



Universitas
Alma Ata
The Globe Inspiring University

2024
APHNI
CONFERENCE

6TH APHNI CONFERENCE 2024

BOOK OF ABSTRACT

"The 6th Asia-Pacific Partnership on Health and Nutrition Improvement (APHNI) Conference 2024: The Evolution of Healthcare Delivery and Navigation on Nutrition, Maternal and Child Health, and Chronic Diseases."

Wednesday, November 20th 2024
The Rich Jogja Hotel, Daerah Istimewa
Yogyakarta (DIY), Indonesia



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Innovations to Improve Population Health,
Daerah Istimewa Yogyakarta (DIY) November 20th 2024

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Welcome Letter from Conference Chair

Assalamualaikum warahmatullahi wa barakatuh.

On behalf of the APHNI Committee, I welcome you to the 6th Asia-Pacific Partnership on Health and Nutrition Improvement (APHNI), held on 20 November 2024 in Yogyakarta, Indonesia. The APHNI is an annual conference organised by the Faculty of Health Sciences at Alma Ata University, Yogyakarta. It has been held since 2019.

This conference will provide an interactive international forum for sharing and exchanging information on the latest research on Health and nutrition and related sciences, to enhance the capacities for creating innovative systems, to contribute to the formulation of global strategies in advancing health systems as well as developing policy initiatives in the community, to stimulate future collaborations among industries, researchers, governments and other stakeholders who apply science for better live. The speakers and participants of the 6th APHNI are up to 60 from various countries, including Indonesia, Malaysia, Thailand, and Taiwan.

I want to take this opportunity to thank you for the committee's endeavours from the Faculty of Health Sciences—Alma Ata University. In addition, the conference committee acknowledges Alma Ata University's technical and financial support.

I hope you can enjoy this conference, and I encourage you to engage with those presenting their works as oral presentations. Should you have extra time, I hope you can extend your stay and enjoy the exotic of Yogyakarta.

Thank you for your participation,

Sofyan Indrayana, S.Kep., Ns., MS.
The Chair of the 6th APHNI Conference

Welcome Letter from the Dean of the Faculty of Health Sciences, Alma Ata University

Assalamualaikum warahmatullahi wa barakatuh.

Ladies and gentlemen, esteemed colleagues, and distinguished guests,

It is with great pleasure and anticipation that we gather here today for the 6th Asia-Pacific Partnership on Health and Nutrition Improvement (APHNI) under the insightful theme of "The evolution of healthcare delivery and navigation on nutrition, maternal and child health, and chronic diseases". This year, the 6th APHNI is hosted by the Faculty of Health Sciences, and this conference serves as a beacon of intellectual exchange and innovation in the field of chemistry.

In today's dynamic landscape, characterised by Volatility, Uncertainty, Complexity, and Ambiguity (VUCA), the role of chemistry in shaping a sustainable future is more vital than ever. Our collective pursuit of knowledge and advancements in the field of health sciences hold the potential to redefine industries, reshape ecosystems, and promote responsible stewardship of our planet's resources.

This conference stands as a testament to the commitment of all participating institutions to address pressing global challenges through the lens of chemistry. The presentations and discussions unfold throughout the day will undoubtedly inspire new ideas, collaborations, and solutions that contribute to a more sustainable world.

As we embark on this intellectual journey, let us remain open to diverse perspectives, engage in rigorous debate, and forge connections that transcend borders and disciplines. May the insight gained during the conference deepen our understanding of health science's role in sustainable development and empower us to catalyse positive change within our societies.

I extend my heartfelt gratitude to the organisers, speakers, and attendees who have come together to make this event a reality. Let us embrace the spirit of collaboration and exploration as we navigate the fascinating intersections of health sciences.

Thank you, and let the 6th APHNI commence.

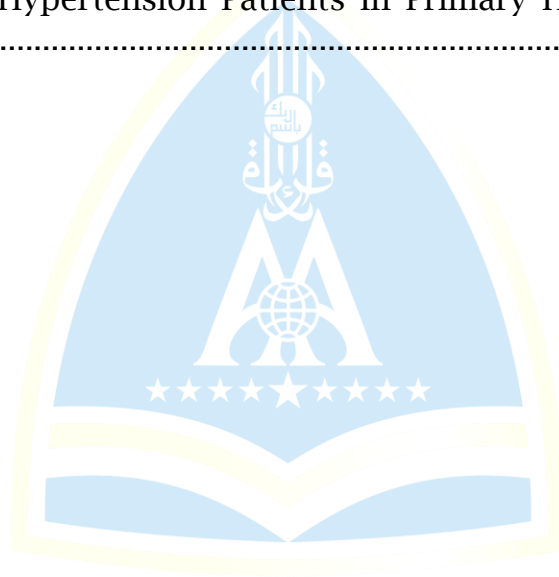
Dr. Yhona Paratmanitya, S.Gz., MPH., RD.

