

ABSTRACT FOR THE 3rd ASIA PACIFIC PARTNERSHIP ON HEALTH AND NUTRITION IMPROVEMENT (APHNI) 2021

Health Improvement Strategies

Within and Post COVID-19 Pandemic

HELD FROM 14 - 16th, OCTOBER 2021

Alma Ata University, Yogyakarta, Indonesia

ASIA PACIFIC PARTNERSHIP ON HEALTH AND NUTRITION IMPROVEMENT (APHNI) 2021

*Health Improvement Strategies Within and
Post COVID-19 Pandemic*

Edited on behalf scientific committee of the 3rd APHNI 2021 University of Alma Ata

Dr. Arif Sabta Aji, S.Gz.

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About the 3rd Asia-Pacific Partnership and Nutrition Improvement (APHNI)

In Indonesia, the implementation of the new normal policy focuses on adjusting the new habits in the social sector, economy-industrial sector, education sector, and health sector. The biggest adaptation changes occur in the social sector, where the entire community is faced with protocols to prevent the spread of the virus such as physical distancing, wearing of masks, cleaning hands, and avoiding crowds. The heterogeneity and culture of society cause the low participation rate in this concept of change (new normal). Another sector that has been heavily impacted by COVID-19 is the health sector. Health workers are at the forefront and health facilities are required to provide the best service in an effort to reduce the number of deaths due to COVID-19 cases.

Various strategies are continuously being developed to maintain essential health services. Approaches using digital platforms enable health systems to better manage COVID-19 response and maintain essential health services. The selection of health technology certainly requires stakeholders to consider in terms of infrastructure and the supporting environment (such as standards and interoperability, legislation, regulations, and the ability of health workers) (WHO, 2020).

The Asia-Pacific Partnership and Nutrition Improvement (APHNI) is an international conference activity that has been routinely held by the Faculty of Health Sciences, Alma Ata University since 2019. The aim of this activity is to provide opportunities for researchers and professionals can publish their research results in proceedings or indexed national journals and international reputable journals. The collaborations that have been established with national and international institutional partners, as well as health profession organizations at the 2019-2020 APHNI international conference activities, provide many opportunities to develop insights in the field of health globally and provide opportunities to publish research results so that they can be useful for other researchers. In an attempt to participate in increasing the knowledge and understanding of recent global concerns, APHNI international conference will be held as a continuation of the previous APHNI with the theme **"Health Improvement Strategies Within and Post Covid-19 Pandemic"**. In addition, discussions will explore strategies in improving quality, services, and the role of post-pandemic health technology in Asia Pacific countries.

Preface

Assalamu'alaikum, Wr. Wb.

Peace be upon you, and Allah mercy and blessings,

Alhamdulillah, Praise and Gratitude we pray to Allah SWT, who has given His mercy and grace, so that we can complete the abstract book for the participants of the 3rd Asia Pacific Partnership on Health and Nutrition Improvement (APHNI) Conference 2021 which was held virtually on October 14-16, 2021.

We hope that this abstract book can provide benefits both theoretically and clinically for the participants of the 3rd Asia Pacific Partnership on Health and Nutrition Improvement (APHNI) Conference 2021.

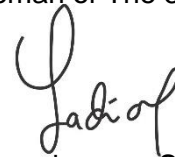
We realize that there is a lot of perfection in the preparation of this abstract book. For this reason, we really hope for constructive criticism and suggestions so that we can become better in preparing the next abstract book and organizing the event as a whole in the coming year.

Finally, we hope that this book can be useful for all those who need it.

Wassalamualaikum, Wr. Wb.

Yogyakarta, 6th November 2021

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Nur Mukhlisoh Majidah, S.Gz.

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TABLE OF CONTENT

Abstract No	Title	Page
THEME 1 Nursing Education, Policy, and Clinical Practice		
NPC-001	The Implementation of the Elderly Posyandu at Puskesmas Sapat, Indragiri Hilir Regency	10
NPC-002	Social-Culture Approach for Nursing Clinical Educator Competency: A Literature Review	11
NPC-003	The Effect of Physical Exercise for Increasing Dementia Informal Caregiver' Health Status: A Meta Analysis	12
NPC-004	Improving Leadership of Head Nurses And Quality of Care to Attainment of Safety Leadership: A Systematic Review	13
NPC-005	An Analysis of Factors Affecting Covid-19 Patients In Using Ventilators At Dr. Sardjito Hospital Yogyakarta	14
NPC-006	Prevalence and risk factors of nurses' burnout during Covid-19 pandemic in Indonesia	15
NPC-007	Analysis of Factors that influence the Readiness of transfer class students in School of Health STIKes Medistra Indonesia as health personnel in treatment for COVID 19 treatment in hospital	16
PBM-001	Chronic Sorrow: Life Experience of Indonesian Mothers with Perinatal Loss	17
PBM-002	Does Yoga-Murottal Reduce Dysmenorrhea Pain and Improve Beta Endorphin Hormone Levels in Adolescents	18
PBM-003	The Influence of Pocketbook on Cadres' Knowledge And Skills In Changing The Perceptions of Couples of Childbearing Age (Pus) About Family Planning In Spesial Region of Yogyakarta	19
PBM-004	Local Community Acceptance of Pregnancy Education Through Culture-Based Comics in Silaen Village, Toba Regency, North Sumatra Province	20
PBM-005	Mezile's Model (Back Massage and Self-Hypnosis) Based On Information and Technology To Lose The Anxiety of Post-Partum Mothers In Covid-19 Pandemic Era	21
PBM-006	Association Between The Availability of Personal Protective Equipment And The Anxiety of Midwives When Providing Antenatal Care (ANC) Services During The Covid-19 Pandemic	22
THEME 2 Natural Medicine-Clinical Pharmacy, Alternative Medicine		
NAC-001	Screening and Antidiarrheal Activity Test of Sembung Rambat (<i>Mikania micrantha</i>) Leaves	24
NAC-002	Pharmacological Study: Combination of Cinnamon Bark and Ginger Ethanol Extracts as Antidiabetic	25
NAC-003	The Effect of Katuk Leaf Juice to Hemoglobin Levels in Pregnant Women Trimester II With Anemia	26
NAC-004	The Effect of <i>Strobilanthes Crispus</i> on Blood Glucose Levels And Lipid Profile of Streptozotocin-Induced Diabetic Rats	27
NAC-005	Effect of Porang (<i>Amorphophallus oncophyllus</i>) flour with <i>Strobilanthes crispus</i> maceration blood glucose level and lipid profile in streptozotocin-induced diabetic rats	28
NAC-006	Formulation, Evaluation of Physical Properties and Antioxidant Activity Test of Moringa Leaf (<i>Moringa Oleifera</i> L.) Ethanol Extract Capsules with DPPH Method	29
NAC-007	The Effectiveness of Red Betel Leaf and Cinnamon Oil for Anti-bacterial and Anti-Inflammatory in Perineal Tears: a Scoping Review	30
NAC-008	Improving Diabetic Foot Ulcer Healing with Adjuvant Bitter Melon Leaf Extract (<i>Momordica charantia</i> L.)	31
NAC-009	Herbal Medicine on Response Immune Patient with Covid-19 Infection A Scoping Review	32
NAC-010	The Effectiveness of Cabbage Compresses (<i>Brassica Oleracea</i> Var <i>Capitata</i>) With Aloe Vera Compress On Reducing Pain Of Breast Supplement In Post-Partum Mothers At Kamonji Public Health Center	33
NAC-011	α -glucosidase Inhibitory Effect of Jengkol (<i>Archidendron pauciflorum</i>) Fruit Peel Extract for Type II Diabetes	34
NAC-012	Analysis of Fiber, Protein, And Organoleptic Test Of Tempeh Nugget With Okra Substitution	35
NAC-013	Snackbar Formulation Made from Red Bean Flour and Soybean Flour with The Addition of Bit Fruit Flour (<i>Beta Vulgaris</i> L) as Alternative Food Source of Iron for Adolescent Girls	36
NAC-014	Potential of Indonesian Community Food Sources which are rich in fiber as an alternative staple food for type 2 diabetics: A scoping review	37
NAC-015	The Effect of Additional Flour of Bean Sprouts on Organoleptic Quality And Nutritional Content of Sempronng Cake	38
NAC-016	Characteristics of Streptozotocin-Nicotinamide Induced Inflammation in Kidney Rat Models	39

Abstract No	Title	Page
NAC-017	Overview of Supplements and Vitamins Use in Community During The Covid-19 Pandemic on Society at One Of The Pharmacies In Banjarmasin	40
THEME 3 Maternal and Child Health & Nutrition		
MCN-001	Stunting Program Analysis West Sumbawa District Health Office	42
MCN-002	Relationship of Mother's Occupational Status with Recovery of Nutritional Status of Stunting Child	43
MCN-003	Rapid Growth in Malnutrition Children Associated With Higher Systolic Blood Pressure in Adolescent	44
MCN-004	The Effect of Eating Behavior on The Nutritional Status of Children (Aged 6-60 Months) in The Working Area of Mantrijeron Center, Yogyakarta	45
MCN-005	Potential of Moringa Leaf Cookies to Increase Breast Milk Production in Postpartum Mothers	46
MCN-006	A Pilot Experimental Study of The Effectiveness Smartphone to Improve Mother's Knowledge In Neonatal Care	47
MCN-007	Apps for Continuous Detection of Third Trimester Pregnant Women in Deli Serdang Regency, North Sumatra	48
MCN-008	Calcium Intake in Role of Reducing Menstrual Pain	49
MCN-009	Effectiveness of Preconception Care for Improving pregnancy outcome: Scoping Review	50
MCN-010	Women's Experience In The Management Of Gestational Diabetes Mellitus During And After Pregnancy In Yogyakarta: A Phenomenology Study	51
MCN-011	Social Nervous Exercise Intervention and Its Association with Fasting Blood Glucose on Gestational Diabetes Mellitus	52
MCN-012	Effectiveness Oxytocin Massage on Reduce Lactation Problems and Support Infants Growth	53
MCN-013	Parity and Intention of Pregnancy with Contraceptive	54
MCN-014	Massage Therapy for Weight Gain in Preterm Neonates: A Literature Review	55
MCN-015	Breast Massage is Effective In Expedite The Time of Colostrum Discharge	56
MCN-016	The Effect of Nutrition Education Using Booklet Media With and Without Counseling on Vegetables and Fruit Feeding Practices in Preschool Children	57
MCN-017	The Service Coverage Indicators on Stunting Reduction Interventions in Riau Province Priority Districts	58
MCN-018	Evaluation of Equity of Health services Facilities In the era of national health insurance: A Case Study in Gunung Kidul Yogyakarta	59
THEME 4 Public Health and Clinical Practice		
HCP-001	Validity and Reliability Test of Instrument Physical Activity Questionnaire for Adolescent (PAQ-A) on Workwoman	61
HCP-002	Catch-up Growth Effect in Early Childhood With Cognitive Ability Of School Age Children (10-12 Years) : A Longitudinal Data Indonesian Family Life Survey	62
HCP-003	The Effect of Health IEC (Information, Education, and Communication) on The Selection of Food Contains Iron for Anemia Prevention in Adolescent Girls: Systematic Literature Review	63
HCP-004	A comparison of Patient Satisfaction When Using Health Assurance and Non-Assurance in Health Primary Services (Puskesmas Kasihan 1) Bantul, Indonesia	64
HCP-005	A mixed-methods exploration of implementation of a healthy school canteen program after a year intervention	65
HCP-006	Development of Activity Books on Sexual Education for 4-5 Year Olds	66
HCP-007	Nutritional Status and Associated with Eating Behavior and Quality Diet among Adult: A Cross Sectional Study	67
HCP-008	Dietary Pattern by Income Level during the COVID-19 Pandemic in Indonesia: Results from the Nutrition, Lifestyles, and Quality of Life (QoL) Survey	68
HCP-009	The Nutritional Problems of Adolescents Among The Traditional Community of Suku Anak Dalam (SAD) in The Working Area of Pematang Kabau Health Center, Sarolangun	69
HCP-010	The Determinants of Iron Deficiency Anemia Incidence in Public Health Students Faculty of Medicine and Health Science Alauddin State Islamic University of Makassar	70
HCP-011	Identification of Nutritional Status and Eating Habits of Adolescent Athletes During The Covid-19 Pandemic	71
HCP-012	The Stunting Prevention Program during Covid-19 Pandemic: A Qualitative Study	72
HCP-013	Indonesian's Dietary Behavior Status Differed by Gender during the Covid-19 Pandemic: Result from Nutrition, Lifestyles and Quality of Life (QoL) Survey	73

Abstract No	Title	Page
HCP-014	Exploring Challenges and Opportunities in Interprofessional Collaboration Health Worker during Covid-19 Pandemic at the Primary Health Center of Bantul Regency	74
HCP-015	The Relationship between Religiosity and Adherence in Diabetes Mellitus Patients at Jetis 1 Bantul Health Center	75
HCP-016	Relationship Between Environmental Changed And Capacity Adaptation With The Level Of Community Resilience Post Earthquake Lombok	76

THEME 1: Nursing Education, Policy, and Clinical Practice

NPC-001

**ASIA-PASIFIC PARTNERSHIP ON HEALTH AND NUTRITION
IMPROVEMENT (APHNI) 2021****The Implementation of the Elderly Posyandu at Puskesmas Sapat,
Indragiri Hilir Regency**Astri Khoir K¹, Heryudarini Harahap^{1,2,*}, Yuyun Priwahyuni¹, Jasrida Yunita¹, Melly Susanti^{1,3}¹STIKes Hang Tuah Pekanbaru²Bappedalitbang Provinsi Riau³Dinas Kesehatan Kota Pekanbaru*Correspondence: yudariniharahap@yahoo.com**ABSTRACT**

Background: The Elderly Posyandu is a community resource health service forum to serve elderly population.

Objective: The study objective was to obtain information about policies, planning, human resources, facilities, and financing in the implementation of Elderly Posyandu (EP) at the Puskesmas (Community Health Center) Sapat, Indragiri Hilir Regency in 2020.

Methods: The method was qualitative. Keys informants were the head of Puskesmas, person in-charge of elderly program at Puskesmas, and two cadres. Supporting informants were person in-charge of elderly program at the Health Office and two elderlies. Data were collected by in-depth interviews, document review, and observation. Source, method, and data were triangulated.

Results: It was found the EP activity was routinely carried out every month before the COVID-19 pandemic, but during pandemic, it was not. The EP was managed by Puskesmas assisted by cadres so that planning of activities was carried out together. Health workers and cadres who manage the EP haven't received specific training. The EP was not had a certain room/building and facilities were inadequate. The financing for the EP activities from BOK funds, but the elderly were charged half price for blood sugar checks. It was concluded that the implementation of the Elderly Posyandu at the Puskesmas Sapat was not optimal.

Conclusion: It is recommended that the Health Office and the Puskesmas Sapat could increase of human resouces of the Elderly Posyandu, provide a special budget, a certain place and books/KMS for the elderly. The implementation of the Elderly Posyandu during the COVID-19 pandemic is carried out in the RW level.

Keywords: *elderly; elderly posyandu; policy; puskesmas sapa*

#NPC-002

ASIA-PASIFIC PARTNERSHIP ON HEALTH AND NUTRITION IMPROVEMENT (APHNI) 2021

Social-Culture Approach for Nursing Clinical Educator Competency: A Literature Review

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ABSTRACT

Background: Clinical education is a method that is applied to formal nurse education as a step to provide real and direct learning experiences in the nursing environment correctly and effectively. The success of education in a clinical setting certainly requires the support of teaching nurses (clinical instructors) who have credibility and competence in terms of knowledge, attitudes and skills and are actively involved in professional activities. It is important to prepare knowledge and understanding related to transcultural nursing issues, intercultural communication and clinical education which explores the socio-cultural elements in the implementation of staff, student and patient.

Objectives: This review aimed to explore the clinical nurse educator in nursing practice for the achievement of socio-cultural competence.

Method: A literature review of the current literature focusing on the area of clinical nurse educator and socio-cultural was conducted. Four key terms, i.e. Clinical education, Clinical Educator, Social Culture, Intercultural Communication, Nurse Educator, Experiential theory, were used to retrieve relevant articles. Four big data bases were used; Scopus, Science Direct, Elsevier and ProQuest. We included articles that were research or review papers, in English, full-text available, and published on 2018-2021. Irrelevant and redundant articles were excluded. The review guidelines used are based on Prisma and the Joanna Briggs Institute (JBI)

Results: Of the four databases we used, we found 11 articles explain the competence of clinical education based on the socio-cultural approach. An educational strategy in the clinical area that integrates transcultural elements of nursing, intercultural communication, collaboration, self-directed with the principles of openness, honesty, and mutual respect in the implementation of team interaction and collaboration. The development of interpersonal relationships is also an important role that educators must have in helping to introduce the nurse orientation process to the organizational environment and other professional teams so that the achievement of satisfaction with clinical education is able to improve the performance of nurses and students perfectly.

