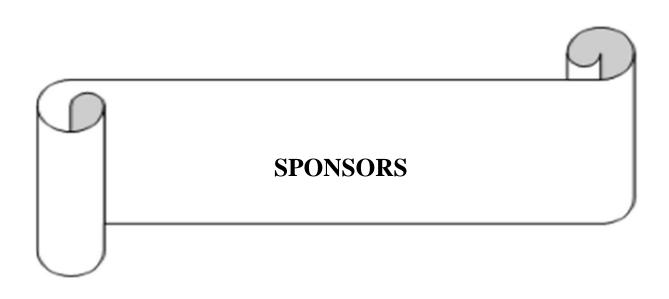
The benefits and satisfaction variables have four themes, there are entertainment, personal relationships, personal identity, and supervision. The next researcher can conduct research with quantitative studies to see the correlation between Tabu.id content and the benefits and satisfactions obtained by followers based on the follower's sexual experience.

Keywords: adolescent, reproductive health, sexual health, instagram, use and gratification theory

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