Dean of Faculty of Health Sciences, Alma Ata University

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CONFERENCE PROGRAM
(Wednesday, November, 20th 2024, The Rich Hotel Yogyakarta)

Event Speakers



Prof. Dr. Hamam Hadi, MS., Sc.D., Sp.GK.



Prof. Joel Gittelsohn, PhD., MS.



Alexandra Ross, PhD. MHS.



Prof. Wan Abdul Manan bin Wan Muda



Dr. Kashif Ullah Khan



Dr. ATM Kamonchanok Maneechai



Edi Sampurno, M.Nurs., PhD.



Dr. Nittiya Noysipoom

SCHEDULE

Time (WIB)	Details
07.00 - 08.00	Registration
08.00 - 08.05	Opening (MC: Bu Emelda dan Bu Lia Dian)
08.05 - 08.10	Qur'an recitation (Khanifudin)
08.10-08.13	Opening pray (Bu Nyai Ida)
08.13-08.23	Lagu kebangsaan Indonesia Raya Mars Alma Ata
08.23 - 08.37	Opening Speech (Prof Hamam) Simbolis gong
08.37-08.47	Tari Sesonderan (Malang, Jawa Timur) by. UKM Tari UAA
08.55-09.15	Bumpering Break
Speaker 1	Prof. dr. H Hamam Hadi, MS, Sc.D, Sp.GK (Director of Center for Global Health, Alma Ata University, Indonesia) "Child Obesity"
09.15-09.35	Bumpering Break
Speaker 2	Prof. Joel Gittlesohn (Bloomberg School of Public Health, John Hopkins University, USA) "School-based strategies for child obesity prevention: State of the art and future directions"
09.35-09.55	Bumpering Break
Speaker 3	Dr. Alexandra Ross (Harvard School of Public Health, USA) "Nutrition Policies to Improve Food Environments and Diet Quality: a Focus on Children and their Families"
09.55-10.15	Bumpering Break
Speaker 4	Prof Wan Abdul Manan Wan Muda (World Public Health Nutrition Association)

	"Addressing the Multiple Burden of Malnutrition in SEA - Its Drivers and Policy Direction"
10.15-10.30	Question and Answer 1
10.35-10.50	Coffee break
10.50-10.55	Moderator 2 introduction Invite speakers to the stage
10.55-11.15 Speaker 5	Bumpering Break (Dr. Khasif Ullah Khan) Universiti Malaya, Malaysia The Role of Health Professionals in the Utilization of Pharmaceutical Technology and Information
11.15-11.35 Speaker 6 ONLINE	Bumpering Break Dr. ATM Kamonchanok Maneechai (Mahidol University, Thailand) The Evolution of Complementary Therapy for The Management of Pregnancy, Labour and Postpartum
11.35-11.50	Question and Answer 2
13.00- 14.00	ORAL PRESENTATION (PARALLEL)
	Doorprize peserta
13.00-13.05	Moderator 3 introduction Invite speakers to the stage
13.05-13.25 Speaker 7 ONLINE	Bumpering Break Dr. Nittiya Noysipoom (Boromarajonani College of Nursing, Nopparat Vajira, Faculty of Nursing, Praboromarachanok Institute, Thailand) "topic"
13.25-13.45 Speaker 8 OFFLINE	Bumpering Break Edi Sampurno, M.Nurs, PhD (Alma Ata Graduate School of Public Health) "Nursing: Long-term Care Management of Chronic Disease Patient"
13.45-14.00	Question and Answer 3
14.15-14.25	"Best oral presentation" Announcement
14.25-14.35	"Best poster competition" Announcement
14.35-14.45	Closing Remark



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List of Oral Presentations

APHNI 2024

"THE EVOLUTION OF HEALTHCARE DELIVERY AND NAVIGATION ON
NUTRITION, MATERNAL, AND CHILD HEALTH, AND CHRONIC DISEASE"

U N I V E R S I T A S A L M A A T A

PARALLEL PRESENTATION SCHEDULE**ROOM I**

Wednesday, November 20th, 2024 (13.00 – 14.15 WIB)

Room: Tulip & Hybrid

Topic: Public Health, Maternal and Child Health, Nutrition, Food Security

Moderator: Ns. Raden Jaka Sarwadhamana, S.Kep., M.P.H.