Conclusion: clinical instructors have an important role in improving the outcome of clinical learning of students and nurses using the strategy of socio-cultural and transcultural.

Keywords: *clinical instructor; clinical education; transcultural; intercultural communication; socio-cultural*

NPC-003

**ASIA-PASIFIC PARTNERSHIP ON HEALTH AND NUTRITION
IMPROVEMENT (APHNI) 2021****The Effect of Physical Exercise for Increasing Dementia Informal Caregiver' Health
Status: A Meta Analysis**Anung Ahadi Pradana¹¹Department of Nursing, STIKes Mitra Keluarga, Indonesia**ABSTRACT**

Background: Older adults with dementia often experience hopeless situations that include feelings of helplessness, frustration with their surroundings, economic dependence on family members, and inability to socialize with other people. Various responses, both negative and positive experienced by caregivers show that being a caregiver for a spouse with dementia is difficult and could lead to disruption of their health.

Objective: The purpose of this study was to determine the effect of physical exercise on the health conditions of informal caregivers. This research was conducted using the Meta Analysis method using Review Manager (RevMan) 5.4 tools. The literature search and selection method was carried out using the Preferred Reporting Items for Systematic Review and Meta-Analysis (PRISMA) tools on articles published for the 2015-2021 period in several databases such as CINAHL, PubMed, EBSCO, and ProQuest.

Results: The results of the analysis get a P value = 0.15 which means that physical exercise does not have a significant effect on the health condition of dementia caregivers, this can also be seen in the forest plot diagram which shows that the overall effect (diamond) crosses the vertical line Ho (d = 0).

Conclusion: Physical exercise is known to be one of the factors that affect the health condition of caregivers in older adults with dementia, but it is necessary to pay attention to other factors that are much more influential on the health condition of caregivers when compared to physical exercise.

Keywords: *dementia; health status; informal caregiver; physical exercise*

#NPC-004

**ASIA-PASIFIC PARTNERSHIP ON HEALTH AND NUTRITION
IMPROVEMENT (APHNI) 2021****Improving Leadership of Head Nurses and Quality of Care to Attainment of
Safety Leadership: A Systematic Review**Lusianah^{1,*}, Ratna Sitorus², Fatma lestari³, Toha Muhaimin³¹ Faculty of Nursing, STIKES Jayakarta, Jakarta, Indonesia² Faculty of Nursing, Universitas Indonesia, Jakarta 13630, Indonesia³ Public Health Department, University of Indonesia*Correspondence: lusiwijiatmoko@gmail.com**ABSTRACT**

Background: Safety leadership is positively influence safety compliance amongst employees in health care. It is necessary to understand how far nursing managerial has played its roles in the attainment of safety leadership.

Objective: This study is aimed to explore the safety leadership implemented by nursing management in enhancing health care system.

Methods: A systematic review of the current literature focusing on the area of nursing managerial and safety leadership was conducted. Five key terms, safety leadership and head nurse or head ward, first line nurse manager, nurse leader, or nurse administrator, were used to retrieve relevant articles. Six big data bases (EBSCO, Scopus, JSTOR, Wiley online, ProQuest and Emerald) were used. We included research articles or review papers, in English, available full-text, and published from September 2010 to September 2020. Irrelevant and redundant articles were excluded. Two data extractors analysed the relevant articles.

Results: Of the five databases, we found 148 relevant articles and 11 of them met the criteria. The biggest proportion (40%) of the study was conducted in American region. Four themes were generated, including safety leader role, leadership development, supporting and obstacles of nursing leadership role.

Conclusion: The adoption of a nurse managerial leadership to tackle the rise in safety leadership in developed and developing health care institutional require policymakers and health care leaders that participate in Nurse managerial leadership. The nurse leaders need to understand the complexities of the institutional structures and functional relationships of the hospital institutions involved in health care system.

Keywords: *head nurse; managerial; safety leadership; hospital*

#NPC-005

ASIA-PASIFIC PARTNERSHIP ON HEALTH AND NUTRITION IMPROVEMENT (APHNI) 2021

An Analysis of Factors Affecting Covid-19 Patients in Using Ventilators at Dr. Sardjito Hospital Yogyakarta

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ABSTRACT

Background: Many patients with coronavirus disease-19 (COVID-19) require hospitalization with the main issue of respiratory problems from mild to severe and even respiratory failure. Various clinical conditions at the beginning of hospital admission are considered to influence the development of the patient's health and the risk of using a ventilator.

Objectives: This study aims to analyze related factors and more dominant factors affecting COVID-19 patients in using ventilators at Dr. Sardjito Hospital, Yogyakarta.

Population and sample:

Methods: Cross-sectional design was used to analyze the relationship between clinical characteristics including gender, age, Body Mass Index (BMI), blood pressure, blood sugar levels, SpO₂ and the use of a ventilator. Purposive sampling technique was employed for this study, and 171 samples were selected based on the Slovin formula. Logistic regression analysis was used to determine which factors were more dominant in influencing the use of ventilators. The population of this study was 300 medical records of COVID-19 patients at Dr. Sardjito Hospital, Yogyakarta in 2020. The sample is 171 medical records selected according to the inclusion and exclusion criteria.

Results: Age, blood sugar levels, and SpO₂ during hospital admission of COVID-19 patients are variables with a p-value <0.05. This means that there is a statistically significant relationship with ventilator use. SpO₂ is the most dominant factor in affecting the use of ventilators, with a p-value <0.001 in the Wald test. When compared with the SpO₂ value in the admission, the range is 95% (normal healthy), the Odds Ratio (OR) SpO₂ during the admission of 85-94% (hypoxia) is 5.623 (2.389-13.236), and SpO₂ during the admission in the range of 67% - 85% (severe hypoxia) is OR 114.3 (13.66-956.52). The Area Under Curve (AUC) value is 0.14 (95% CI: 8.2%-21.6%).

Conclusion: SpO₂ of patients on admission is the most dominant factor for COVID-19 patients in using ventilators at Dr. Sardjito Hospital, Yogyakarta.

Keywords: COVID-19; risk factors; ventilator

#NPC-006

**ASIA-PASIFIC PARTNERSHIP ON HEALTH AND NUTRITION
IMPROVEMENT (APHNI) 2021****Prevalence and risk factors of nurses' burnout during Covid-19
pandemic in Indonesia**Bayu Anggileo Pramesona^{1*}, Suharmanto¹, Dyah Wulan Sumekar Rengganis Wardani¹¹ Department of Public Health, Faculty of Medicine, Universitas Lampung
Jalan Prof. Dr. Ir. Sumantri Brojonegoro 1, Bandar Lampung, Indonesia 35141*Correspondence: bayu.pramesona@fk.unila.ac.id**ABSTRACT**

Background: The increasing prevalence of burnout among healthcare professionals in recent years has been widely investigated. However, research on the prevalence and related factors of burnout among nurses particularly who worked in the isolation rooms of Covid-19 patients is scarce.

Objectives: This study aimed to investigate the prevalence and risk factors of burnout among nurses during Covid-19 pandemic in Indonesia.

Methods: This cross-sectional study was conducted at a tertiary referral hospital for Covid-19 case in Lampung province, Indonesia from July to August 2021. A total of 164 nurses who worked in the isolation rooms of Covid-19 patients were recruited purposively. Information regarding socio-demographics was collected through self-reported online questionnaire. A Maslach Burnout Inventory-Human Services Survey (MBI-HSS) scale was employed to assess levels of burnout. A Chi-square test was used to analyze the data.

Results: More than half (54.8%) of nurses who worked in the isolation room for Covid-19 patients were experienced the burnout in the low category. The prevalence of burnout in the emotional exhaustion dimension was 31 (21.2%), depersonalization burnout dimension was 118 (80.8%), and no burnout in the personal accomplishment dimension (0%). Risk factor that was found to be significantly associated with burnout in the univariate analysis was only using of PPE for 4-7 hours per shift (OR = 0.35, 95% CI = 0.18–0.71).

Conclusions: A relatively high prevalence of burnout in the low category among nurses who worked in the isolation room of Covid-19 patients was found in our study. The burnout syndrome was also high in the depersonalization dimension. Using PPE for 4-7 hours per shift was determined as a risk factor for burnout among nurses. The hospital management should consider the effort toward the prevention and reduction of burnout syndrome among nurses particularly who taking care for Covid-19 patients in the isolation rooms.

Keywords: *burnout; nurses; COVID-19; pandemic; indonesia*

#NPC-007

ASIA-PASIFIC PARTNERSHIP ON HEALTH AND NUTRITION IMPROVEMENT (APHNI) 2021

Analysis of Factors that influence the Readiness of transfer class students in School of Health STIKes Medistra Indonesia as health personnel in treatment for COVID 19 treatment in hospital

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ABSTRACT

Background: The increase number of corona cases occurred in a short time and required immediate treatment. Corona virus can easily spread and infect anyone regardless of age. This virus can be transmitted easily through contact with sufferers. Various efforts have been made by the Government of Indonesia to break the chain of the spread of Covid 19, including making policies in the management of Covid 19 patients in hospitals. Currently, hospitals in Indonesia, especially the COVID-19 referral hospital, have exceeded capacity. Many health workers have experienced fatigue due to high workloads with the number of patients who were confirmed positive for Covid 19 with moderate and severe symptoms who were hospitalized. Researchers identified several factors that affect the readiness of health workers in the management of Covid 19 patients, including knowledge, family status, availability of Personal Protective Equipment (PPE), health status and reward. (Fadli et al., 2020). Optimal self-preparation is needed in order to achieve COVID 19 management that is in line with expectations by examining these factors more deeply

Methods: This research method uses a descriptive correlation design with a cross sectional approach aimed at knowing the relationship between variables where the independent variable and dependent variable are identified at the same time. The number of samples used as many as 33 students of the transfer class who already work as nurses in hospitals.

Results: There were 2 factors that had an influence on the readiness of transfer students in the management of COVID 19 at the hospital, namely the family status factor and the availability of PPE with p values of 0.036 and 0.007 and 3 factors that had no effect, namely knowledge, health status and giving rewards with p values > 0.05.

Keyword: *readiness; covid 19 treatment; knowledge; family status; health status; reward PPE*

#PBM-001

**ASIA-PASIFIC PARTNERSHIP ON HEALTH AND NUTRITION
IMPROVEMENT (APHNI) 2021****Chronic Sorrow: Life Experience of Indonesian Mothers with Perinatal Loss**Erni Samutri^{1,*}, Widyawati², Wenny A. Nisman², Lia Endriyani¹, Sofyan Indrayana¹¹Faculty of Health Sciences, Universitas Alma Ata²Faculty of Medicine Public Health and Nursing, Universitas Gadjah Mada*Correspondence: erni.samutri@almaata.ac.id**ABSTRACT**

Background: Perinatal death causes parents to experience actual loss due to fetal absenteeism and symbolic loss due to the loss of self, hope and self-esteem. The loss will be expressed through grief response that might developed as a chronic sorrow.

Objectives: To explore chronic sorrow experience of mother with perinatal loss.

Methods: This study is qualitative research using descriptive phenomenological approach. Participants were selected using the maximum variation sampling on their current numbers of children. Data were collected using semi-structure interviews and saturation achieved on the ninth participant. Data were analyzed using modified Stevick-Colaizzi-Keen method.

Results: Three themes emerged from the data analysis, including 1) recurrent grief experience and emerge when dealing with triggers, 2) coping strategy and emotional support treat the grief feeling, 3) specific characteristics of chronic sorrow on perinatal loss: grief that feels diminished and the presence of another child can be a cure as well as a grief-trigger.

Conclusion: Chronic sorrow on perinatal loss was felt repeatedly when mothers face the triggers and has two specific characteristics that slightly different from the general characteristics of chronic sorrow. The right identification of mother's coping strategies could help them to adapt with the loss.

Keywords: *mother; chronic sorrow; perinatal loss; trigger*

#PBM-002

**ASIA-PASIFIC PARTNERSHIP ON HEALTH AND NUTRITION
IMPROVEMENT (APHNI) 2021****Does Yoga-Murottal Reduce Dysmenorrhea Pain and Improve Beta Endorphin Hormone
Levels in Adolescents?**Sri Sumarni^{1,*}, Shinta Dhian Hasna' Atifah², Ta'adi¹¹Poltekkes Ministry of Health Semarang, Indonesia²Master of Applied Midwifery, Poltekkes Kemenkes Semarang*Correspondence: taadisamsuri@gmail.com**ABSTRACT**

Background: Dysmenorrhea pain can cause problems in adolescents, to reduce it alternative actions are needed that are easy to do. The combination of yoga murottal can be run to treat dysmenorrhea pain. Yoga might control dysmenorrhea pain and stimulate the release of endorphins which trigger the body relax and reduce muscle tension.

Objectives: To prove that the yoga murottal as an alternative treatment for reducing dysmenorrhea pain and increasing beta-endorphin hormone levels in adolescents.

Method: The type of research is True Experiment, pretest posttest with control group design. Sampling according to the inclusion criteria, respondents was 30 female students. The intervention group was given yoga murottal for 20 minutes every day during menstruation followed by 2 times a week while the control group was given analgesic drugs. Data obtained from observation sheets and blood samples. Analysis of the data used Paired T test and Independent T test.

Results: There is a significant difference of pain scale both two groups with p-value = 0.001. There is a difference of beta endorphins levels before and after intervention in two groups with p-value 0.001. There is no difference of beta endorphins levels between intervention and control groups with p-value 0.201. However, it is known that the increase of beta endorphin level at intervention group is higher than of that at control group (52.9 ng/ml and 47.1 ng/ml respectively).

Conclusion: Yoga murottal has been shown to reduce dysmenorrhea pain scale and increase beta endorphins levels in adolescents.

Keywords: *yoga murottal; pain scale; beta endorphins; dysmenorrhea*

#PBM-003

**ASIA-PASIFIC PARTNERSHIP ON HEALTH AND NUTRITION
IMPROVEMENT (APHNI) 2021****The Influence of Pocketbook On Cadres' Knowledge And Skills In Changing The
Perceptions Of Couples Of Childbearing Age (Pus) About Family Planning In Special
Region of Yogyakarta**Dyah Pradnya Paramita^{1*}, S Mulyaningsih¹, RD Alviana¹, Supiyati¹, Fatimah¹¹Departement of Midwifery, Faculty of Health Science, Universitas Alma Ata, Yogyakarta 55183, Indonesia*Correspondence: dyahpradnya.paramita@almaata.ac.id**ABSTRACT**

Background: The number of traditional contraceptive methods used in the National Health Insurance (JKN) era is increasing compared to the previous year. One of the contributing factors is the public's negative perception due to the lack of information about modern family planning. Consequently, family planning cadres are needed to provide accurate information to change people's negative perceptions of modern family planning. A guideline written in a pocketbook can help cadres provide accurate information.

Objectives: This study was conducted to determine the effect of the pocketbook on the knowledge and skills of cadres in changing the couple's perception about family planning in the Special Region of Yogyakarta.

Methods: The research design was pre-experimental with a one-group pretest-posttest approach. The research population was 186 people who were the representatives of family planning cadres from Bantul and Yogyakarta city. The sampling technique was performed random sampling, and 90 cadres were selected. The data were analyzed

Results: The results demonstrated that the knowledge and skill cadres were higher after receiving the family planning pocketbook with the p-value <0,05. There is an effect of the pocketbook on family planning services in the JKN era on cadres' knowledge about the family planning program.

Conclusions: The Family Planning pocketbook affects cadres' knowledge and skills in changing couples of childbearing age perceptions about family planning.

Keywords: *cadres; family planning (KB); knowledge; pocketbook; skills*

#PBM-004

**ASIA-PASIFIC PARTNERSHIP ON HEALTH AND NUTRITION
IMPROVEMENT (APHNI) 2021****Local Community Acceptance of Pregnancy Education Through Culture-Based Comics in
Silaen Village, Toba Regency, North Sumatra Province**Siti Nurmawan Sinaga^{1*}, Albiner Siagian², Nurmaini³, Badaruddin⁴¹Doctoral Student, Faculty of Public Health, Universitas Sumatera Utara²Department of Community Nutrition, Faculty of Public Health, Universitas Sumatera Utara³Department of Environmental Health, Faculty of Public Health, Universitas Sumatera Utara⁴Faculty of Social Science and Politics, Universitas Sumatera Utara*Correspondence: sitinurmawan@gmail.com**ABSTRACT**

Background: Maternal death is still a big concern in the world. Indonesia recorded the highest maternal mortality rate in the ASEAN region, with 305 deaths per 100,000 live births. Many maternal deaths are caused by conditions during pregnancy including hypertension, complications and infections. All of these factors can be prevented if pregnant women are given the opportunity to focus more on their pregnancy care. Because pregnant women live in a cultural context, the support from their social environment is crucial. The gain social support, medium for communicating maternal health messages in the local culture is important.

