

BOOK OF ABSTRACT

**2nd International Conference of
Gorontalo Health Polytechnic (2nd ICGHP)**
*“Interprofessional Collaboration for Prevention and
Control of Non Communicable Disease: Bridging
Disciplines, Improving Outcomes”*

2025

2nd ICGHP

International Conference of Gorontalo Health Polytechnic



Book of Abstrack

**2nd International Conference of Gorontalo Health Polytechnic
10-11 December 2025**

**Assalamualaikum Warahmaatullahi Wabarakatuh,
Peace be upon us all,
Shalom, Namo Buddhaya, Om Swastiastu, Salam Kebajikan,**

It is my great honor and pleasure to welcome you to the **2nd International Conference of Gorontalo Health Polytechnic (ICGHP)**. This year's theme, "Interprofessional Collaboration for Prevention and Control of Non Communicable Disease: Bridging Disciplines, Improving Outcomes", highlights our shared commitment to tackling one of the most pressing global health challenges. On behalf of the organizing committee, I would like to express my deepest gratitude to our esteemed keynote speakers and panelists;

- Najihah Zainol Abidin, Ph.D from Management and Science University Malaysia.
- Dr.Khadizah H.Abd Mumin,RN.,MD from University Brunei Darussalam.
- Thang Ngu Yen,Ph.D from Can Tho University of Medicine and Pharmacy, Vietnam.
- Dr.Paromita Benergee from National Institute of Nutrition, India.

Your presence here, as global experts in health science, enriches this conference. We are confident that your insights and experiences will inspire innovative approaches to diabetes prevention and management.

Thank you

Wassalamu'alaikum Warahmaatullahi Wabarakatuh.



CONTENTS

Preparation and Characterization of Butterfly Pea Flower (<i>Clitoria ternatea</i> L.) Extract Nanoemulsion using Particle Size Analysis (PSA).....	1
Maternal Health Literacy and Pregnancy Self-Care: A Global Scoping Review of Evidence, Gaps, and Implications for Maternal–Neonatal Outcomes.....	2
Resveratrol and Ferulic Acid as Non-Flavonoid Antidiabetic Candidates: Mechanisms, Bioavailability Challenges, and Formulation Prospects	3
Dissolution Test of Sesewanuwa Leaf Fraction Tablets with Various Binders Using UV-VIS Spectrophotometry	4
Green Shell Filter (GSF): An Innovative Eggshell-Based Media for CO Absorption in Cigarette Smoke.....	5
Herbal Transdermal Patch as Antihyperglycemic in Male White Rats (<i>Rattus norvegicus</i> L.)	6
Differences Of Leukocyte Index In Various Classifications Of Hypertension In Pregnancy.....	7
Occupational Exposure to Resuspended PM10 in Semi-Enclosed Warehouses: The Role of Material Storage Type and Ventilation in Risk Mitigation.....	8
Family And Community Empowerment Model To Improve Early Detection Of Hypertensive Disorders In Pregnancy	9
Knowledge and Attitudes towards Diabetes Mellitus Management in Women Indonesia: A Cross-Sectional Study.....	10
Android-Based Adolescent Reproductive Health Application (“Kepo Remaja”) As An Educational Media For Preventing Early-Age Pregnancy..	11
Corn and Cassava Development Study on changes in albumin levels in energy-deficient experimental animals	12
Factors Related to the Nutritional Status of Toddlers in the District Tabongo : Analysis of Subject Survey Data Nutrition Program Planning	13
Economic Status And Nutritional Profile As Determinants Of Anemia In Preconception Women	14
Impact of a Self-Efficacy–Based Sleep Hygiene Intervention on Sleep Quality and Sleep Hygiene Practices in Patients With Type 2 Diabetes Mellitus	15
Caregiver Communication and Adolescent Knowledge and Attitudes on Reproductive Health in Orphanages.....	16