Jury :

1. Dr. Veriani Aprilia, STP., M.Sc.
2. Dr. Eka Nurhayati, S.ST., M.K.M.

Time	Presenter Code	Presenter	Title of Manuscript
13.00 – 13.08	A001	Anisa Eka Pramasti	The Interaction of Macronutrient and Energy Intake with Gestational Weight Gain Status on Newborn Interaction Outcomes: Findings from VDPM Cohort Study in West Sumatera
13.10 – 13.18	A007	Nadia Fahira Dewi	Based on Marine as an Alternative Product Rich in Protein, Calcium and Phosphorus
13.20 – 13.28	A004	Lia Dian Ayuningrum	Comprehensive Analysis of Anxiety, Stress, Depression, Obesity, and Cortisol Levels in Women with PCOS
13.30 – 13.38	A005	Devi Arine Kusumawardani	Maternal Anemia in Third Trimester and Related Maternal and Fetal Outcomes: Results from a Study in Jember Regency
13.40 – 13.48	A009	Audy Fidarova Putri	Formula Milk Advertising Exposure and Exclusive Breastfeeding Duration Among Infants Aged 6-8 Months in Indonesia (Online Survey)
13.50 – 13.58	A010	Anita Widiawati	Strategies to increase nurse compliance with standard operational procedures (SOP) to prevent the risk of falling in hospitalised children at Wonosari Hospital
14.00 – 14.08	B001	Arvikjatul Arman	A cross-sectional study between physical activity and body mass index to blood pressure in hypertension patients in Primary Health Center Bantul 1 Yogyakarta

ROOM II

Wednesday, November 20th, 2024 (13.00 - 14.15 WIB)

Room: Chrysant

Topic: Child Health, Clinical Nutrition, Clinical Pharmacy

Moderator: apt. Sundari Desi Nuryanti, M. Sc

Jury :

1. Dr. Yhona Paratmanitya, S.Gz., Dietisien., MPH.

2. Dr. apt. Daru Estiningsih, M.Sc.

Time	Presenter Code	Presenter	Title of Manuscript
13.00 - 13.08	A002	Adilla Prastiwi	The Relationship Between Vitamin D Intake and Serum 25-Hydroxyvitamin-D In Third-Trimester Pregnant Women in West Sumatra
13.10 - 13.18	A003	Rina Cahyaningsih	Analysis of drug-related problems (DRPS) in geriatric patients with complicated and uncomplicated diabetes mellitus at the inpatient installation of Panembahan Senopati Hospital Bantul
13.20 - 13.28	A006	Putri Novitasari	Identification of Fat Mass and Obesity-Related (FTO) rs9939609 Gene Variant Among Sundanese Obese Young Women
13.30 - 13.38	A008	Sintha Fransiske Simanungkalit	Factors related to the nutritional status (bmi/u) of autism spectrum disorder (ASD) persons aged 5-18 years in the Jabodetabek Area 2024
13.40 - 13.48	A011	Herwinda Kusuma Rahayu	Exposure to food advertising: Associations with unhealthy food consumption among children aged 6-23 months in Indonesia
13.50 - 13.58	A012	Effatul Afifah	Analysis of complementary feeding practices among stunted children aged 6-24 months in Natuna Regency
14.00 - 14.08	A013	Herni Dwi Herawati	Factors Associated with Vegetable Consumption among Urban Indonesian Preschool Children

PRESENTATION GUIDELINE



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GUIDELINE

- Each parallel room will have one moderator, with one or more committee members in attendance
- Oral presentations for the APHNI 2024 have been allocated 15 minutes of effective presentation time, including a question-and-answer session
- Oral presentations must be in English. One article can only be presented by a presenter; the other authors can register as non-presenters who help in the discussion sessions
- The moderator will remind you 2 minutes left for the presentation time
- During the presentation, participants are required to maintain a conducive situation
- In the Q&A session, participants who want to ask questions must use a raised hand. After that, the moderator will invite participants to speak.



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The Interaction of Macronutrient and Energy Intake with Gestational Weight Gain Status on Newborn Interaction Outcomes: Findings from VDPM Cohort Study in West Sumatera

Anisa Eka Pramasti¹, Arif Sabta Aji^{1*}, Anafrin Yugistyowati², Effatul Afifah¹

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ABSTRACT

Background: Proper nutrient intake in pregnant women is essential for maternal and foetal health, childbirth preparation, and prevention of infant nutrition problems. Malnutrition, especially Chronic Energy Deficiency (CED), can increase the risk of complications from giving birth to a baby with Low Birth Weight (LBW).

Objectives: To analyse the interaction between the intake status of macronutrients (carbohydrates, proteins, fats), energy and maternal weight gain status during pregnancy on newborn anthropometry in West Sumatra.

Methods: This secondary data analysis was based on the longitudinal cohort study "Vitamin D Program Women (VDPM)" with 182 subjects. In the third trimester, the Semi-Quantitative Food Frequency Questionnaire (SQ-FFQ) obtained macronutrients and energy intake. Statistical data analysis uses Spearman Correlation and a multivariate test with the General Linear Model (GLM) to find the interaction between macronutrient intake, energy, and gestational weight gain (GWG) status on newborn anthropometry outcomes with adjusting possible confounding variables such as antenatal care visit, parity status, maternal age, and gestational age.

Results: There was no significant association between macronutrients, energy, and GWG status during pregnancy ($p > 0.05$). The macronutrient and energy intake had no association with newborn anthropometry ($p > 0.05$). There was no interaction between macronutrients and energy intake with GWG status on anthropometric indicators of newborns ($p > 0.05$).