Objectives: This study aims to compile and to test the acceptance of educational comics to rural communities about the support needed by pregnant women.

Methods: The research is a quasi-experimental in which comics with images of Batak cultural figures are composed using information from FGDs and in-depth interviews with 10 pregnant women and their husbands, 3 FGDs with health workers and community leaders, and 5 in-depth interviews with traditional leaders.

Results: The comics were measured its acceptance in Silaen Village, Toba Regency, North Sumatra Province. The acceptance assessments used a scale of 1-10 on the appearance of the book (8 questions) and the value contained in the book (6 questions). Based on the questionnaire the average book appearance was 9.17, while the book value was 9.58.

Conclusion: It can be concluded that a culture-based education model is highly needed.

Keywords: *local culture; comics; pregnancy; community acceptance; maternal health*

#PBM-005

ASIA-PASIFIC PARTNERSHIP ON HEALTH AND NUTRITION IMPROVEMENT (APHNI) 2021

Mezile's Model (Back Massage And Self-Hypnosis) Based on Information and Technology to Lose The Anxiety of Post Partum Mothers in COVID-19 Pandemic Era

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ABSTRACT

Background: the roles of husbands to keep the psychological condition of pregnant and post-partum mothers are low. Many husbands could not perform full attention and support during the pregnancy, delivery, and post-partum period. Heretofore, the researchers do not find studies that include the roles of the husband from antenatal until postnatal care during the Covid-19 pandemic.

Objectives: This research aims to create Mezile's model in the form of back massage and self-hypnosis based on information and technology with adequate design and effective implementation to lose the anxiety of post-partum mothers. This model also involved husbands taking the role from the antenatal until postnatal care.

Method: This Research & Development used a true experimental design with pre and post-test control group design. The researchers used simple random sampling. The subjects consisted of 50 participants in the experimental group and 50 participants in the control group. The experimental group received the intervention with self-hypnosis training, while the husbands of the experimental group received back massage training. The husbands in the control group received only back massage training. The intervention lasted from the second until the fifteenth day after normal delivery. Then, mothers with post sectio Caesarea received the training on the eighth until the twenty-first day. The researchers used Wilcoxon and Mann-Whitney tests.

Results: Mezile's model refers to back massage and self-hypnosis based on information and technology. It was reliable as the holistic-based education media to apply effective management to lose anxiety (p-value 0.03), higher than the control group.

Conclusion: Mezile's model, back massage, and self-hypnosis, based on information and technology, is reliable for obstetric care education based on holistic nature during the pregnancy and post-partum period. The implementation was effective in managing the anxiety of post-partum mothers in the control group.

keywords: *mezile's model; back massage; self-hypnosis; post-partum mothers; COVID-19*

#PBM-006

ASIA-PASIFIC PARTNERSHIP ON HEALTH AND NUTRITION IMPROVEMENT (APHNI) 2021

Association Between The Availability Of Personal Protective Equipment And The Anxiety Of Midwives When Providing Antenatal Care (ANC) Services During The Covid-19 Pandemic

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ABSTRACT

Background: The increase in the number of Covid-19 cases took place quite quickly and spread to various countries in a short time. Indonesia ranks 13th in the world for Covid-19 cases, with a total of 4.1 million positive cases of COVID-19 and 134,000 deaths. Central Sulawesi Province occupies the 20th position in Indonesia, and the City of Palu occupies the first position in the Covid-19 case in Central Sulawesi Province. Maternal and neonatal health services are one of the services affected both in terms of access and quality. The critical role of midwives in providing midwifery services during a pandemic makes them more vulnerable to anxiety. Antenatal care services during the Covid-19 pandemic have changed, namely midwives must use level 1 personal protective equipment when providing services. Difficulties in fulfilling personal protective equipment can cause anxiety in midwives in providing antenatal care services during the Covid-19 pandemic.

Objectives: This study aims to determine the association between the availability of personal protective equipment and the anxiety of midwives when providing antenatal care (ANC) services during the Covid-19 pandemic.

Methods: This study used an analytic observational research design with a cross-sectional design. Population in this study were all midwives who worked at the Mabelopura, Birobuli and Bulili Health Center, with the total population sampling (56 respondent). Data analysis technique used bivariate analysis with a chi-square test.

Results: The results of the statistical test analysis showed that there was a association between the availability of personal protective equipment and the anxiety of the midwife with a significant value (p-value $0.01 < 0.05$).

Conclusions: There is a significant association between the availability of personal protective equipment and the anxiety of midwives when providing antenatal care services during the Covid-19 pandemic. The availability of personal protective equipment according to standards must be met by the puskesmas.

Keywords: *personal; protective; equipment; midwife; antenatal; care.*

THEME 2: Natural Medicine- Clinical Pharmacy, Alternative Medicine

#NAC-001

**ASIA-PASIFIC PARTNERSHIP ON HEALTH AND NUTRITION
IMPROVEMENT (APHNI) 2021****Screening and Antidiarrheal Activity Test of Sembung Rambat (*Mikania micrantha*) Leaves**Arif Ardianto¹, Dena Munarsih¹, Iin Nur Rahayu¹, M.Muzhil Aslam¹, M.Fahrul Aditya², Daru Estiningsih^{1*}¹Pharmacy Departement, Faculty of Heealth Sciences, Alma Ata University²Informatics Departement, Faculty of Computer, Alma Ata University*Correspondence: daru_estiningsih@almaata.ac.id**ABSTRACT**

Background: The prevalence of diarrhea in Indonesia is very high. It cause morbidity and mortality rate in toddlers increase. Every year more than 1.3 billion toddlers have diarrhea and 3.2 million experience death from diarrhea. Based on empirical evidence in Pelita Jaya Pesisir Selatan, Pesisir Barat Lampung , the leaves of sembung rambat (*Mikania micrantha*) usually use to treat diarrhea, rheumatic and bloody wound. In addition, there are resourceful compounds, alkaloid that are able to reduce or inhibit the disposal of residual substances from the body.

Objectives: The aim of this research is to prove the potential effect of sembung rambat (*Mikania micrantha*) leaf extract as antidiarrheal agent by screening and pharmacological tests in Swiss male mice.

Methods: The antidiarrheal effect was tested using intestinal transit method of diarrhea in mice induced Oleum ricini.

Results: The result of phytochemical screening showed the presence of alkaloids are tannins, flavonoids and saponins. The result of measuring the length of the marker on the length of the intestine (ratio) after t = 65 minutes showed that the ethanol extract of sembung rambat (*Mikania micrantha*) leaf had an antidiarrheal activity with a dose variation of 100 mg/Kg BW; 150 mg/Kg BW; 200 mg/Kg BW.

Conclusions: The most effective dose is 200 mg/Kg BW because its ratio close to the positive control group.

Keywords: *antidiarrheal activity; Mikania micrantha (sembung rambat); intestinal transit*

#NAC-002

**ASIA-PASIFIC PARTNERSHIP ON HEALTH AND NUTRITION
IMPROVEMENT (APHNI) 2021****Pharmacological Study: Combination of Cinnamon Bark and Ginger
Ethanol Extracts as Antidiabetic**Eva Nurinda^{1*}, Nurul Kusumawardani², Ari Susiana Wulandari², Annisa Fatmawati³¹ Departemen of Pharmacology, Alma Ata University, Bantul, Yogyakarta² Departemen of Clinical Pharmacy, Alma Ata University, Bantul, Yogyakarta³ Departemen of Herbal Pharmacy, Alma Ata University, Bantul, Yogyakarta*Correspondence : evanurinda@almaata.ac.id**ABSTRACT**

Background: Cinnamon has been widely used by Indonesian people as a complementary therapy to treat hyperglycemia such as in diabetes mellitus patients. While ginger is also used as a mixture in traditional anti hyperglycemia herb. There is not known how much antidiabetic effect of cinnamon ethanol extract when combined with ginger, and not many studies have analyzed the correlation of lowering blood glucose levels associated with increasing of insulin of this combination.

Objectives: This study aimed to pharmacologically evaluate the decrease of blood glucose level and its relationship with the insulin level of the blood due to intervention compared with glibenclamide.

Methods: This pharmacological study used wistar strain male rats under hyperglycemia condition induced by streptozotocin at a dose of 45mg/kg. Sample were grouped with 6 animals in each where there was a positive and negative control group and also an intervention group given ethanol extract for 14 days.

Results: The result showed that all intervention groups experienced an increase in insulin levels and a decrease in blood glucose levels after 14 days. The One Way Anova test showed that the increase of insulin levels treated with combination of ethanol extract cinnamon bark at the dose 150mg/200gr and ginger ethanol extract at the dose 100mg/200gr was comparable to glibenclamide ($p=0.355$), but the decrease in blood glucose levels between groups showed a difference that was not statistically significant. There was a relationship between insulin levels and blood glucose levels linearity with the equation $y= 17.00 - 5.90x$.

Conclusions: Cinnamon bark and ginger can increase insulin levels which potential to control blood glucose levels in hyperglycemic conditions.

Keywords: *insulin; blood glucose; hyperglycemic; cinnamon; ginger.*

#NAC-003

**ASIA-PASIFIC PARTNERSHIP ON HEALTH AND NUTRITION
IMPROVEMENT (APHNI) 2021****The Effect of Katuk Leaf Juice to Hemoglobin Levels in Pregnant Women Trimester II With
Anemia**Rani Widiyanti Surya Atmaja¹, Ellen Tri Bonowati¹, Nurasih¹¹ Poltekkes Kemenkes Tasikmalaya
Jalan Pemuda No 38 Cirebon*Correspondence : rani.widiyanti.s@dosen.poltekkestasikmalaya.ac.id**ABSTRACT**

Background: During pregnancy anemia is one of the most common problems encountered. Consuming katuk leaf (*Sauropus androgynous*) is one of solution to overcoming cases of anemia.

Objectives: This study aims to determine the effect of katuk leaf on hemoglobin levels in pregnant women in trimester II with anemia in the working area of Beber Public Health Center, Cirebon Regency

Methods: The research design used in this research was a quasi experiment with a pretest and posttest design with a control group design. The whole sampling technique was carried out using non-probability sampling with accidental sampling method. The total sample in this research were 30 trimester II pregnant women with anemia. were given treatment. The control group only consumed Fe tablets and the treatment group consumed the combination Fe katuk leaf juice. The statistical test in this research used paired T-test analysis, Wilcoxon Sign Rank Test and Independent T-Test..

Results: In this research, anemia was mostly found at the age of 20-35 years where as parity for pregnant women was found in primigravidas. The results showed that the average pretest and posttest hemoglobin levels increased. In the control group namely 9.86 mg / dL and 9.90 mg / dL and increased pretest and posttest hemoglobin levels. In the treatment group 9.92 mg / dL and 10.52 mg / dL so that there is a difference in the increase in hemoglobin levels. In the treatment group with the difference between the two groups of 0.56 and p-value = 0.00 < α (0.05). This shows that there is an effect of katuk leaf juice on hemoglobin levels in pregnant women in the second trimester with anemia.

Conclusions: There is an effect of katuk leaf juice on hemoglobin levels in pregnant women in trimester II with anemia..

Keywords: *katuk leaf; anemia; pregnant women*

#NAC-004

**ASIA-PASIFIC PARTNERSHIP ON HEALTH AND NUTRITION
IMPROVEMENT (APHNI) 2021****The Effect Of *Strobilanthes Crispus* On Blood Glucose Levels And Lipid Profile Of
Streptozotocin-Induced Diabetic Rats**

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ABSTRACT

Background: Diabetes mellitus (DM) is a metabolic disease that are currently suffered due to changes in unhealthy eating patterns, lack of physical activity, obesity, smoking habits, and family history. *Strobilanthes crispus* (SC) contains antioxidant compounds which are known to have a hypoglycemic effect on long-term intervention in non-diabetic samples.

Objective: The purpose of this study was to determine the effect of SC administration on blood glucose levels and blood serum lipid profiles in DM-induced Wistar rats using STZ. A total of 30 rats were divided into 5 treatment groups, namely normal control, diabetic control, diabetic intervened with glibenclamide, 3.2% and 16.8% *S.crispus* water extract. Blood samples were collected from retro orbital vein for glucose and lipid profiles measurement before and after STZ-diabetic inducement and 14 d after the intervention. Data were then analyzed statistically by one-way analysis of variance (ANOVA) continued with Duncan's Multiple Range Test (DMRT).

Results: The results showed that the rats experienced hyperglycemia after STZ induction accompanied by changes in lipid profiles. The presence of SC administration starting at a concentration of 3.2% for 14 days was able to reduce blood glucose levels, but effective administration at a dose of 16.8% had a good effect on reducing triglyceride levels, total cholesterol, LDL cholesterol, and increasing HDL cholesterol levels.

Conclusion: The study proved that SC provided good hypoglycemic effect and improvement of lipid profile at concentration of 16.8% SC

Keywords: *diabetes mellitus; strobilanthes crispus; blood sugar; lipid profile; rat*

#NAC-005

ASIA-PASIFIC PARTNERSHIP ON HEALTH AND NUTRITION IMPROVEMENT (APHNI) 2021

Effect of Porang (*Amorphophallus oncophyllus*) flour with *Strobilanthes crispus* maceration blood glucose level and lipid profile in streptozotocin-induced diabetic rats

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ABSTRACT

Background: *Amorphophallus oncophyllus* is a local functional food that has low glycemic index value, high fiber and rich in glucomannan. The high presence of calcium oxalate in *Amorphophallus oncophyllus* caused itching and kidney stones. Recent studies confirmed that *Strobilanthes crispus* have the ability to decrease calcium oxalate content.

Objectives: This study was to determine the effect of pure *Amorphophallus oncophyllus* flour and with *Strobilanthes crispus* maceration on blood glucose and lipid profile level in streptozotocin-induced diabetic rats.

Methods: This method is true experimental design with pretest - posttest control group design. The rats were divided into 5 groups: negative control group, positive control group, comparative group in the glibenclamide drug, the treatment group 1 with pure *Amorphophallus oncophyllus* flour, the treatment group 2 is *Amorphophallus oncophyllus* flour with *Strobilanthes crispus* maceration. Measurements of blood glucose level, measure of High-Density Lipoprotein (HDL), Low-Density Lipoprotein (LDL) and Triglyceride levels were performed 3 times before streptozotocin induction, at the 4th day, 7th day and 14th days. Data were analyzed using One Way ANOVA and continued with Duncan's test.

Results: After 14th days intervention, *Amorphophallus oncophyllus* flour with *Strobilanthes crispus* maceration decreased blood glucose levels by 91.28 mg/dL compared to pure *Amorphophallus oncophyllus* flour only reduced blood glucose levels by 60.66 mg/dL ($p=0.05$) and showed a significant decrease in triglycerides by 34.25 mg/dL and LDL by 29.38 mg/dL with $p<0.05$. *Amorphophallus oncophyllus* flour with maceration of *Strobilanthes crispus* (by 28.25 mg/dL) was greater than that only pure flour (10.96 mg/dL) in increasing HDL levels ($p<0.05$)

Conclusion: *Amorphophallus oncophyllus* flour with *Strobilanthes crispus* maceration can lower blood glucose levels and lipid profile (Triglyceride, LDL and HDL) better than pure *Amorphophallus oncophyllus* flour.

Keywords: *Amorphophallus oncophyllus*; blood glucose; Diabetes mellitus; lipid profile; HDL; LDL; *Strobilanthes crispus*; triglyceride

#NAC-006

ASIA-PASIFIC PARTNERSHIP ON HEALTH AND NUTRITION IMPROVEMENT (APHNI) 2021

Formulation, Evaluation of Physical Properties and Antioxidant Activity Test of Moringa Leaf (*Moringa Oleifera* L.) Ethanolic Extract Capsules with DPPH Method

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ABSTRACT

Background: Free radicals are unstable electrons because they do not have an electron pair so they tend to want to bind electrons around them. Flavonoid compounds, more precisely, quercetin compounds can act as natural antioxidants that have hydroxy groups to bind to free radicals so that they are more neutral. Prevention and therapy of Covid-19 can use supplements that contain antioxidants.

Objectives: This research was conducted to formulate Moringa leaf (*Moringa oleifera* L) ethanol extract capsules and to determine the antioxidant activity of Moringa ethanol extract capsule formulations.