Conclusions: Macronutrients and energy intake did not interact with GWG status on newborn anthropometry outcomes. Further analysis is needed to determine factors that interact with macronutrients and energy intake and the status of GWG in newborn anthropometric indicators.

KEYWORDS: macronutrient intake; energy; gestational weight gain; newborn anthropometry; west Sumatera.

The Relationship Between Vitamin D Intake and Serum 25 Hydroxyvitamin-D in Third-Trimester Pregnant Women in West Sumatra

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ABSTRACT

Background: Vitamin D helps calcium metabolism and bone health and supports the immune system, especially during pregnancy. Low levels of vitamin D in pregnant women can increase the risk of pregnancy complications. An optimal vitamin D intake is required to maintain sufficient vitamin D status.

Objectives: This study was to determine the correlation between vitamin D intake and serum 25(OH)D levels in the third trimester of pregnancy in West Sumatra.

Methods: This secondary data analysis was based on the longitudinal cohort study "Vitamin D Program Women (VDPM)" with 183 women. The dietary intake was measured by the Semi-Quantitative Food Frequency Questionnaire (SQ-FFQ), and the serum 25(OH)D concentration was measured by Enzyme-Linked Immunosorbent Assay (ELISA). Statistical analysis was tested using Pearson correlation with the SPSS 23.0 version.

Results: Pregnant women's average vitamin D intake and serum 25(OH)D concentration during the third trimester were 9.15 mcg/day and 21.04±10.09 ng/ml, respectively. Most pregnant women had below the normal recommended daily vitamin D intake (<15 mcg/day). Furthermore, the positive correlation had shown the correlation between vitamin D intake and 25(OH)D serum, yet this was not a statistically significant association and very weak correlation status ($p=0.082$ and $r=0.102$).

Conclusions: This study showed no relationship between vitamin D intake and serum 25(OH)D concentration during the third trimester of pregnancy. Pregnant women are advised to get more exposure to sunlight and consume vitamin D-fortified foods or vitamin D supplements to improve bone health and vitamin D status.

KEYWORDS: vitamin D intake; serum 25(OH)D levels; pregnant women; west Sumatra.

Analysis of Drug-Related Problems (DRPS) In Geriatric Patients with Complicated and Uncomplicated Diabetes Mellitus at The Inpatient Installation of Panembahan Senopati Hospital Bantul

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ABSTRACT

Background: Diabetes mellitus is a long-term metabolic disorder (chronic) that can cause complications in geriatric patients (patients aged 65 years and over) and potentially cause DRPs during treatment.

Objectives: To determine the different characteristics of drug-related problems (DRPs) in geriatric patients with a diagnosis of complicated and uncomplicated diabetes mellitus in the inpatient installation of Panembahan Senopati Hospital, Bantul.

Methods: This study used a retrospective method based on medical record data from January to June 2023. The sample inclusion criteria were geriatric patients hospitalised at the Panembahan Senopati Hospital, Bantul, diagnosed with diabetes mellitus. DRPs were identified using PCNE version 9.0 and Beer's criteria. Analysis was carried out descriptively and computerised using the chi-square test.

Results: Fifty-eight patients were used as samples, with 37 patients with complications (63.8%) and 21 patients without complications (36.2%). DRPs in geriatric patients with a diagnosis of complicated diabetes mellitus were most often potential DRPs with problems related to treatment safety (43.2%) and with the cause of drug selection being no indication for the drug (26.3%). DRPs in geriatric patients with a diagnosis of diabetes mellitus without complications were most often potential DRPs with problems related to treatment safety (59.6%) and with the cause of drug selection being inappropriate drug combinations (22.8%). The drug that most often causes DRPs is insulin. The p-value = 0.479 (> 0.05) shows no significant relationship between complicated and uncomplicated diabetes and the incidence of DRPs.

Conclusions: Based on research, it is known that there are slight differences in the characteristics of DRPs in complicated and uncomplicated geriatric patients at Panembahan Senopati Hospital, Bantul.

KEYWORDS: diabetes mellitus; DRPs; geriatrics

Relationship between BMI, Anxiety, Stress, Depression, and Cortisol Levels in Women with PCOS

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ABSTRACT

Background: Polycystic Ovary Syndrome (PCOS) is one of the leading causes of infertility and is often associated with an increased risk of psychological disorders such as anxiety, depression, and reduced quality of life. These emotional and psychological factors, along with physical indicators such as body mass index and chronic stress, play an essential role in determining health outcomes in women with PCOS. Women with PCOS often experience disordered eating patterns, such as binge eating and emotional eating, which contribute to increased obesity.

Objectives: Evaluate the relationship between Body Mass Index (BMI), levels of anxiety, stress, depression, and cortisol levels in women with PCOS

Methods: A cross-sectional observational study was conducted on 36 women with PCOS undergoing treatment at a health centre in Yogyakarta who had undergone treatment for at least 6 months. Using standard scales, including the HARS questionnaire for anxiety, BDI for depression, PSS for stress levels, BMI to check Obesity and the Elisa Method to analyse cortisol levels

Results: Most of the respondents experienced BMI with level II of obesity, severe anxiety and severe stress, and half of the respondents experienced severe depression and cortisol levels of 118.56; this indicates an increase in cortisol levels in women with PCOS. BMI significantly affected cortisol levels (0.021). Overall, BMI, anxiety, and depression significantly influenced the increase in cortisol levels, with BMI being the most dominant factor.

Conclusions: This study shows that BMI-defined obesity, anxiety, depression, and stress significantly affect cortisol levels in women with PCOS. Psychological stress, characterised by anxiety and depression, exacerbates metabolic conditions through increased chronic inflammation and insulin resistance, ultimately reinforcing the cycle of obesity and reproductive disorders.

KEYWORDS: anxiety; cortisol levels; PCOS; obesity; stress

Maternal Anaemia in Third Trimester and Related Maternal and Fetal Outcomes: Results From A Study In Jember Regency

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ABSTRACT

Background: Anemia in pregnant women is at risk of becoming one of the causes of poor maternal and fetal outcomes. Maternal and fetal outcome refers to the mother and newborn's morbidity, obstetric emergencies, life-threatening situations, and mortality. **Objectives:** The research aimed to analyse the correlation between maternal anaemia in the third trimester and maternal and fetal outcomes.

Methods: This quantitative study is research with a cross-sectional design. The study population included third-trimester pregnant women from January to December 2022 in the Arjasa Health Center working area, totalling 550 pregnant women. The sample size calculation used the Lemeshow formula, resulting in a sample size of 115 third-trimester pregnant women. The analysis test used in this study was the contingency coefficient test. Data collection utilised secondary data from the Maternal and Child Health Clinic's register book, the pregnant women's cohort book, and the Arjasa Health Center laboratory examination book for 2022.

Results: The study showed that most respondents had no history of anaemia, and those who mainly experienced mild anaemia accounted for 42.6%. The study revealed a relationship between the history of anaemia in third-trimester pregnant women and maternal outcomes ($p\text{-value} = 0.005$, $\text{coeff c.} = 0.291$), categorised as a weak relationship, and low birth weight ($p\text{-value} = 0.015$, $\text{coeff c.} = 0.220$), also categorised as a weak relationship. The analysis of the history of anaemia incidents in third-trimester pregnant women with the age of delivery and infant mortality did not show a significant relationship.

Conclusions: This study shows there is a correlation between the history of anaemia in third-trimester pregnant women and maternal outcomes and low birth weight.

KEYWORDS: anemia; fetal outcome; maternal outcome; third trimester

Identification of Fat Mass and Obesity-Related (FTO) rs9939609 Gene Variant Among Sundanese Obese Young Women

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ABSTRACT

Background: The Fat Mass and Obesity-Related (FTO) rs9939609 gene, a common variant in the FTO gene, is known to be associated with obesity. However, no study was conducted on the FTO rs9939609 gene variant among Sundanese obese young women, showing a significant gap in understanding what genetic factors contribute to obesity in this unique population.

Objective: To identify the prevalence and distribution of the Fat Mass and Obesity-Related (FTO) rs9939609 gene variant among Sundanese obese young women.

Method: In this cross-sectional study, 38 Sundanese women aged between 18 and 25 were included. These women had been classified as obese, with a body fat percentage higher than 35%. Genotyping of the FTO rs9939609 gene variant was performed using PCR and sequencing.

Result: Our findings revealed that 50% of the subjects had the heterozygous variant TA, 42.1% had the homozygous variant TT, and only 7.9% had the variant AA homozygote. The FTO rs9939609 variant among subjects was in Hardy-Weinberg equilibrium ($p > 0.05$), and the minor allele frequency was 0.329.

Conclusion: These results provide the first insights into the prevalence of the FTO rs9939609 gene variant among Sundanese obese young women, making a unique contribution to obesity research and clinical practice. The minor allele frequency obtained aligns with global patterns of FTO variants, suggesting a genetic predisposition to obesity. The statistical results establish a solid genetic foundation for future research on the role of the FTO rs9939609 variant in obesity among Sundanese women.

KEYWORD: FTO rs9939609; obese women; sundanese ethnicity

Development of Noodle Product with Substitution of Crab (*Portunus Pelagicus*)-Flour Based on Marine as an Alternative Product High In Protein, Calcium and Phosphorus

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ABSTRACT

Background: Noodles are a popular source of carbohydrates in Indonesia but often lack nutritional value.

Objective: This study aimed to analyse the effect of crab shell flour substitution as an alternative ingredient in noodle formulation on increasing protein, calcium, and phosphorus content.