Methods: This type of research is a laboratory experimental study, starting with testing the total flavonoid levels in solutions with concentrations of 20, 40, 60, 80 and 100 ppm using the UV-Vis spectrophotometric method. Evaluation of physical properties of 96% Moringa leaf ethanol extract capsules included moisture content test, granule angle of repose test, granule flow property test, capsule weight uniformity test and capsule disintegration time test. Antioxidant activity test using the DPPH method with two samples, namely 96% Moringa leaf ethanol extract capsules with formulas I, II, III, quercetin as a comparison.

Results: The results of the evaluation of 96% Moringa leaf ethanol extract capsules showed that formula II (PVP 50 mg) had good physical properties. Testing the antioxidant activity of capsules of ethanol extract of Moringa leaves formulas I, II, III, quercetin obtained IC₅₀ values of 44.0 ppm, 40.2 ppm, 46.4 ppm, 4.80 ppm with ANOVA test results of 0.458 ($p > 0.05$) showed that there was a difference but not significant.

Conclusion: The evaluation of the ethanol extract capsules of Moringa leaf formula II, met the parameters of a good capsule evaluation test requirement and had very strong antioxidant activity seen from the acquisition of the IC₅₀ value. The antioxidant properties of Moringa leaf extract capsules will improve the immune system and clinical trials need to be carried out on patients to become candidates for Covid-19 prevention and therapy supplements.

Keywords : *antioxidant; capsule; COVID-19; Moringa oleifera L*

#NAC-007

ASIA-PASIFIC PARTNERSHIP ON HEALTH AND NUTRITION IMPROVEMENT (APHNI) 2021

The Effectiveness of Red Betel Leaf and Cinnamon Oil for Anti-bacterial and Anti-Inflammatory in Perineal Tears: a Scoping Review

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ABSTRACT

Background: A tear in the perineum experienced by post-partum women can occur due to an episiotomy process or a spontaneous tear. This cloak, in addition to causing curiosity, can also cause infection if not treated or treated appropriately. Based on several research results, the current treatment for perineal tears is the administration of antiseptic, anti-pain and antibiotics orally or topically. Several Indonesian herbal plants can be used to accelerate the healing of torn wounds in the perineum due to the ability of these plants as antibacterial and anti-inflammatory. These plants include red betel leaf and cinnamon oil.

Objectives: to review the literature from research results that discuss the activity of red betel leaf and cinnamon oil as anti-bacterial and anti-inflammatory both orally and topically.

Method: Searching for articles through databases on Google Scholar, in the last years i.e. 2008-2021. Inclusion: Review articles involving research on experimental animals with in vitro and in vivo activity tests using the Completely Randomized Design method.

Results: as well as 12 relevant articles showed that both red betel leaf and cinnamon oil were tested in vitro and in vivo, showing that these two plants effectively act as antibacterial and anti-inflammatory.

Conclusion : Two herbal plants red betel leaf and cinnamon oil have the potential to treat and accelerate the healing of perineal tears through their anti-inflammatory and anti-bacterial activities.

Keywords: *red betel leaf, cinnamon oil, anti-inflammatory, anti-bacterial, perineal tears*

#NAC-008

ASIA-PASIFIC PARTNERSHIP ON HEALTH AND NUTRITION IMPROVEMENT (APHNI) 2021

Improving Diabetic Foot Ulcer Healing with Adjuvant Bitter Melon Leaf Extract (*Momordica charantia* L.)

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ABSTRACT

Background: Diabetic foot ulcer (DFU) patients often experience delays in the healing process.

Objective: This study aims to examine the adjuvant administration of bitter melon leaf extract to increase the healing of diabetic foot ulcers.

Methods: This study used a randomized, double-blind, placebo-controlled trial. A total of 30 DFU patients with a PEDIS score of 1-8 who met the criteria were divided into 2 groups, namely the treatment group with adjuvant administration of bitter melon leaf extract at a dose of 6 g/day as many as 15 patients and the control group 15 patients with placebo. This intervention was carried out for 4 weeks. DFU cure was measured by PEDIS scores at baseline, weeks 2, 3 and the end of week 4. Data were analyzed using paired t-test and independent t-test.

Results: After 4 weeks of treatment, the PEDIS score in the treatment group decreased at week 2 (0.9 ± 1.8), but not significant ($p=0.19$), decreased at week 3 (1.9 ± 1.9) and significant ($p=0.01$), decreased in week IV (2.3 ± 2.1) and significantly ($p=0.001$). The control group experienced a decrease in week 2 (0.3 ± 2.3), but not significant ($p=0.71$), decreased in week 3 (1.2 ± 2.5), but not significant ($p=0.18$), decreased in week 4 (1.9 ± 2.7) and significantly ($p=0.03$), and there was an effect of adjuvant administration of bitter melon leaf extract on the cure of DFU ($p=0.004$).

Conclusion: Adjuvant administration of bitter melon leaf extract has been shown to increase the healing of DFU.

Keywords: *bitter melon; Momordica charantia* L.; *diabetic foot ulcer; ulcer healing*

#NAC-009

**ASIA-PASIFIC PARTNERSHIP ON HEALTH AND NUTRITION
IMPROVEMENT (APHNI) 2021****Herbal Medicine on Response Immune Patient with Covid-19 Infection
A Scoping Review**

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ABSTRACT

Background: Covid-19 has spread through the world and has caused a global pandemic. There is a lot of evidence that taking herbal medicines could increase the immune response but otherwise, the relation of herbal medicine and inflammation factors that leads to cytokine storm is still discussing.

Objective: The purpose of this article is to review the evidence of herbal medicine on the immune response of patients with Covid-19 infection.

Method: We conducted a scoping review on the PubMed and Science Direct databases from January 1 to April 2020 by using searching terms "COVID-19", "SARS-CoV2 Infection", "Herbal Medicine" AND "Immune Response Or "Humoral Immune, Response". We use only scientific articles that discuss herbal medicine and its effect on the immune response.

Result: There were 5 articles included in the analysis, The characteristics of the articles were published and many types of herbal medicines are used to maintain symptom management and to enhance the patient's immune response, including purpurea extracts, longa, Echinacea, QPD (qingfei paidu) And Western medicine, Jiedu Capsule (SFJDC), Yidu-toxicity blocking lung decoction and Ayush Kwath

Conclusions: Herbal medicines may have the ability to regulate the production and release of proinflammatory cytokines, interfere with viral development in host cells, and modify certain molecular pathways. Herbal agents may be useful as a treatment against COVID-19 and clinical trials of this herbal agent for COVID-19 have not been specifically carried out, so further investigation is needed in this regard.

Keywords: *herbal medicine; COVID-19; cytokine storm*

#NAC-010

ASIA-PASIFIC PARTNERSHIP ON HEALTH AND NUTRITION IMPROVEMENT (APHNI) 2021

The Effectiveness of Cabbage Compresses (*Brassica Oleracea Var Capitata*) With Aloe Vera Compress On Reducing Pain Of Breast Supplement In Post Partum Mothers At Kamonji Public Health Center

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ABSTRACT

Background: Pain was the body's way of telling us that something was wrong. Breast engorgement caused pain which affected the breastfeeding process. In the Kamonji Health Center area, there were 47 postpartum mothers who experienced breast pain.

Objectives: The purpose of this study was to determine the difference in the effectiveness of giving cabbage compresses (*brassica oleracea var capitata*) with aloe vera compresses to reduce breast swelling pain in postpartum mothers in the Kamonji Health Center area.

Methods: This type of research was a quasi-experimental with a two-group pretest-posttest design. The sampling technique was consecutive sampling with samples $n_1=n_2=15$ for each group of cabbage compresses and aloe vera compresses. The analysis used univariate and bivariate.

Results: The results of statistical test analysis using the Paired Sample T-test showed that there was a difference in the effectiveness of cabbage compresses (*brassica oleracea var capitata*) with aloe vera compresses on reducing breast pain in postpartum mothers in the Kamonji Health Center area. The researcher obtained (sig value = $0.000 < 0.05$). The cabbage compress was more effective than the aloe vera compress with an average difference of 0.267. The results showed that there was a difference in the effectiveness of giving cabbage compresses with aloe vera compresses on reducing breast swelling pain in post partum mothers in the Kamonji Health Center area.

Conclusions: This study concluded that postpartum mothers who experienced breast swelling pain could apply cabbage compresses with aloe vera compresses as a non-pharmacological therapy to reduce breast swelling.

Keywords: *compress; cabbage; aloe vera; pain*

#NAC-011

**ASIA-PASIFIC PARTNERSHIP ON HEALTH AND NUTRITION
IMPROVEMENT (APHNI) 2021** **α -glucosidase Inhibitory Effect of Jengkol (*Archidendron pauciflorum*) Fruit Peel Extract for
Type II Diabetes**Firdaus^{1*}, Risti Kurnia Dewi¹, Sheryn Priyulkif¹, Rasyid Avicena¹, Salsabil Naqiyah¹¹Department of Nutrition, Andalas University, padang, 25175, Indonesia*Correspondence: norifumi.curly@gmail.com**ABSTRACT**

Background: Diabetes Mellitus / DM is a metabolic disease involving inappropriately elevated blood glucose levels. There's as been an enormous interest in the development of alternative medicine for type-2 diabetes mellitus, explicitly screening for phytochemicals with the ability to prevent glucose absorption. Inhibition of intestinal alpha-glucosidase delays the digestion of starch and sucrose. Jengkol fruit peel decoction is empirically believed to control blood glucose.

Objectives: This study aimed to provide In vitro evidence for potential inhibition of α -glucosidase as a 50% reduction of α -glucosidase activity.

Methods: The ethanol extract of jengkol fruit peel was obtained by maceration of powder of plants using 96% ethanol. Inhibition test was divided into reactions with extracts compare with Acarbose. The concentration extract used to kinetics test is the concentration that could inhibit the enzyme by 50%. Both these tests measure the absorbance was read using ELISA reader. IC₅₀ results obtained from linear regression of absorbance vs. concentration of the extract.

Results: The result showed that jengkol fruit peel extract can inhibit the activity of α -glucosidase enzyme with an IC₅₀ obtained form this research is 10.12 μ g/ml. IC₅₀ of acarbose is 3.44 μ g/ml.

Conclusions: The present study suggest that the extract of *Archidendron pauciflorum* has a good potency as antidiabetic candidate, especially to treat type II diabetes mellitus.

Keywords: *jengkol; archidendron pauciflorum; diabetes; α -glucosidase*

#NAC-012

ASIA-PASIFIC PARTNERSHIP ON HEALTH AND NUTRITION IMPROVEMENT (APHNI) 2021

Analysis of Fiber, and Organoleptic Tests of Tempeh Nugget with Okra Substitution

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ABSTRACT

Background: Tempe is a typical Indonesian food that is famous for being nutritious, affordable, and a source of protein. Nuggets are known as raw materials for meat, fish, or shrimp, but nuggets with tempeh as raw materials are rarely processed. Processed tempeh nuggets and additional okra provide additional nutritional value.

Objectives: To determine the content of protein, fiber, and organoleptic tests on processed tempeh nugget products with okra substitution.

Methods: Experimental design research was conducted to determine the effect of adding okra and tempeh on nutritional content and acceptability. A total of three treatments and three repetitions were carried out in the development of this product. Semi-trained panelists selected as many as 30 people to test organoleptic products. Statistical analysis with ANOVA test was performed using SPSS version 24.0.

Results: The results of this study indicate that the formulation between tempeh and okra affects the color, taste, and aroma of the product ($p < 0.05$), but not on the texture ($p = 0.06$). Protein content of the product has increased significantly with 65% Okra and 35% tempeh formulation. The fiber content in the product did not have a significant difference between the combination of tempeh and okra ($p = 0.38$).

Conclusion: The combination formula of tempeh and okra has significant impact on the level of preference in color, flavor, aroma, and increases the protein content of the tempeh nugget product.

Keywords: *fiber; okra; organoleptic analysis; protein; tempe nugget*

#NAC-013

ASIA-PASIFIC PARTNERSHIP ON HEALTH AND NUTRITION IMPROVEMENT (APHNI) 2021

Snackbar Formulation Made from Red Bean Flour and Soybean Flour with The Addition of Bit Fruit Flour (*Beta Vulgaris. L*) as Alternative Food Source of Iron for Adolescent Girls

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ABSTRACT

Background: In Indonesia, the prevalence of anemia in adolescent girls increased from 37.1% (Riskeddas 2013) to 48.9% (Riskesdas 2018). Snackbar is one of the snacks favored by teenagers. The addition of beetroot flour as a source of iron into snackbar is expected to be an alternative healthy snack for adolescent girl. Therefore, it is necessary to research the snack bar formulation and analyze the nutrition contain.

Objectives: The objective of this study was to develop snack bar formulation and analyzed the nutrition contain.

Methods: This study used the experimental design. The snackbar was carried out into two stages, first stage to determine the best formula without adding beetroot flour and the second stage, with the addition of beetroot flour at the following amounts: 40 g (F1), 50 g (F2), and 60 g (F3). Nutrition contain of all of the formula was analyzed.

Results: The best formula was substituted 40 g (F1) beetroot flour which contain of 11,99% protein; 10.62% fat; 53,04% carbohydrate; 4,76 mg iron (32% provided Fe from the RDA of adolescent girl), with total an energy was 355.75 kcal/100 g.

Conclusions: Beetroot flour could be used to improve nutrient profile of snack bars, which could be used to fulfill the nutrient needs of adolescents, especially for iron. For the next research, a new formulation is needed by adding animal protein sources to increase iron absorption.

Keywords: *adolescent; beetroot; flour; iron; snackbar*

#NAC-014

ASIA-PASIFIC PARTNERSHIP ON HEALTH AND NUTRITION IMPROVEMENT (APHNI) 2021

Potential of Indonesian Community Food Sources which are rich in fiber as an alternative staple food for type 2 diabetics: A scoping review

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ABSTRACT

Background: Staple foods as a source of carbohydrates contribute most of human energy needs. Based on Perkeni's recommendation, diabetic patients can consume at least 45-60% of carbohydrate sources. In addition, several previous studies have shown that increasing the adequacy of dietary fiber above 20-25 g/day can improve glycemic control.

Objectives: Our scoping review investigated the potential of Indonesian food sources, namely sorghum and corn as a source of carbohydrates and also fiber as a substitute rice for diabetic patients.

Methods: We systematically used electronic databases searched such as PubMed, ScienceDirect, Web of Science, Portal Garuda, Sinta Ristekbrin, and Google Scholar. We choose the relevant documents used experimental animals and humans studies then published between 2011 and 2021 .

Results: In total, fifteen relevant articles that discuss the relationship between giving corn or sorghum with blood glucose levels of animal studies and human. Some studies showed the effect of eating sorghum or its derivatives can reduce blood glucose. As well as the other articles indicated eating corn or its derivatives also decrease glycemic response of healthy people and experimental animals. Corn and sorghum contain dietary fiber in the form resistant starch and have low glycemic index compare with white rice. Furthermore, corn also contain essential fat, mineral, β -Carotene and isoflavone. While sorghum also include phenolic components such as phenolic acids and flavonoids.

Conclusions: Sorghum and corn have the potential as an alternative staple food to achieve a better glycemic response in diabetic patients.

Keywords: *staple food; sorghum; corn; fiber; diabetic patient*

#NAC-015

ASIA-PASIFIC PARTNERSHIP ON HEALTH AND NUTRITION IMPROVEMENT (APHNI) 2021

**The effect of additional flour of bean sprouts on organoleptic
quality and nutritional content of semprong cake**

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ABSTRACT

Background: The value of macronutrients contained in bean sprouts at the age of 24 hours, namely protein 30.47%, fat 0.44%, carbohydrates 65.97%. Sprouts have nutrients that are more easily absorbed by the body.

Objectives: The purpose of the study was to determine organoleptic quality of the semprong cake which was added with bean sprout flour and nutritional content

Methods: Contain experimental information regarding what was done and how the study was performed. This study is an experimental study using a completely randomized design (CRD) with treatment A (100% rice flour), B (100% rice flour and 10% sprout flour), C (100% rice flour and 20% sprout flour), D (100% rice flour and 30% sprout flour). It was repeated twice. Parameters analyzed were organoleptic properties of semprong cake. Organoleptic test was by Analysis of variance (ANOVA) if significant, it was continued with the Duncan New Multiple Test (DNMRT). Analysis of the nutritional content was carried out in the laboratory of the research and industrial standardization center in the city of Padang. Nutritional analyze were water content, ash, fat, protein and carbohydrates, potassium and calcium

Results: There is an effect of adding sprouted flour to the aroma, texture and taste of the semprong cake. The result of this research is that the selected and preferred semprong cake is that which is added 20% of mung bean sprout flour from rice flour.