Research Methods: This study used an experimental design with a one-factor, Completely Randomized Design (CRD) consisting of five treatments with variations in the ratio of wheat flour and crab shell flour. Nutritional analysis was conducted using the Kjeldahl method for protein and spectrophotometry for calcium and phosphorus, while the organoleptic test involved 40 panellists in assessing the noodles' colour, aroma, taste, and texture.

Results: The results showed that treatment F5, which consisted of 25% crab shell flour, showed the highest calcium and phosphorus concentrations. However, the protein content fluctuated, with treatment F0 consisting of 100% wheat flour showing the highest protein content. This fluctuation may be due to the processing method used and the storage conditions of the product, which may affect protein stability. Organoleptic test results showed that the F0 treatment noodles with 100% wheat flour were the most preferred in terms of colour and taste. The F1 treatment was still well accepted, but its favorability score was lower than that of the F0 treatment. This is due to the characteristics of the noodles in the F0 treatment commonly found in noodles sold.

Conclusion: The study showed that treatment F5 with 25% crab shell flour produced the highest calcium and phosphorus concentrations, while treatment F0 (100% wheat flour) had the highest protein content. Fluctuations in protein content may be due to processing methods and storage conditions. Organoleptic

tests showed that F0 treatment noodles were preferred in colour and taste, while F1 treatment was still acceptable but had lower liking scores.

Keywords: Alternative Food; Calcium; Crab Shell Flour; Noodles; Phosphorus.



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Factors Related to The Nutritional Status (BMI/U) of Autism Spectrum Disorder (ASD) Persons Aged 5-18 Years in The Jabodetabek Area 2024

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ABSTRACT

Background: The prevalence of children with autism spectrum disorder is estimated to increase by 500 individuals per year since 2010. Children with ASD have nutritional problems similar to those of children in general.

Objectives: This study aims to determine the relationship between energy intake, maternal education level, knowledge of balanced nutrition, parental income, family support, birth weight and the nutritional status of ASD children.

Methods: The study used an observational design with a cross-sectional design and a purposive sampling technique with a sample size of 117 respondents. Data analysis was carried out using univariate and bivariate analysis using the Spearman Rank test.

Results: Overnutrition and undernutrition are two nutritional issues that children with ASD, much like other kids. Children with ASD who suffer from malnutrition will have altered thinking and reasoning, and children with ASD who are obese will suffer from neurological, respiratory, dermatological, and gastrointestinal disorders. To achieve healthy growth, development, and quality of life, children with ASD must have appropriate nutritional status. The results showed that ASD children had an average normal nutritional status (0.66). The bivariate test showed a significant relationship between energy intake ($p = 0.008$), knowledge of balanced nutrition ($p = 0.020$), parental income ($p = 0.010$), family support ($p = 0.004$), and low birth weight ($p = 0.012$) with the nutritional status of ASD children. However, there was no relationship between maternal education level ($p = 0.627$) and the nutritional status of ASD children. P

Conclusions: Parents are expected to monitor food intake and child growth and development, provide quality food ingredients, and increase their knowledge of balanced nutrition accompanied by family support to maintain optimal nutritional status in children with ASD.

KEYWORD: autism spectrum disorder; intake energy; family support; parental income; knowledge

Formula Milk Advertising Exposure and Exclusive Breastfeeding Duration Among Infants Aged 6-8 Months in Indonesia (Online Survey)

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ABSTRACT

Background: Exclusive breastfeeding is pivotal for a baby's development and growth. The emerging issue is the decreasing prevalence of exclusive breastfeeding due to modernity and the rampant marketing campaign of formula milk.

Objectives: This study aims to determine the relationship between the frequency of exposure to formula milk advertisements and the duration of exclusive breastfeeding among infants aged 6-8 months in 6 provinces in Java, Indonesia.

Methods: This observational study was conducted using an online survey and a cross-sectional approach. It involved 371 mothers with infants aged 6-8 months in 6 provinces in Java Island, Indonesia, using a consecutive sampling technique. The study lasted from January to March 2024. Data were analysed using the univariate test and the Spearman correlation test.

Results: The study shows that the average duration of full breast milk intake among babies was until the age of 2.86 (SD $\pm 2,34$) months, and the average frequency of formula milk advertisements exposure was 5.79 (SD ± 3.73) times. There was a significant relationship with a negative direction but a very weak correlation between the frequency of exposure to formula milk advertisements and the duration of exclusive breastfeeding (p-value = 0.001 and $r = -0.179$).

Conclusions: The higher the frequency of exposure to formula milk advertising, the lower the duration of exclusive breastfeeding in infants aged 6-8 months. Strict regulation of formula milk advertising and breastmilk assistance for mothers with breastfeeding difficulties are needed.