When compared with the control semprong cake, there was an increase in protein content. While the other nutritional content decreased. The nutritional content of the semprong cake is 4.30% water content, 1.17% ash content, 21.18% fat content, 7.30% protein content, and 53.36% carbohydrate content. When compared with the control semprong cake, there was an increase in protein content. While the other nutritional content decreased.

Conclusions: The semprong cake treatment C (100% rice flour and 20% sprouted flour) was the most preferred by the panelists and was the right formula and increase in protein content.

Keywords: *semprong cake; mung bean sprout flour; rice flour; and organoleptic*

#NAC-016

**ASIA-PASIFIC PARTNERSHIP ON HEALTH AND NUTRITION
IMPROVEMENT (APHNI) 2021****Characteristics of Streptozotocin-Nicotinamide Induced
Inflammation in Kidney Rat Models**Heru Sasongko^{1,4}, Arief Nurrochmad², Abdul Rohman³, Agung Endro Nugroho^{2*}¹Student of Doctoral Program, Faculty of Pharmacy, Universitas Gadjah Mada, Yogyakarta, 55281 Indonesia.²Department of Pharmacology and Clinical Pharmacy, Faculty of Pharmacy, Universitas Gadjah Mada, Yogyakarta, 55281, Indonesia.³Department of Pharmaceutical Chemistry, Faculty of Pharmacy, Universitas Gadjah Mada, Yogyakarta 55281, Indonesia⁴Department of Pharmacy, Universitas Sebelas Maret, Surakarta. 57126 Indonesia.*Correspondence: nugroho_ae@ugm.ac.id**ABSTRACT**

Background: Chemical agents such as streptozotocin (STZ) and nicotinamide (NAD) are utilized in animal models of diabetes mellitus and associated consequences in the kidneys. Many research have been conducted to investigate modeling, however the results are unclear. Diabetic nephropathy is considered to begin with an inflammatory reaction in the kidneys.

Objectives: The aim of this study was to investigate STZ and NAD induce inflammation in the kidney and their metabolic profile

Methods: Male Wistar rats were divided into control and STZ-induced diabetes. Half of the diabetes group received a single dose of nicotinamide (230 mg/Kg) 15 minutes after STZ injection. All groups were followed up for 6 weeks. The profiles of creatinine, urea, uric acid, albumin and protein from serum and urine were observed. Inflammation of the kidney was tested by immunohistochemistry (IHC) with IL-6 and TNF- α parameters.

Results: The findings of the tests indicated that using NAD to promote inflammation in STZ-induced diabetic rats made no significant difference. NAD, on the other hand, can help mice live longer and avoid problems throughout the test.

Conclusions: STZ-induced diabetic rats, using NAD can lead to inflammation. NAD administration is advised since it can help the rats live longer during the experiment.

Keywords: *diabetes mellitus; inflammation; niacinamide; streptozotocin*

#NAC-017

**ASIA-PASIFIC PARTNERSHIP ON HEALTH AND NUTRITION
IMPROVEMENT (APHNI) 2021****Overview of supplements and vitamins use in community during the covid-19
pandemic on society at one of the pharmacies in banjarmasin**Nazhipah Isnani^{1*}, Siti Halimah¹, Iqlima¹, Muhammad Zaini¹, Mulyani¹¹ Politeknik Unggulan Kalimantan, Jl. Pangeran Hidayatullah RT 14 Banjarmasin*Correspondence : isnainazhipah@gmail.com**ABSTRACT****Background:** This study aims to find out supplements and vitamins use of people during the Covid-19 pandemic at one of the pharmacies in Banjarmasin.**Objectives:** The purpose of this study describes and determines the percentage level of supplements and vitamins use during the Covid-19 pandemic.**Method:** The source of data in this study is secondary data obtained from taking daily sales reports of supplements and vitamins at the pharmacy.**Result:** The result of the study shows that the intake of vitamins and minerals, especially vitamins A, C, E, and zinc, during the Covid-19 pandemic must be considered because these components have antioxidants. In conclusion, the level of supplements and vitamins use during the Covid-19 does not increase significantly every month, the increase occurred only in certain months.**Conclusion:** This shows that the use of supplements and vitamins during the Covid-19 pandemic is assessed from several parameters including the type of supplement, indication, dosage, side effects, usage rules, and contraindications.**Keywords:** *suplements; vitamins; COVID-19*

THEME 3: Maternal and Child Health & Nutrition

#MCN-001

ASIA-PASIFIC PARTNERSHIP ON HEALTH AND NUTRITION IMPROVEMENT (APHNI) 2021

Stunting Program Analysis West Sumbawa District Health Office

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ABSTRACT

Background: Stunting is a chronic undernutrition status during growth and development since early life. Indonesia is included in the third country with the highest prevalence in the South-East Asia Regional (SEAR). The average prevalence of stunting under five in Indonesia in 2005-2017 was 36.4%. Indonesia includes stunting as one of the targets of the Sustainable Development Goals, which is included in the 2nd sustainable development goal, namely eliminating hunger and all forms of malnutrition by 2030 and achieving food security. The Stunting Rate of West Nusa Tenggara Province (NTB) is still above the national figure of 29.6%. the prevalence of under-five tengkes or stunting due to chronic malnutrition in NTB is still high, the stunting rate in NTB is 33%. This figure means that one in three children under five in NTB is short in stature below the average age due to chronic malnutrition, and in West Sumbawa Regency in 2018 it was 32.6%.

Objective: To find out the process of implementing the Stunting program at the West Sumbawa Regency Health Office in 2019.

Methods: Research using qualitative methods aims to explore and find out the policies of the Stunting prevention program at the Health Office of West Sumbawa Regency, Sampling using the proposive sampling method with a total sample of 4.

Results: Stunting Prevention Programs In 2019 there were 11 Priority Programs that were approved by the Government and OPD of West Sumbawa Regency, 5 Priority Programs for the Stunting Locus in Maluku, and 10 recommendation programs through APBDes in West Sumbawa Regency, and flagship programs in West Sumbawa Regency. is a Hearth Based on Local Food (Kelor), the implementation of 2 of the 5 Priority Programs in Mantun Village, Kec. Embarrassment Like Optimizing Parenting Classes and Alert Village Forums It has not run optimally with the inhibiting factor being the lack of community human resources participating.

Conclusion: Stunting Prevalence Reduction in West Sumbawa Regency in 2018 was 32.6%, 2019 was 18.3% and the preliminary results for 2020 were 12.3% and were the best in reflecting on the decline in Stunting in West Nusa Tenggara Province.

Keywords: *stunting; program; prevention; reduction reflective district*

#MCN-002

ASIA-PASIFIC PARTNERSHIP ON HEALTH AND NUTRITION IMPROVEMENT (APHNI) 2021

Relationship Of Mother's Occupational Status with Recovery Of Nutritional Status Of Stunting Child

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ABSTRACT

Background: Stunting is a nutritional problem that has a negative impact on the achievement of optimal growth and development in children. One of the causes of stunting is the lack of parental focus on providing balanced nutrition due to the busyness of parents.

Objective: This study aims to determine the relationship between maternal employment status and the restoration of the nutritional status of stunted children. Using descriptive correlation with cross sectional approach. The sample from this study was taken by accidental sampling technique, namely as many as 45 respondents.

Results: The analytical test used is the Chi-Square test. The results of the association were no significant (P-value > 0.05).

Conclusion: In conclusion, there is no relationship between the mother's employment status and the restoration of the nutritional status of stunting children in the region Tangerang District Health Office

Keywords: *balanced nutrition; employment status; stunting*

#MCN-003

ASIA-PASIFIC PARTNERSHIP ON HEALTH AND NUTRITION IMPROVEMENT (APHNI) 2021

Rapid Growth in Malnutrition Children Associated with Higher Systolic Blood Pressure in Adolescent

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ABSTRACT

Background: Based on some studies, rapid growth during early life might increase the risk of chronic disease. The most leading cause of death worldwide is cardiovascular disease, and Hypertension was the common risk factor. Studies that investigate the effect of rapid growth in early life on blood pressure in later life were limited.

Objectives: This study analyzed the association of rapid growth after first 1000 days of life and blood pressure at 17-19 years.

Methods: We analyzed 17 years follow up cohort using secondary data from Indonesian Family Life Survey wave 2 (1997), wave 3 (2000) and wave 5 (2014). Number of under 2 children included in the study were 672. Rapid growth was defined as a change in length or height per age and weight per age in z score, based on WHO Child Growth Standard, between 1997 and 2000 which greater than 0,67 for malnutrition children (low birth weight, stunted, underweight and wasting). Blood Pressure was measured three times by oscillometric method in 2014, the average was used to be analyzed. We used one way ANOVA (analysis of Variance) to assess the association of rapid growth on systolic blood.

Results: Children who experienced malnutrition at 0-2 years old with rapid growth on length or height had higher systolic blood pressure compared to normal children and children with malnutrition but not growth rapidly (p-value=0,029). Whereas, there was no difference of systolic blood pressure in children with malnutrition and rapid growth on weight.

Conclusions: Children who had history of malnutrition on early life (0-23 months) and had rapid growth on length or height after 1000 days of life, had higher systolic blood pressure compared with normal children and non rapid growth children even with history of malnutrition.

Keywords: *cohort study; blood pressure; malnutrition; rapid growth*

#MCN-004

ASIA-PASIFIC PARTNERSHIP ON HEALTH AND NUTRITION IMPROVEMENT (APHNI) 2021

The effect of eating behavior on the nutritional status of children (Aged 6-60 months)
in the working area of Mantrijeron Center, Yogyakarta

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ABSTRACT

Background: Childhood is a period of rapid growth and development. Therefore, the need for high nutrients must be met. Eating behavior in children plays an important role in their nutritional status. Inappropriate eating behavior will lead to an excess nutrient intake or, conversely, a lack of nutrition.

Objectives: To determine the effect of eating behavior on the nutritional status of children (aged 6-60 months) in the working area of Mantrijeron Health Center, Yogyakarta.

Methods: This study was descriptive-analytic research with a cross-sectional approach. Samples in this study were 33 respondents. The collected data were analyzed quantitatively using univariate analysis and bivariate analysis with the multiple linear regression analysis test.

Results: Based on the nutritional status, 6 children experienced undernutrition (18.2%), 26 children experienced good nutritional status (78.8%), and 1 child experienced overnutrition (3%). Furthermore, the behavior of removing food in the mouth was found in 7 children (21.2%). The behavior of holding food in the mouth was found in 7 children (21.2%). The behavior of refusing to eat by closing the mouth was found in 11 children (33.3%). The results of the analysis of the behavior of removing food on nutritional status indicated a sig value of 0.000 (< 0.05). Besides, the results of the analysis of the behavior of refusing food on nutritional status indicated a sig value of 0.040 (< 0.05). In addition, the results of the analysis of the behavior of holding food in the mouth on nutritional status indicated a sig value of 0.941 (> 0.05). Simultaneously, the results of the analysis of the eating behavior on the nutritional status of children indicated a sig value of 0.000 (< 0.05).

Conclusions: Eating behavior has an influence on the nutritional status of children (aged 6 – 60 months).

Keywords: *eating behavior, nutritional status, children.*

#MCN-005

ASIA-PASIFIC PARTNERSHIP ON HEALTH AND NUTRITION IMPROVEMENT (APHNI) 2021

Potential of Moringa Leaf Cookies to Increase Breast Milk Production in Postpartum Mothers

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ABSTRACT

Background: Exclusive breastfeeding is beneficial for babies and mothers. Efforts are needed to increase milk production so that mothers can continue to only breastfeed their babies. Moringa leaves can increase breast milk production because they contain flavonoids and polyphenols. Moringa leaf cookies were chosen because they are widely liked by nursing mothers, can be stored for a relatively long time, and their processing can minimize nutritional losses.

Objectives: To analyze the effectiveness of Moringa leaf cookies in increasing breast milk production

Methods: Quasy experiment with pretest-posttest non equivalent control group design. The number of samples was 46 respondents on the first day of primiparous postpartum mothers who were divided into two into 23 intervention groups given Moringa leaf cookies (125 grams/day) for 14 days and vitamin A, Fe tablets and 23 control groups were given Vitamin A and Fe tablets. In this study, milk production was measured through indicators of infant weight with the right level of accuracy. The analysis used in this study is the Paired T-Test, Independent T-Test and Multivariate Test

Results: There was a difference before and before being given Moringa leaf cookies in the intervention group, while the statistical test results obtained a p-value of 0.000 <0.05. There was a difference in body weight in the intervention group and the control group and the results of the statistical test p-value 0.000 <0.05.

Conclusion: Moringa leaf cookies (125gram/day) for 14 days were effective in increasing breast milk production based on the baby's weight.

Keywords: *cookies; moringa leaves; breast milk production*

#MCN-006

ASIA-PASIFIC PARTNERSHIP ON HEALTH AND NUTRITION IMPROVEMENT (APHNI) 2021

A Pilot Experimental Study of The Effectiveness Smartphone to Improve Mother's Knowledge In Neonatal Care

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ABSTRACT

Background: Infant's health during first 0-28 days is a crucial stage. Infant mortality data showed that 60-80% of all newborn deaths, occurring in the first six days of life in Indonesia. Furthermore, education about neonatal care through antenatal care activities are needed.

Objectives: To determine the effectiveness android-based smartphone to be media alternative choices in the pregnant women knowledge status about neonatal care.

Methods: A pilot study with a quasi-experimental: non-equivalent control group with a total of 31 respondents for each group was conducted from November 2019 to January 2000. Respondents were third trimester pregnant women who performed ANC at Puskesmas Banguntapan 1. The research instrument used a knowledge questionnaire and the android application "My Baby Care (MBC)". Data collection was carried out 3 times in the form of pre-test activities and socialization about the features of the MBC application; follow-up activities using WhatsApp Groups; and post-test activities. Paired t-test was created to compare pre-test and post-test group and independent sample t-test was created to compare the pregnant women's knowledge status between the two groups.

Results: The average age of the respondents in this study was 28.7 in the experimental group and 29.9 in the control group. The majority of respondents with high school education, not working, married over 20 years and have more than two children. There was no significant difference in the knowledge of respondents in the two groups about neonatal care before giving the intervention. Comparison of respondents' post-test between the two groups showed that health education using smartphones was more effective in increasing respondents' knowledge about neonatal care (MD = 4,354, p = 0.030).

Conclusions: The use of smartphone based android is more effective in increasing mother's knowledge. This technological innovation is very important in the implementation of health education in the antenatal care program

Keywords: *health education mother's knowledge; neonatal care; smartphone*

#MCN-007

ASIA-PASIFIC PARTNERSHIP ON HEALTH AND NUTRITION IMPROVEMENT (APHNI) 2021

Apps for Continuous Detection of Third Trimester Pregnant Women in Deli Serdang Regency, North Sumatra

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ABSTRACT

Background: Antenatal care is vital because its closely related to maternal mortality, neonatal mortality and even the health condition of children under five. Nationally, the ideal K1 is 86% and K4 drop to 74.1%. Ironically, there are three-quarters of provinces in Indonesia below the national average, including the North Sumatra Province. The North Sumatra Province even ranks in the bottom six of ANC access. The gap between K1 and K4 in North Sumatra Province reached 21%.

Objectives: This study aims to improve the KAP of third trimester pregnant women through apps.

Methods: A total of 20 the 3rd semester pregnant women in the Tanjung Morawa Health Center working area, Deli Serdang Regency, North Sumatra, were tested using the apps. In addition to information about the ANC visit schedule, the apps also contain modules on pregnancy, pregnancy care and the dangers of pregnancy.

Results: After 5 times of training, there was a significant increase in knowledge, with a score of 1.25 points ($p < 0.05$). The attitude component increased by 18.3 score points ($p < 0.05$) and the action component increased by 1.35 score points ($p < 0.05$).

Conclusion: In the interview, it was also revealed that pregnant women felt that they were getting very useful apps. Referring to this research, efforts are needed to continuously meet the needs of pregnant women by increasing the KAP needed by pregnant women with modifications using technology apps that are easy to use.

Keywords: *apps; north sumatra province; pregnant women; third semester*

#MCN-008

**ASIA-PASIFIC PARTNERSHIP ON HEALTH AND NUTRITION
IMPROVEMENT (APHNI) 2021****Calcium Intake Roles in Reducing Menstrual Pain**Ami Febriza^{1*}, Rosdiana Sahabuddin², Cindy Pratiwi Paradise³^{1*} Departement of Physiology, Faculty of Medicine and Health Sciences, University of Muhammadiyah Makassar, Indonesia² Departement of Obstetry and Gynecology, Faculty of Medicine and Health Sciences, University of Muhammadiyah Makassar, Indonesia³ Undergraduate Students, Faculty of Medicine and Health Sciences, University of Muhammadiyah Makassar, Indonesia*Correspondence: amifebriza@med.unismuh.ac.id**ABSTRACT**

Background: Dysmenorrhea or menstrual pain generally occurs in adolescents that characterized by such as spasmodic or stabbing pain of lower abdominal. The incidence of primary dysmenorrhea, especially in young women, is relatively high in the world. Calcium is one of the essential minerals that can affect the performance of muscles in the body. It needed for the body to contract muscles, including muscles in the reproductive organs during menstruation.

Objectives: This study aims to determine the role of calcium intake in reducing menstrual pain among adolescents.

Methods: This study was an observational study of first-semester undergraduate medical students with 127 respondents. Calcium intake was calculated by comparing calcium consumption with the Recommended Dietary Allowance (RDA) of Calcium, then categorized into insufficient calcium intake if calcium intake is < 960 mg/day and adequate calcium intake if calcium intake is > 960 mg/day. Menstrual pain was measured using Universal Pain Assessment Tool. Chi-square was used to determine the association between calcium intake and menstrual pain. An independent-sample t-test was used to determine means difference of calcium intake between respondents with mild and moderate menstrual pain.

Result: There was a statistically association between level of calcium intake daily and menstrual pain (p-value < 0.05). Calcium intake was lower in respondents with mild menstrual pain (679.82±179.79) than moderate pain (835.98±232.78).

Conclusions: It can be concluded that lower calcium intake had association with severity of menstrual pain.

Keywords: *calcium; dysmenorrhea; menstrual pain*

#MCN-009

ASIA-PASIFIC PARTNERSHIP ON HEALTH AND NUTRITION IMPROVEMENT (APHNI) 2021

Effectiveness of Preconception Care for Improving pregnancy outcome: Scoping Review

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ABSTRACT

Background: Preconception Health Services have not received enough attention in Indonesia, although preconception health services can be an opportunity to prepare for the health of pregnant women early. Indicators, guidelines, and series of preconception health services have not been standardized by the Ministry of Health. A systematic review is needed that discusses the effectiveness of preconception health services that have been studied. So that it can be concluded that the picture of preconception health services is effective and following the needs of the community.\

Objectives: To discover updating research article about pruritus in Pregnancy

Methods: Articles were searched through databases in Pubmed, Google Scholar, and EBSCO in the last 10 years i.e. 2008-2019. Inclusion: Review articles involving research on humans with quantitative design include Randomised Controlled Trials (RCTs), RCTs Clusters, Experimental Quasi, pre-post interventions, cohorts, and cross sectionals. The study respondents were women of childbearing age.

Results: 16 articles meet the criteria and a review based on the quality assessment of the article using the Quality Assessment Tool for Quantitative Studies (EPHPP QAT) shows 6 weak quality articles, 8 medium quality articles, and 2 strong quality articles. Health services provided during preconceptions can improve the quality of outcomes of pregnancy, childbirth, postpartum, and infant, including improving maternal health and improving maternal behavior in maintaining health. Further research is needed to find out the effectiveness of each existing intervention and the modified intervention of an existing intervention.

Conclusion: Pruritus in pregnancy requires taking a thorough history and complete physical examination. The dermatoses of pregnancy should be considered in the differential diagnosis of pruritus and managed accordingly. An accurate diagnosis must be made owing to the fact that some of these conditions are associated with an increased risk of adverse fetal outcome. The effectively treatments must be improved and discovered and considered safe in pregnancy

Keywords: *discomfort in pregnancy; pregnancy; pruritus; systematic review*

#MCN-010

ASIA-PASIFIC PARTNERSHIP ON HEALTH AND NUTRITION IMPROVEMENT (APHNI) 2021

Women's Experience in The Management of Gestational Diabetes Mellitus During and After Pregnancy in Yogyakarta: A Phenomenology Study

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ABSTRACT

Background: Gestational Diabetes Mellitus incidence is related to mothers' and children's health risks, such as pre-eclampsia, premature births, and the development of type 2 Diabetes at 5-10 years after pregnancy. The adaptation process of women with gestational diabetes mellitus encounter complicated process as well as required to master a series of treatments over a short period. The psychological support of families and healthcare professionals is indispensable in achieving Gestational Diabetes Mellitus management success.

Objectives: This research aimed to explore the mothers' experience in Gestational Diabetes Mellitus management during and after pregnancy

Methods: The design of research implemented qualitative approaches, phenomenology, and the homogenous purposive technique to recruit 12 participants. In-depth interviews were carried out to each participant face to face. Interviews were recorded, verbatim transcribed, and analyzed thematically by Collaizi.

Results: There are five themes: responses to Gestational Diabetes Mellitus diagnosis, Gestational Diabetes Mellitus management during pregnancy, obstacles in Gestational Diabetes Mellitus management, supports for Gestational Diabetes Mellitus management, and post-natal self-management. Diet and exercise indiscipline still typical to some participants, although they have a good understanding of Gestational Diabetes Mellitus. Feeling the fetus's movement of and surrendering to God become forms of psychological support in the management of gestational diabetes mellitus maximumly.

Conclusions: The support and obstacle identifications are multidimensional to help facilitate health workers to be more effectively support women with gestational diabetes mellitus in overcoming the perceived obstacles; thus, they will still feel a safe and comfortable pregnancy with minimum risk.

Keywords: *gestational diabetes; pregnancy; post-partum; intervention*

#MCN-011

ASIA-PASIFIC PARTNERSHIP ON HEALTH AND NUTRITION IMPROVEMENT (APHNI) 2021

Social Nervous Exercise Intervention and Its Association with Fasting Blood Glucose on Gestational Diabetes Mellitus

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ABSTRACT

Background: Gestational diabetes mellitus has been identified as a major complication of pregnancies and has remained a major cause of perinatal morbidity and mortality, in both mother and child. Exercise can be used as a strategy to reduce hyperglycemia experienced during gestational diabetes mellitus. Regular exercise is important for a healthy pregnancy and can lower the risk of developing GDM. For women with GDM. Exercise is safe and can affect the pregnancy outcomes beneficially. The role of exercise about increases skeletal muscle glucose uptake, and minimizing hyperglycemia. Social nervous exercise is a moderate-intensity exercise intervention that plays a role in controlling blood glucose through autonomic nervous stimulation so that it has an effect on glucose homeostasis. Social nervous exercise can stimulate the parasympathetic or myelinated vagus nerves. The social nerve or the Social Nervous System is the vagus nerve nc-X which is supported by cranial nerves namely nerves V, VII, IX, and XI centered in the nucleus ambiguus.

Objectives: To determine the impact of a social nervous exercise training program consisting of warm-up, core (prayer movements) and cooling exercises on glucose homeostasis parameters in pregnant women diagnosed with gestational diabetes mellitus.

Methods: Thirty-seven pregnant women diagnosed with gestational diabetes mellitus at 24-28 weeks of gestation were allocated into two groups. Experimental group with regularly supervised social nervous exercise program and standard antenatal care for gestational diabetes mellitus. The control group received only standard antenatal care. The exercise program started from the time diabetes was diagnosed until 6 weeks of intervention. Interventions were performed twice per week and sessions lasted 40-45 minutes.

Results: The baseline results for the experimental and control groups were homogeneous, without differences in the baseline variables ($P>0.05$). Social nervous exercise the experimental group significantly reduced fasting blood glucose levels ($P<0.001$) compared to the control group.

Conclusions: A social nervous exercise program has a beneficial effect on fasting blood glucose levels in late pregnancy.

Keywords: *gestational diabetes mellitus; intervention; social nervous exercise; fasting blood glucose; Indonesia*

#MCN-012

ASIA-PASIFIC PARTNERSHIP ON HEALTH AND NUTRITION IMPROVEMENT (APHNI) 2021

Effectiveness Oxytocin Massage on Reduce Lactation Problems and Support Infants Growth

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ABSTRACT

Background: Lactation problems often occur in the early postnatal period. One of them is the readiness of the mother in early breast feeding. Early breast feeding is one of the effective efforts in providing nutrition for newborns and preventing lactation problems. In 2019, in Indonesia the percentage of newborns who received IMD was 75.58%. The success rate of IMD is closely related to lactation readiness in early postpartum. To support the success of lactation, postpartum mothers need to be given education on methods to stimulate milk production at the beginning of the puerperium with oxytocin massage. Good breast milk production will support the nutritional adequacy of the baby and reduce lactation problems in the early postpartum period

Objectives: The purpose of this study was to determine the effectiveness of oxytocin massage on lactation and infant growth problems. .

Methods: this study was a pre-experimental research using posttest only design and true-experiment using posttest only control group design. The research locations were in the Mother and Child Health (KIA) Clinic and Midwives Independent Practice (PMB) in Bantul, Sleman, and Gunung Kidul Yogyakarta areas. Implementation from April until September 2020. The population of this study was all the families of postpartum mothers from the first to the third day and after 1 week an evaluation of breastfeeding. The sampling technique uses total sampling was 80 postpartum mothers on the first-third day of childbirth followed until the baby was 2 months old. The research instruments were the oxytocin massage checklist, lactation problems and body length observation note sheet. Test analysis using wilcoxon.

Results: The results of this study were that the majority of respondents performed oxytocin massage with a frequency of 2-3 times (85%), respondents experienced lactation problems in the first week of puerperium by 16.3% and at the 4th postpartum visit all respondents had no lactation problems. The average increase in the length of the baby's body at the age of 2 months is 8.44 cm. The majority of the baby's body length at the age of 2 months corresponds to age (98.8%). The results of bivariate analysis of oxytocin massage were effective in reducing lactation problems ($p=0.000$) and support infants growth ($p=0.000$).

Conclusion: Oxytocin massage is effective in reducing lactation problems and support infants growth

Keywords: *oxytocin massage; lactation problems; infants growth; postnatal*

#MCN-013

**ASIA-PASIFIC PARTNERSHIP ON HEALTH AND NUTRITION
IMPROVEMENT (APHNI) 2021****Parity and pregnancy intention associated with the use of contraceptives in the
reproductive age woman**Wahyuningsih^{1*}, Dina Putri Utami Lubis², Sri Ayu Candra Misali³¹Department of Nursing, Faculty of Health Science, Universitas Alma Ata, Jalan Brawijaya 99, Yogyakarta, Indonesia, 55183²Department of Nursing, STIKES Yogyakarta*Correspondence: wahyuningsih@almaata.ac.id**ABSTRACT**

Background: Unmet need family planning in the reproductive age woman still has a high percentage. In Indonesia, the number of unmet need family planning is 12.1% with the achievement target is 9.91%. Reproductive age woman with unmet need have a risk of unintended pregnancy. This matter causes dangerous conditions for both mother and baby. Parity and pregnancy intention are factors related to the behavior of using contraceptives in the reproductive age woman.

Objectives: To find out the correlation between parity and pregnancy intention with the use of contraceptives

Methods: This study used an analytical survey design. There were 262 reproductive age woman as respondents. This study was conducted in Bantul 1 and Sedayu sub-districts, Indonesia. The instrument used is the London Measurement Unpregnancy Planning (LMUP) which has been adjusted. The data was analyzed use chi-square.

Results: 47% of reproductive age women who have children > 2 and 30% of reproductive age women who do not want to have children do not use contraception. The association parity (95%CI: 0.010-0.051) and pregnancy intention (95% CI: 0.00-010) were significant.

Conclusions: Parity and pregnancy intention have associated with the use of contraceptives in the reproductive age women. Thus, it is necessary to educate women in the reproductive age regarding to the number of child births and the right intentions.

Keywords: *contraceptives; parity; pregnancy intention; reproductive age women*

#MCN-014

ASIA-PASIFIC PARTNERSHIP ON HEALTH AND NUTRITION IMPROVEMENT (APHNI) 2021

Massage Therapy for Weight Gain in Preterm Neonates: A Literature Review

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ABSTRACT

Background: Premature Infants are generally at risk for poor feeding problems, nutritional deficiencies, and growth retardation. Several interventions have been developed to promote adequate growth in preterm infants as an important parameter for chasing growth and long-term health outcomes. Massage therapy has been effectively associated with increased body weight, shorter hospital stay, and improved development of behavioral responses. Weight gain is the most commonly used indicator to assess the health of preterm neonates, where it is associated with the pursuit of delayed growth of premature infants.

Objectives: This Review aim to identify literature on Massage Therapy practice as a method to promote weight gain or growth in preterm neonates

Methods: The methodology for this review followed the JBI review methodology guidelines. Searches were performed in several databases: Pubmed, Wiley, ProQuest, and Elsevier. Data collected were then extracted by two independent reviewers, synthesised and presented in the form of tables and narratives.

Results: Fifteen studies involving were identified in the search as the criteria set for this review. Three studies were quasi-experiment studies and nine were randomised control trials (RCT).

Conclusions: The implementation of massage as a non-pharmacological method for neonates growth among the reviewed studies. Differences were identified in terms of the body part massaged, the duration and intensity of the massage, and the combination of massage with/without oil. All studies presented positive results for weight gain in preterm neonates both in the NICU and as follow-up care in the hospital.

Keywords: *massage therapy, preterm, weight, growth.*

#MCN-15

ASIA-PASIFIC PARTNERSHIP ON HEALTH AND NUTRITION IMPROVEMENT (APHNI) 2021

Breast Massage Is Effective in Expedite the Time of Colostrum Discharge

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ABSTRACT

Background: The percentage of success in giving colostrum at birth in Indonesia is still low. The causes of not giving colostrum at the time of the newborn include colostrum not yet coming out, the amount of milk that comes out is less, the mother feels that there is not enough milk and becomes anxious, and the baby continues to cry. Based on the phenomenon, researchers are interested in increasing breastfeeding by mothers by educating pregnant women in the third trimester to do breast massage to help facilitate the production of colostrum and the production process. Based on the survey, it was found that all mothers had never received information or received intervention about breast massage during pregnancy. Physiologically, breast massage is carried out to facilitate blood circulation and preparation for the lactation process so that it can provide breast milk to the baby directly.

Objective: The purpose of this study was to determine the effectiveness of breast massage in expedite the time of colostrum discharge.

Method: The research method used quantitative methods with a cross sectional approach, purposive sampling as many as 80 pregnant women with a gestational age of 38 weeks.

Results: The education provided received a positive response and intervention is carried out until delivery so as to facilitate the expedite of colostrum and the baby could be given breast milk immediately.

Conclusion: The study showed the largest percentage of colostrum expulsion time directly as much as 78.8% of a number of respondents and showed that there was an effect of breast massage with colostrum expenditure ($p = 0.0001$)

Keywords: *breast massage; colostrum; colostrum expedite; pregnancy; education*

#MCN-16

ASIA-PASIFIC PARTNERSHIP ON HEALTH AND NUTRITION IMPROVEMENT (APHNI) 2021

The Effect of Nutrition Education Using Booklets With Counseling And Without Counseling on Feeding Practice In Preschool Children

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ABSTRACT

Background : Vegetable and fruit consumption in preschool children in Indonesia is still lower than recommended, which may be due to poor child feeding practices. Nutrition education through booklets and counseling about healthy food consumption (vegetables and fruit) will clarify information and understanding of parents resulting in better child feeding practices, compared to just giving booklets without counseling.

Objectives: determine the effect of nutrition education using booklets with counseling and without counseling on feeding practice in preschool children.

Methods: This type of research is quasi-experimental with a pre and post-test design with a control group. The sample selection used purposive sampling and simple random sampling. Purposive sampling was used to select the sub-district that had the highest obesity percentage in the city of Yogyakarta and obtained the district of Danurejan. Meanwhile, simple random sampling was used to select children and schools (PAUD/TK). The number of samples was 56 people (28 experimental groups and 28 controls) from 4 PAUD/TK. The experimental group was given nutrition education using booklets and counseling, given counseling once with a duration of 30-60 minutes, the implementation was carried out at the sample house. In the control group, only booklets were given without counseling. The pre-test was carried out before nutrition education was given and the post-test was carried out after nutrition education with a time lag between nutrition education and post-test of about 30 days. The instruments used consisted of booklets and the Comprehensive Food Feeding Questionnaire (CFFQ). The statistical tests used were Paired T-test, Wilcoxon, and Mann-Whitney.