KEYWORDS: formula milk advertising; formula milk; breastfeeding duration; exclusive breastfeeding; Indonesia

Strategies to Increase Nurse Compliance with Standard Operational Procedures (SOP) to Prevent The Risk of Falling In Hospitalized Children at Wonosari Hospital

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ABSTRACT

Background: The incidence of fall risk in pediatric inpatients increased from 2022 to 2023. This incident is a serious problem that impacts morbidity and mortality. The incidence occurs due to a lack of evaluation of nurses' compliance with efforts to prevent fall risk in pediatric inpatients. Research has been conducted before at the Wonosari hospital, and it is known that the level of compliance of nurses with SOPs to prevent the risk of falling in children has only reached 53.2% with associated factors such as motivation, knowledge, attitudes, workload and work environment, which is the most influencing factors is motivation. According to this finding, a strategy for increasing nurses' compliance must be developed to solve this problem.

Objectives: Develop a strategy to increase nurses' compliance with SOPs to prevent the risk of falling on inpatients at Wonosari Hospital

Methods: The research was conducted using a qualitative design. Forum Group Discussion (FGD) was used for data collection. The research informants are nurses with low and high compliance scores, nursing managers and committees, and nursing policy makers in hospitals. Qualitative analysis was done using the Miles and Huberman model analysis content technique.

Results: The FGD produced several strategies to increase nurses' compliance with SOPs, namely 1. internal training, 2. socialisation modification, 3. policy formulation, 4. supervisor supervision, and 5. SOP review and improvement, according to the FGD results.

Conclusions: Hospital management, quality committees, and room heads are expected to implement these strategies due to the FGD. Evaluation of nurses' compliance with efforts to prevent the risk of falls in hospitalised children at Wonosari Hospital.

KEYWORDS: compliance; nurses; prevention efforts; risk in child falls; hospitalization

Exposure to Food Advertising: Associations with Unhealthy Food Consumption Among Children Aged 6-23 Months in Indonesia

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ABSTRACT

Background: High-quality complementary feeding (CF) practice can improve child survival and promote healthy growth and development. However, consumption of unhealthy foods in CF is common among children living in low- and middle-income countries due to massive exposure to food advertising. Unhealthy food consumption can displace other nutritious foods.

Objectives: To analyse the association between the frequency of exposure to food advertising and the frequency of unhealthy foods in CF among children aged 6-23 months in Indonesia.

Methods: We conducted a cross-sectional study using convenience sampling, including 415 children. Mothers self-reported their frequency of food advertising exposure in various media and their children's unhealthy food consumption within the last two weeks.

Results: The frequency of unhealthy food consumption in CF was 18.29 (± 9.75), and exposure to food advertising was 5.41 (± 5.32). A significant positive association was seen between the consumption frequency of unhealthy foods in CF and food advertising exposure ($r=0.272$, $p<0.001$).

Conclusions: High exposure to food advertising will increase the frequency of unhealthy food consumption on CF among children. Given the significant impact of such marketing, the government should restrict unhealthy food marketing targeting children's mothers.

KEYWORDS: food advertising; complementary feeding; unhealthy food

Analysis of Complementary Feeding Practices Among Stunted Children Aged 6–24 Months in Natuna Regency

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ABSTRACT

Background: In 2023, the prevalence of stunting in Natuna reached 16.1%, up from 11.77% in 2021. One critical factor in stunting prevention is the appropriate provision of complementary feeding (CF) for children aged 6–24 months. According to the 2023 Indonesian Health Survey, CF practices in Riau Islands Province remain suboptimal, characterised by low feeding frequency, limited dietary diversity, and inadequate animal protein intake.

Objectives: This study will analyse the relationship between maternal knowledge, attitudes, and involvement with CF practices among stunted children aged 6–24 months in Natuna Regency.

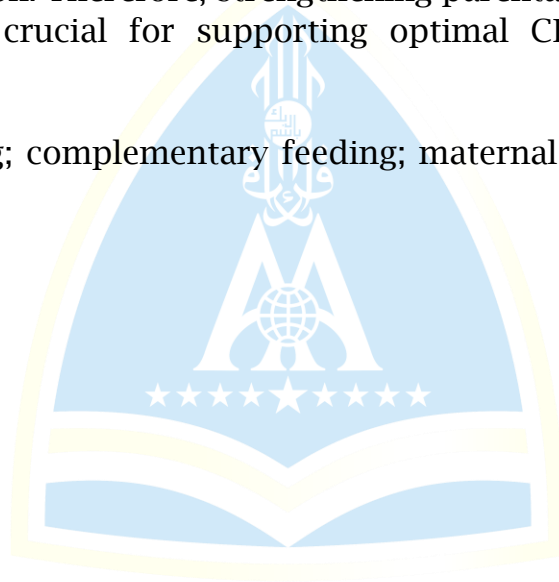
Methods: This quantitative study employed a case-control design. A purposive sampling method was used to recruit 122 respondents, comprising 60 cases (stunted children) and 62 controls (non-stunted children). Data collection was conducted through questionnaires, and the quantitative data were analysed using the chi-square test with SPSS 25.0.