Results: there was a difference in healthy eating guidance behavior between before and after nutrition education in the experimental group ($p < 0.05$). There was no difference in the behavior of restriction and child control between before and after being given nutrition education in the experimental group ($p > 0.05$). There were differences in child control behavior between before and after nutrition education in the control group ($p < 0.05$). There was no difference in the behavior of restriction and child control between before and after nutrition education was given to the control group ($p > 0.05$). There were differences in the behavior of healthy eating guidance, restriction and child control in the experimental and control groups ($p < 0.05$).

Conclusions: there is an effect of nutrition education using booklets and counseling on healthy eating guidance, restriction, and child control behavior compared to only using booklets without counseling.

Keywords: *nutrition education; booklets; counseling; child feeding practice; preschool children*

#MCN-17

ASIA-PASIFIC PARTNERSHIP ON HEALTH AND NUTRITION IMPROVEMENT (APHNI) 2021

The Service Coverage Indicators on Stunting Reduction Interventions in Riau Province Priority Districts

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ABSTRACT

Background: The prevalence of stunting in Riau Province based on the Indonesian Toddler Nutrition Status Survey in 2019 was 23.95%. Efforts to reduce the prevalence of stunting remains challenging to achieve the target of 18% by 2024. One of the pillars in efforts to reduce stunting is convergence action involving multi stakeholders to ensure the service delivery interventions received by targeted households (1000 HPK).

Objectives: This study aims to describe the service coverage indicators in 10 priority districts/municipalities in Riau Province.

Method: The service coverage data obtained from the Electronic Community-Based Nutrition Recording and Reporting System and web monitoring convergence action system. The data analysed descriptively. The specific and sensitive interventions implemented in 161 priority villages in 2020.

Results: The results of the study were 6.0% of 392,444 under-five children indicated stunting (short and very short toddlers). In the priority villages, the average coverage of specific interventions (1 indicator) and sensitive interventions (4 indicators) remained below 60%. The lowest coverage of specific intervention was the iron tablet supplementation for teenagers (48.6%). The 4 indicators of sensitive interventions as follows: toddlers who attend early childhood education (PAUD) (23.2%); villages with the sustainable food house program (26.1%); toddler-family development support group (33.9%); targeted households that attend parenting classes (50.6%).

Conclusion: The strengthening of interventions is required to increase coverage service delivery to targeted household. The local government convergence action and increasing the role of the village authorities were the main keys in accelerating stunting reduction.

Keywords: *convergence; service coverage; specific intervention; sensitive intervention*

#MCN-018

**ASIA-PASIFIC PARTNERSHIP ON HEALTH AND NUTRITION
IMPROVEMENT (APHNI) 2021****Evaluation of Equity of Health services Facilities In the era of national health
insurance: A Case Study in Gunung Kidul Yogyakarta**Imram Radne Rimba Putri^{1*}, Faza Khilwan Amna¹¹Lecturers of Hospital Administration Program, Alma Ata University Yogyakarta*Correspondence : imramradne@almaata.ac.id**ABSTRACT**

Background: National Health Insurance is part of the Social Security System National. After more than 5 years of implementation, it needs to be evaluated, one of the evaluations is to assess equity in health facilities that is fair and equitable for every level of society.

Objective: The purpose of this study is to evaluate how equitable health services facilities are in the era of national health insurance in Gunung Kidul, Yogyakarta

Methods: This quantitative research is descriptive with cross sectional design, using a retrospective approach. Data obtained from the Health Profile of the Special Region of Yogyakarta in 2019 which was carried out by the Yogyakarta Special Region Health Office in 2020 which we then analyzed.

Results: The coverage of the National Health Insurance participants in Gunung Kidul in 2020 is not yet 100%, which is 94% or the total membership is 705,093 people from the total population of Gunung Kidul 741,741 people. The availability of human resources in the health sector is not evenly distributed, namely the ratio of general practitioners to the total population for Gunung Kidul 1: 6,088. Health services, especially advanced health facilities in Gunung Kidul, are still lacking, namely there are only 7 hospitals to serve the total population of Gunung Kidul 742,741 people.

Conclusion: There is no equal distribution of health care facilities in Gunung Kidul, Yogyakarta

Keywords: *equity; health service facilities; health insurance*

THEME 4: Public Health and Clinical Practice

#HCP-001

**ASIA-PASIFIC PARTNERSHIP ON HEALTH AND NUTRITION
IMPROVEMENT (APHNI) 2021****Validity and Reliability Test of Instrument Physical Activity Questionnaire for
Adolescent (PAQ-A) on Workwoman**Chintya Wulandarie^{1,*}, Sumardiyono², Ratih Puspita Febrinasari³¹Postgraduate Program of Human Nutrition, Sebelas Maret University, Surakarta, Indonesia²Department of Public Health, Faculty of Medicine, Sebelas Maret University, Surakarta, Indonesia³Department of Pharmacology and Therapy, Faculty of Medicine, Sebelas Maret University, Surakarta, Indonesia*Correspondence: chintya11wulandarie@gmail.com**ABSTRACT**

Backgrounds: Physical activity is all body movements carried out by humans through special methods in shaping the body through intensity, time limits and a purpose. The purpose of the exercise is to build and develop physiological and psychological functions. In the aging process, the process of losing body mass occurs at around the age of 30-35 years and becomes faster at menopause (in women). Exercise is effective in slowing down the cell aging process by changing the levels of various biomarkers that play a role in the cell aging process.

Objectives: This study aims to test the validity and reliability of the Physical Activity Questionnaire for Adolescent (PAQ-A) instrument.

Methods: This research is descriptive research with a cross-sectional method. The sampling technique used is purposive sampling. The subjects of this study were working women aged 26-45 years totaling 30 respondents. The analytical technique used is a descriptive quantitative analysis using Pearson Correlation and Cronbach's Alpha with the help of SPSS 22 software.

Results: The PAQ-A validity test with the criteria of the Indonesian Physical Fitness Test (Concurrent Validity) shows a correlation value (r table) of 0.361 which means that the correlation is quite close. The PAQ-A inter-item correlation is between 0.395 – 0.786. In addition, the PAQ-A instrument proved reliable with a Cronbach Alpha score of 0.750.

Conclusions: This study concludes that the PAQ-A instrument is proven to have good and reliable concurrent validity. As for the highly variable inter-item correlation, similar studies that tested the validity of this instrument also found similar results.

Keywords: *validity test, reliability test; PAQ-A; physical activity*

#HCP-002

ASIA-PASIFIC PARTNERSHIP ON HEALTH AND NUTRITION IMPROVEMENT (APHNI) 2021

Effect Of Catch-up Growth in Early Childhood With Cognitive Ability Of School Age Children 10-12 Years : Longitudinal Data Indonesian Family Life Survey

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ABSTRACT

Background: Children's cognitive abilities are influenced by the nutritional condition of children in early childhood. Catch-up growth in early childhood affects cognitive abilities at school age.

Objectives: This study aims to analyze the effect of catch-up growth in early childhood on the cognitive abilities of school-age children in Indonesia.

Methods: This study is a cohort study followed for 10 years using 3 waves of secondary data from the Indonesian Family Life Survey (IFLS). The initial data of the study were taken in 1997 when the children were 0-23 months old, then followed in 2000 (3-5 years old) and 2007 (10-12 years old). The subjects of study were 537 children aged 0-23 months in 1997. Cognitive ability was measured by using the Raven Progressive Matrices method. Statistical analysis for cognitive ability scores with catch-up growth was carried out by using one-way Anova and multivariate analysis using multiple linear regression.

Results: Significant differences were seen in the cognitive ability scores of normal children and stunted children who did not catch-up growth ($p=0.0002$), but the cognitive scores of normal children are not different from stunting catch up group. Other factors that affect the cognitive ability score were (1) Child factors consist of stunting nutritional status of children aged 0-23 months, head circumference, hemoglobin levels, consumption of animal protein, duration of breastfeeding, complete basic immunization history. (2) Parental factors consist of father's occupation, parental education, number of parity. (3) Household socio-economic factors (household income and wealth index), and (4) environmental factors (housing area, father's smoking habit, defecation facilities and household drinking water sources).

Conclusions: Catch-up growth in early childhood effect on the cognitive ability scores of school age children. Children who catch-up growth have better cognitive abilities than children who experience stunting during early life.

Keywords: *catch-up growth; cognitive ability; early childhood; stunting*

#HCP-003

ASIA-PASIFIC PARTNERSHIP ON HEALTH AND NUTRITION IMPROVEMENT (APHNI) 2021

The Effect of Health IEC (Information, Education, and Communication) on The Selection of Food Contains Iron for Anemia Prevention in Adolescent Girls: Systematic Literature Review

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ABSTRACT

Backgrounds: IEC (Information, Education, and Communication) are nutrition education strategies through counseling to improve individual knowledge, attitudes, and behavior. The provision of nutrition education uses several media namely, electronic media, print and lectures. This strategy can be an alternative to help young women in choosing food ingredients to prevent anemia. Given the adverse effects of anemia, it is necessary to overcome it. This study aims to analyze the effectiveness of using electronic media (video) to increase the knowledge, attitudes, and behavior of young women in choosing foods high in iron based on a review of research journals.

Objectives: This study aims to Systematic Literature Review (SLR) the effect of health IEC (Information, Education, and Communication) on the selection of food contains iron for anemia prevention in adolescent girls.

Methods: Systematic literature review was carried out by searching for relevant articles from an electronic database (Google Scholar) using the following keywords: "Information", "Education", "Communication", "Adolescents", "Anemia" in Indonesian and English. Twenty were selected based on the following inclusion criteria: publication date from 2016 to 2021, discussing the causes of food contains iron for anemia prevention in adolescent girls and media in increasing knowledge, English and Indonesian articles, full texts, open access, and academic journals. Articles were analyzed using a matrix table.

Results: Each media has advantages and disadvantages to increasing attitudes, attitudes, behavior. Media that has an effect on changes in knowledge, attitudes and behavior in choosing foods that are high in iron is to use video media because it has elements of sound, images, animation and improves individual skills rather than just reading, namely leaflet media.

Conclusions: This study concludes that the video media is effective as a learning medium and is more effective in increasing knowledge, attitudes and behavior in choosing foods high in iron in adolescent girls compared to leaflets.

Keywords: *adolescents girls; anemia; communication; education; information*

#HCP-004

ASIA-PASIFIC PARTNERSHIP ON HEALTH AND NUTRITION IMPROVEMENT (APHNI) 2021

A comparison of patient satisfaction when using health assurance and non-assurance in health primary services (Puskesmas Kasihan 1) Bantul, Indonesia

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ABSTRACT

Background: In Indonesia, the health sector has experienced a very significant development. Fair and equitable health care is one way to fulfill the health rights of each individual. Therefore, puskesmas are required to provide good service quality through conformity to standards with customer needs. The creation of service quality will certainly create customer satisfaction for service users when using health assurance and non-assurance.

Objectives: This study to know a comparison of patient satisfaction when using health assurance and non-assurance in health primary services (Puskesmas Kasihan 1) Bantul, Indonesia.

Methods: This study was a cross-sectional study, with 222 samples with 111 respondents using health assurance and 111 non-assurance. Samples were collected with a cluster sampling technique taken from 9 service polyclinics in Puskesmas Kasihan 1 Bantul. Data were analyzed using independent sample t test.

Results: The study found that the average patient satisfaction with health insurance was 34.76 more than the average patient satisfaction with non-health insurance was 29.10. Based on the results of the analysis, the mean \pm sd of patient satisfaction with health insurance was 29.10 \pm 3.04 compared to the satisfaction of non-health insurance patients, namely 34.76 \pm 3.61 with a Sig value of 0.000, which means that there is a significant difference between patient satisfaction with health insurance and satisfaction. non-insured patients.

Conclusions: In conclusion, there is a significant difference in patient satisfaction when using health assurance and non-assurance patients.

Keywords: *patient satisfaction; health assurance; non-assurance; puskesmas, health primary services*

#HCP-005

ASIA-PASIFIC PARTNERSHIP ON HEALTH AND NUTRITION IMPROVEMENT (APHNI) 2021

A Mixed-Methods Exploration of Implementation of A Healthy School Canteen Program After A Year Intervention

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ABSTRACT

Background: Previous studies have shown that adolescents preferred less healthy food and their eating habit will affect their nutritional status in adulthood and old age. School canteen is a part of food retailing and provisioning that influence the diet quality of the adolescents. Healthy school canteen intervention is recommended as one of the public health strategies in supporting the development of healthy diet behavior.

Objectives: To evaluate the effects of healthy school canteen intervention program among middle school children.

Methods: A mixed-methods research design including focus group interviews for teachers and principal, observation on school canteen, a survey for food handlers and food testing for hazardous chemicals. Thematic analysis of focus group data and descriptive analyses of survey data were conducted. 4 schools were selected as intervention group and 4 schools as positive control group.

Results: Only one school out of 8 schools that had written commitment and food safety team. In intervention school 50% of B food handlers use personal protective equipment and 25% of food handlers received training. In positive control group, none of the food handlers used personal protective equipment and they had not received any training. Food handlers in the positive control group have a higher rate of correct answers. Only 2 out of 4 schools in the intervention group had nutritious foods available in the canteen and 3 out of 4 schools in the positive control group. None of the school canteens were found positive for methanyl yellow. Higher positive findings for Rhodamin B, Formaldehyde and Borax (33.3%, 60.0%, 33.3%) compared to 28.6%, 27.3%, and 28.6% in the control group.

Conclusions: Intervention group have been slightly more successful in creating healthy school canteen, as they had a slightly better total score in the observation sheet compared to the schools from the positive control group.

Keywords: *healthy school canteen; school canteen program; food safety; food handlers, school children*

#HCP-006

**ASIA-PASIFIC PARTNERSHIP ON HEALTH AND NUTRITION
IMPROVEMENT (APHNI) 2021****Development of Activity Books on Sexual Education for 4-5 Year Olds**Dita Eka Mardiani¹, Sariestya Rismawati¹¹Poltekkes Kemenkes Tasikmalaya, Jalan Babakan Siliwangi No.35, Kahuripan, Kec.
Tawang, Tasikmalaya, Jawa Barat 46115*Correspondenc author: ditaekamardiani90@gmail.com**ABSTRACT**

Background: The high incidence of sexual violence against children has an impact on the growth and development process, both directly and indirectly. There is a need for health education about sexual education to form an early understanding of children. Health education can be carried out using various methods and media, one of them is by using an activity book media.

Objective: This study aims to describe the validity of the activity book on sexual education for early childhood (4-5 years). This research is Sugiyono's Research and Development (R&D) which consists of 10 stages.

Method: In this study, researchers have carried out 4 stages: (1) potential and problems, (2) data collection, (3) media design and (4) media validation. The validation test stage consists of 1 media expert and 2 material experts to test the feasibility value of the textbook being developed.

Result: The results of the media expert validation test obtained a score percentage of 77.6% which is included in "feasible" category. The percentage score of the two material experts obtained a percentage value of 96.7% and 97.8%, which means that they are in "very feasible" category. There are several suggestions regarding the design of the activity book media by experts, so that this activity book is worth using with revision.

Keywords: *activity book, early childhood, sexual education*

#HCP-007

**ASIA-PASIFIC PARTNERSHIP ON HEALTH AND NUTRITION
IMPROVEMENT (APHNI) 2021****Nutritional Status and Associated with Eating Behavior and
Quality Diet among Adult: A Cross Sectional Study**Nurul Muslihah^{1*}, Ayuningtyas Dian Ariestiningsih¹, Ilma Rizky Almirra¹, Anastasia Triffani Ginting¹1 Department Nutrition, Faculty of Medicine,
Universitas Brawijaya, Malang, Indonesia*Correspondence : nurul_muslihah.fk@ub.ac.id**ABSTRACT**

Background: Obesity among adults is common a public health problem. Quality diet might be influenced by eating behavior and are associated with nutritional status, but research is lacking in obesity adult in Indonesia.

Objectives: The purpose of study was to investigate associated of eating behavior, quality diet and obesity

Methods: A cross sectional study was carried out among 144 respondents (39.6% male and 60.4% female), aged 39.07 ± 5.48 years, who selected using stratified random sampling from 5 sub-district, in Malang City, East Java, Indonesia. The eating behavior score were calculated using Dutch Eating Behavior Questionnaire (DEBQ) and quality diet using Diet Quality Index International (DQI-I) from SQ-FFQ. Association of eating behavior, quality diet and nutritional status was analyzed logistical regression analysis.

Results: The study showed the prevalence of obesity was 50.7% and 20.8% was overweight category as well as central obesity was 34.7%. The average of quality diet score was 57.98 ± 7.26 from total score 100 and no significant different both among normal and obesity or overweight adults ($P > 0.05$). The relationship between eating behavior in restraint, emotional, and external eating aspect with obesity adults are $p = 0.04$ ($r = 0.242$), $p = 0.111$ ($r = 0.185$), $p = 0.441$ ($r = -0.065$).

Conclusions: It can be concluded that obesity was prevalent in adults and there is relationship obesity and restraint eating among adults

Keywords: *eating behavior; obesity; quality diet, adult*

#HCP-008

ASIA-PASIFIC PARTNERSHIP ON HEALTH AND NUTRITION IMPROVEMENT (APHNI) 2021

Dietary Pattern by Income Level during the COVID-19 Pandemic in Indonesia: Results from the Nutrition, Lifestyles, and Quality of Life (QoL) Survey

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ABSTRACT

Background: Coronavirus Disease 2019 (COVID-19) causes lifestyle changes, especially in diet. Physical distancing and stay at home policies are carried out as our effort to prevent the COVID-19 spreading, however this condition affected the economy and dietary patterns.

Objectives: The objective of this study was to analyze the income levels and dietary patterns during the COVID-19 pandemic.

Methods: This cross-sectional study involving 697 people from various regions in Indonesia. The study was conducted from June - August 2020. Research data was obtained by self-administered online questionnaire including the dietary patterns, lifestyles, and quality of life data in the Google forms.

Results: Subject had mean of age 28 years and the majority were women (83.6%). The percentage of people with large-scale social restrictions is 47.5%. The dietary pattern changed to be healthier during the pandemic (46.2%) with the majority income level was categorized as high income (32.0%). There were associations between dietary pattern and income level such as online food/drink delivery, consuming western diet foods, consuming dietary supplement, and probiotic consumption ($p < 0.05$).

Conclusions: Very high monthly income has influenced lifestyles and dietary patterns to be healthier, while at low-income levels there is no difference in diet before and after the pandemic. The application of health protocols is as important as the promotion of a healthy diet in the community during pandemic in Indonesia.

Keywords: *dietary patterns; Income level; COVID-19; Indonesia*

#HCP-009

**ASIA-PASIFIC PARTNERSHIP ON HEALTH AND NUTRITION
IMPROVEMENT (APHNI) 2021****The Nutritional Problems of Adolescents Among the Traditional Community of Suku Anak Dalam (SAD) in The Working Area of Pematang Kabau Health Center, Sarolangun**Merita^{1,*}, Dyan Heru Prabowo², Arnati Wulansari³¹Sekolah Tinggi Ilmu Kesehatan Baiturrahim; Dinas Kesehatan Kabupaten Sarolangun, Jambi²Sekolah Tinggi Ilmu Kesehatan Baiturrahim, Jambi³Sekolah Tinggi Ilmu Kesehatan Baiturrahim, JambiCorrespondence: merita_meri@yahoo.com**ABSTRACT**

Background: Adolescents in traditional community of Suku Anak Dalam (SAD) are a group that susceptible to experiencing nutritional problems and their nutritional status needs to be considered, because it is a transitional period from childhood to adulthood who live as marginalized.

Objectives: This study aims to know the nutritional problems of adolescents among the traditional community of (SAD) in the work area of the Pematang Kabau Health Center, Sarolangun District.

Methods: This study used a cross sectional study design which was conducted in the working area of Pematang Kabau Health Center in July until August 2020. The sample in this study was 30 adolescents with a purposive sampling. Measuring instruments used include microtoice, scales and 2x 24-hour food recall questionnaire. Data were collected by conducting guided interviews using a questionnaire and direct measurement of nutritional status. The data analysis used univariate analysis.

Results: The results showed that a large proportion SAD adolescents have normal nutritional status (83.3%), poor eating habits (56.7%), adequate levels of macronutrients are deficits (80%), no food taboo (76.7%), and parental education is low (100%).

Conclusions: Based on the results of the study, it can be concluded that there are still nutritional problems in adolescents with SAD, especially in the aspects of consumption and eating habits. Therefore, it is hoped that nutrition and health workers will be active in providing regular education to SAD adolescents so as not to cause nutritional problems.

Keywords: *adolescents; nutritional status; pematang kabau; SAD*

#HCP-010

**ASIA-PASIFIC PARTNERSHIP ON HEALTH AND NUTRITION
IMPROVEMENT (APHNI) 2021****The Determinants of Iron Deficiency Anemia Incidence In Public
Health Students Faculty Of Medicine And Health Science Alauddin
State Islamic University Of Makassar**

Sukfitrianty Syahrir

Department of Public Health Faculty Of Medicine and Health Science Alauddin State Islamic
University, Makassar*Correspondence: Sukfitrianty.syahrir@uin-alauddin.ac.id**ABSTRACT**

Background: Iron deficiency is the most common nutritional problem in the world, which is around 4 to 5 billion people worldwide suffer from iron deficiency anemia, therefore the problem of anemia must get attention.

Objectives: This study aims to determine the determinants of iron nutrition anemia in public health students Faculty Of Medicine And Health Science Alauddin State Islamic University Of Makassar.

Methods: This research is an analytic survey with a cross sectional study approach. The population in this study were 80 active students of the 2018 public health study program. The sample in this study was active students from the 2018 class with a total sampling technique. Analysis of the data used is univariate analysis and bivariate analysis, using the chi-square test.

Results: The results showed that there was a relationship between eating patterns, breakfast habits, pocket money, menstrual patterns, and anemia status in students of the Department of Public Health, FKIK UIN Alauddin Makassar. Meanwhile, there was no relationship between upper arm circumference (LILA), tea drinking habits, knowledge, infectious diseases, and nutritional status with the anemia status of students from the Department of Public Health Faculty Of Medicine And Health Science Alauddin State Islamic University Of Makassar

Conclusions: To prevent anemia in adolescents, it is done by maintaining a diet and increasing consumption of animal foods and fruits.

Keywords: *iron deficiency anemia; public health students*

#HCP-011

ASIA-PASIFIC PARTNERSHIP ON HEALTH AND NUTRITION IMPROVEMENT (APHNI) 2021

Identification of Nutritional Status and Eating Habits of Adolescent Athletes During The Covid-19 Pandemic

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ABSTRACT

Background: Adolescence is a period of growth that has special nutritional needs to support daily activities and growth. Likewise for an athlete, the main problem that is often encountered by national athletes is lack of stamina and endurance. The fatigue factor followed by a slow body recovery process can reduce the athlete's performance. One thing that can affect this is nutritional intake. Eating habits are one of the factors that can determine a person's nutritional status. Adolescence is a nutritionally vulnerable age because of rapid growth and if the eating habits is not managed properly, it will have an impact on growth that is not optimal.

Objectives: The purpose of this study was to determine the nutritional status and eating habits of adolescent athletes during the maintenance period of nutritional status.

Method: This study used a Cross Sectional Study design. The sample are adolescent athlete using purposive sampling technique within criteria: Participated in training at the Bandung Cricket Sports Branch, had an age range of 12-24 years old, actively participated in routine training, did not participate in activities outside of training in preparation for PORDA JABAR 2022, and was willing to participate in research by measuring anthropometric, eating habits and nutritional status, so that the number of samples obtained is 22 people. This study carried out anthropometric measurements, measurement of nutritional needs & intake and eating habits of adolescent athletes. The data that has been collected is then analyzed with the help of Microsoft Office Excel software.

Results: The results showed that 90% of respondents were in the normal nutritional status category, 5% each were in the mild and severe overweight categories. In the assessment of eating habits, 23% of respondents are in the high category, 9% are in the sufficient category, 59% of respondents are in the less category and 9% are in the low category. And on the assessment of nutritional intake, 18% of respondents were in the normal category, 9% had mild deficits, 14% moderate deficits and 59% had severe deficits.

Conclusion: PORDA JABAR athletes mostly had normal nutritional status, but need to improve the nutritional intake.

Keywords: *nutritional status; eating habits; adolescent; adolescent athlete; maintenance period; cricket; pandemic; COVID-19*

#HCP-012

**ASIA-PASIFIC PARTNERSHIP ON HEALTH AND NUTRITION
IMPROVEMENT (APHNI) 2021****The Stunting Prevention Program during Covid-19 Pandemic: A Qualitative Study**Ika Sumiyarsi Sukamto¹, Rufidah Maulina^{1*}, Hanifah Sarah¹, Hasna Fatin Habibah¹¹Midwifery Department, Faculty of Medicine, Universitas Sebelas Maret (UNS), Ir. Sutami Street 36 A,
Surakarta, Indonesia*Correspondence: maulinarufidah@staff.uns.ac.id**ABSTRACT**

Background: Since the Covid-19 outbreak occurred, the stunting prevention program has been faced many challenges. The programs, such as Integrated Post Service as the place where mothers can visit to measure their baby's growth were closed and restricted.

Objectives: The purpose of this study was to describe the description of stunting prevention during the covid-19 pandemic from the perspective of health workers working at the Community Health Center.

Methods: This research method is qualitative by using in-depth interviews with 10 health workers from the Community Health Center (Puskesmas) and an in-depth study of secondary data obtained from the Surakarta City Health Office.

Results: During the pandemic, the implementation of stunting prevention activities was hampered due to the government's focus on the covid-19 prevention program, lack of commitment and participation of social workers, the invalid measurement from social workers, social restrictions, and fear of community gathering. On the other hand, cadres reported the findings by using text messages rather than book measurements to follow the social restriction regulation. Some of the cadres also visited the toddlers' houses in order to get their measurements. There needs to be a commitment to tackle stunting and a workflow so that stunting-related activities are not affected by the pandemic.

Conclusion: Obstacles in the stunting prevention program during the pandemic were felt by cadres, health centers, and mothers of toddlers where they could not do the regular weighing. There needs to be coordination and collaboration from various sectors to handle the stunting management.

Keywords: *children under five; community participation; COVID-19; stunting*

#HCP-013

ASIA-PASIFIC PARTNERSHIP ON HEALTH AND NUTRITION IMPROVEMENT (APHNI) 2021

Indonesian's Dietary Behavior Status Differed by Gender during the Covid-19 Pandemic: Result from Nutrition, Lifestyles and Quality of Life (QoL) Survey

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ABSTRACT

Background: The Covid-19 disease emerged in Indonesia in the beginning of 2020 and became the primary focus by Indonesia government. People need to enforce health protocols to prevent Covid-19 spread and have to implemented large scale social restriction. It changed the social rules such as their lifestyle, social and dietary behavior.

Objectives: The aim of this study was to determine the dietary behavior and its association with the gender status during pandemic Covid-19 in Indonesia. **Methods:** This was a cross-sectional study. This study involving 697 people who recruited by online survey and carried out from June to August 2020. We shared an online questionnaire survey in Google Form such as dietary behavior, lifestyles, and quality of life. Bivariate analysis was measured to test the association using SPSS version 23 for windows.

Results: Subject's mean age was 28 years (27.56 ± 8.854 years) and the majority of the respondents were women (83.6%). Indonesia regions who applied the PSBB (Large Scale-Social Restrictions) policy were 47.5%. The dietary behavior changed to be healthier during the pandemic (46.2%). There were associations between dietary behavior and gender status on consuming dinner, online food/drinks deliveries from restaurants, buying food from food stalls, coffee shops or other food stalls, and drinking sugarsweetened beverages ($P < 0.05$).

Conclusions: Covid-19 disease made significant changes in the dietary behavior in Indonesia. The implementation of the health protocol program must be carried out as important as public health promotion, especially about promoting healthy dietary behavior among Indonesian during a pandemic.

Keywords: *dietary behaviors, gender, COVID-19, Indonesia*

#HCP-014

**ASIA-PASIFIC PARTNERSHIP ON HEALTH AND NUTRITION
IMPROVEMENT (APHNI) 2021****Exploring Challenges and Opportunities in Interprofessional Collaboration Health
Worker during Covid-19 Pandemic at the Primary Health Center of Bantul Regency**

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ABSTRACT

Background: The Corona Virus Disease-19 (COVID-19) pandemic is of special concern in all parts of the world, including Indonesia. The number of active cases also continues to increase in most provinces in Indonesia, especially in the Special Region of Yogyakarta. This condition requires health workers to collaborate well in suppressing and handling COVID-19 patients.

Objectives: The aims of this study were to find out how collaboration occurs between health workers in handling COVID-19 and identify opportunities and challenges in collaborating between health professionals.

Methods: The design of this study was a cross sectional study. We used the purposive sampling method to recruit participants. This study followed by 200 participants who they were health workers at the Primary Health Center in Bantul Regency.

Results: The result showed that the Interprofessional Collaboration (IPC) health worker at Health Primary Center of Bantul was categorized as good (45%). However, the application of collaboration at the Health Primary Center is still not optimal. There were top three obstacles in doing collaboration, namely lack of time, perception of complicated bureaucracy, lack of trust from health workers about their knowledge and skill. Based on spearman test result showed that the sociodemographic characteristics of the partisipants did not significantly affect the IPC ($P>0.05$).

Conclusions: The main key in practicing IPC were building a good work team, good communication, good relationship, responsibility for each other's, keep learning from each other and being critical, maintaining the ethics of each profession. Thus, effective and efficient collaboration will be established.

Keywords: *interprofessional collaboration (IPC); health worker; challenges; COVID-19, primary health center*

#HCP-015

**ASIA-PASIFIC PARTNERSHIP ON HEALTH AND NUTRITION
IMPROVEMENT (APHNI) 2021****The Relationship between Religiosity and Adherence in Diabetes Mellitus Patients at
Jetis 1 Bantul Health Center**Bella Fevi Aristia¹, Akrom²¹Program Studi Farmasi, Fakultas Farmasi, STIKES RS Anwar Medika²Program Studi Farmasi, Fakultas Farmasi, Universitas Ahmad Dahlan*Correspondence: bellafeviaristia@gmail.com**ABSTRACT**

Background: Diabetes mellitus (DM) is a chronic disease that can affect a person's physical or psychological. People who have religiosity have better adaptations for their illness and medication adherence. They believe that illness is a gift from God, so as humans we must fight to recover with treatment.

Objective: The aim of the study was to analyze the correlation between religiosity and medication adherence of diabetes mellitus patients in Jetis 1 Bantul Health Center.

Methods: This study used a cross sectional design with simple random sampling. This study involved 71 outpatients with diabetes mellitus. The data collection used demographic instrument, religiosity questionnaires and pill boxes to analyze medication adherence which was calculated using the pillcount method. The correlation values were analyzed using spearman correlation.

Results: The result showed 64,79% of patients were female, mean age was (59,52±8,74) years, mean duration of diabetes mellitus was (7,21± 4,95) years. 71,83% patients had a good adherence. There is a significant relationship between religiosity and medication adherence in diabetes mellitus patients with a value of $r=0,392$ ($p=0,001$). Religiosity had a positif correlation with medication adherence but the strength of the correlation is weak.

Conclusions: Religiosity had an important influence and relationship on medication adherence to diabetes mellitus patients.

Keywords: *religiosity; adherence; diabetes mellitus; health center*

#HCP-016

ASIA-PASIFIC PARTNERSHIP ON HEALTH AND NUTRITION IMPROVEMENT (APHNI) 2021

Relationship Between Environmental Changed and Capacity Adaptation With The Level Of Community Resilience Post Earthquake Lombok

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ABSTRACT

Background: Natural disasters directly impact to the human life, the physical environment, biological and social. The Earthquake in Lombok, West Nusa Tenggara on 29 July 2018 with force on 6,4 Richter Scale made many casualties and destruction of houses and facilities owned physical building education and health and the life patterns of the normal disruption. The situation in the aftermath of a calamity is the right moment to do resilience level analysis of the community towards previous disaster, that society should be able to stand up to the disaster that occurred with capacity capability adaptation that is, as well as to ensure that the process of the recovery and the investment of next run well.

Objectives: To know the relationship between environmental changes and capacity of the adaptation of community resilience post-earthquake Lombok.

Methods: This study is a survey analytic research with cross sectional design. The population in this study was affected the whole community earthquake and living in Tanjung District, North Lombok. The sample used in this study as many as 129 people taken using cluster random sampling techniques. The collected data analyzed using a Chi-Square statistic test and logistic regression.

Results: Environmental changes (house damage), and adaptive capacity which includes exposure to disasters, response sensitivity and coping strategies have a relationship with the level of resilience of post-earthquake communities in Lombok ($p < 0.05$). People who have damaged homes in the mild-moderate category are 11 times more likely to have a good level of resilience. Adaptation capacity that includes high response sensitivity has 3 times greater chance of having a good level of resilience and a high coping strategy allows 2 times greater to have a good level of resilience.

Conclusion: Environmental changes or house damage has the strongest influence variable on the level of resilience of the community after the earthquake in Lombok. The level of community resilience is also influenced by adaptive capacity factors which include response sensitivity and community coping strategies.

Keywords: *resilience; environmental changes; capacity adaptation; earthquake; Lombok*

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