Results: Among the case group (stunted children), 34 respondents (27.9%) exhibited good knowledge, while in the control group, all respondents (58.8%) demonstrated good knowledge. Regarding attitudes, 40 respondents (32.8%) in the case group displayed poor attitudes, whereas 43 respondents (35.2%) in the control group had positive attitudes. Furthermore, 40 respondents (32.8%) in the case group were not actively involved in CF practices, compared to 50 respondents (41.0%) in the control group who were actively involved. Statistical analysis using the chi-square test revealed significant associations between knowledge, attitudes, involvement, and CF practices among stunted children aged 6–24 months, with p-values for knowledge (<0.001), attitudes (<0.001), and

involvement (<0.001), all below the threshold of $\alpha = 0.05$. Multivariate analysis identified maternal knowledge as the most significant determinant of complementary feeding practices among stunted children aged 6–24 months.

Conclusions: This study highlights that improved maternal knowledge, attitudes, and involvement contribute to better CF practices for stunted children. Mothers with good knowledge are more likely to provide appropriate CF, while positive attitudes influence proper CF practices. Additionally, maternal physical and emotional involvement enhances understanding of children's nutritional needs, improving CF provision. Therefore, strengthening parental knowledge, attitudes, and involvement is crucial for supporting optimal CF practices to reduce stunting.

KEYWORDS: stunting; complementary feeding; maternal involvement; children aged 6–24 months



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Factors Associated with Vegetable Consumption Among Urban Indonesian Preschool Children

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ABSTRACT

Background: Low vegetable consumption is a risk factor for obesity. Several studies have shown that vegetable consumption can have a protective effect on chronic disease prevention and weight loss. According to the Total Diet Survey, the consumption of vegetables among children is low at just 18.2 grams/day.

Objectives: This study aims to determine factors associated with vegetable consumption among urban Indonesian preschool children.

Methods: This type of research is cross sectional study. The sample selection used Probability Proportional to Size with several inclusion and exclusion criteria, resulting in a sample of 181 children. The variables taken include daily vegetable consumption, which was measured by using a quantitative Food Frequency Questionnaire (SQ-FFQ), the availability of vegetables at home, maternal knowledge, age at first introducing vegetables, parental eating behaviour was measured by using parental modelling of eating behavioural scale (PARM), and feeding behaviour was measured by using a comprehensive questionnaire feeding practices (CFPQ). Bivariate data were analysed using chi-square and multivariable analysis using binary logistic regression.

Results: children mostly less to consume vegetables, as many as 141 children (77.9%), while sufficient to consume vegetables 40 children (22.1%). The bivariate analysis results using the chi-square test, with a confidence level of 95%, obtained a $p\text{-value} < \alpha$ (0.05) for maternal knowledge, age at first introducing vegetables and parental eating behaviour. Multivariate analysis shows that the mother's knowledge variable is the dominant variable influencing preschool children's vegetable consumption (OR 22; 95%CI; 8.1-59.3).

Conclusions: There is a relationship between maternal knowledge, age at first introducing vegetables and parental eating behaviour with vegetable consumption habits in preschool children

KEYWORDS: consumption; children; factors; preschool; vegetable

A Cross-Sectional Study Between Physical Activity and Body Mass Index to Blood Pressure in Hypertension Patients In Primary Health Center Bantul 1 Yogyakarta

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ABSTRACT

Background: Hypertension occurs when the arterial blood pressure, during heart systole, is higher than 140 mm/hg, and diastole reaches 90 mm/hg. Physical activity and BMI also had crucial roles in treating hypertension. Regular physical activity and maintaining a healthy BMI positively impact blood pressure control and help improve the quality of life for patients. This study investigates the relationship between physical activity and body mass index (BMI) with blood pressure in hypertensive patients at Bantul 1 Primary Health Center in Yogyakarta, Indonesia.

Methods: A cross-sectional study was conducted among 157 respondents with hypertension with age >60 years old selected through a purposive sampling technique. SPAQ measured physical activity, and BMI was collected using observation sheets. BMI and blood pressure were measured using an observation sheet. Data analysis was performed using Spearman, and multivariate analysis was performed using logistic regression. With a significance level of 95% or α value of 5% (0.05), the obtained p-value (0.000) < α value (0.05).

Results: The analysis result used Spearman correlation, indicating a relationship between physical activity and body mass index to blood pressure in hypertensive patients in primary health centre Bantul 1 Yogyakarta. There was a relation between physical activity and blood pressure with $p = 0,00$; $r = 0,821$. There was a relation between body mass index and blood pressure with $p = 0,00$; $r = 0,565$. Logistic regression found that BMI strongly correlates with blood pressure, with a p-value of 0.000.

Conclusions: Both physical activity and body mass index (BMI) correlate with blood pressure. BMI correlates with blood pressure in the Primary Health Center in Yogyakarta, Indonesia.

KEYWORDS: BMI; hypertension; physical activity;



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