Community Health Worker Performance and Diabetes Prevention Behaviors Among Pregnant Women.....	17
Evaluation of the Utilization of the Special MCH Book for Small Babies in the Working Area of Tanjung Paku Public Health Center, Solok City, 2024	18
The Effect of Animated Video Education in Improving Cervical Cancer Knowledge among Perimenopausal Women	19
Relationship of Sociodemographic and Clinical Characteristics to Medication Compliance and Its Impact on the Quality of Life of Hypertensive Patients at RSUD Siti Fatimah Az-Zahra Palembang	20
An <i>In-Silico</i> Meta-Analysis Of Downregulated Tumor-Suppressor Micrnas As Targeted Therapy Candidates For Breast Cancer.....	21
Availability Level of Medicine at Kota Selatan and Piloloda’a Public Health Centers in 2024	22
Self-Management based on Transcultural Nursing in Patients with Gynecological Cancer: Concept Analysis.....	23
The Effect Of Caffeine Consumption And Stress On The Short-Term Memory Of Medical Students : A Literature Review	24
Effectiveness of Self management Intervention in Community on Management of Type 2 Diabetes Mellitus: A Systematic Review	25
The Report Of The Implementation Of Midwifery: Integrated Antenatal Care Programme Policies	26
Overview Of The Implementation Of The primary Service Integration (ILP) Policy Using The Edward III Implementation Model At The Mamajang Public Health Center In Makassar City.....	27

Preparation and Characterization of Butterfly Pea Flower (*Clitoria ternatea* L.) Extract Nanoemulsion using Particle Size Analysis (PSA)

Prisca Safriani Wicita¹, Zulfiayu Sapiun², Arlan K Imran³, Aprilia Polihito⁴
^{1,2,3,4} Department of Pharmacy, Poltekkes Kemenkes Gorontalo, Gorontalo, Indonesia

Email: Prisca_wicita@poltekkesgorontalo.ac.id,
zulfiayu@poltekkesgorontalo.ac.id , aprilapolihito30@gmail.com

ABSTRACT

Butterfly pea flower (Clitoria ternatea L.) is a medicinal plant known for its wide range of health benefits, including antipyretic, analgesic, anti-inflammatory, and antioxidant activities. This study aimed to determine the preparation method of the nanoemulsion, evaluate the effect of different types of oils on its characterization and physical stability, and assess the particle size and polydispersity index values. This research employed a quasi-experimental laboratory design with three treatment groups and triplicate replications. The independent variable was the type of oil used, while the dependent variables included particle size, polydispersity index, and physical stability. The controlled variables were stirring duration, stirring speed, and temperature.

The results showed that the % transmittance values of the formulations were as follows: F1 (100% ± 0.047), F2 (100% ± 0), and F3 (98.2% ± 0.044). Among these, F2 demonstrated the best characteristics and was further evaluated using Particle Size Analysis (PSA). Formula F2 exhibited a particle size of 11.3 nm and a polydispersity index of 0.121.

Conclusion: The type of oil significantly influenced the physical stability of the nanoemulsion, as indicated by the % transmittance values.

Keywords: *Clitoria ternatea* L.; Nanoemulsion; Particle Size Analysis (PSA).

Maternal Health Literacy and Pregnancy Self-Care: A Global Scoping Review of Evidence, Gaps, and Implications for Maternal–Neonatal Outcomes

Nurul Fadhilah Gani¹, Nurul Khusnul Khotimah², Nordianna Seman³, Nurhidayah⁴, Hasnah⁵

^{1,2,4,5} *Nursing Department, Universitas Islam Negeri Alauddin Makassar, Indonesia*

³ *A Center for Nursing Studies, Faculty of Health sciences, MARA University of Technology, Malaysia*

Email: [¹ nurul.fadhilah@uin-alauddin.ac.id](mailto:nurul.fadhilah@uin-alauddin.ac.id), [² nurul.khusnul@uin-alauddin.ac.id](mailto:nurul.khusnul@uin-alauddin.ac.id), [³ nordianna@uitm.edu.my](mailto:nordianna@uitm.edu.my), [⁴ nurhidayah.ners@uin-alauddin.ac.id](mailto:nurhidayah.ners@uin-alauddin.ac.id), [⁵ hasnah@uinn-alauddin.ac.id](mailto:hasnah@uinn-alauddin.ac.id)

ABSTRACT

Maternal health literacy (MHL) has emerged as a critical determinant of maternal–neonatal outcomes, yet global evidence remains fragmented across populations, measurement tools, and self-care domains. This fragmentation limits the development of literacy-sensitive interventions, despite strong evidence that MHL influences antenatal behaviors, nutrition, psychosocial well-being, and danger-sign recognition. This scoping review aims to systematically map empirical evidence on how MHL affects pregnancy-related self-care behaviors and maternal–neonatal outcomes, identify conceptual and methodological gaps, and highlight priorities for future interventions. The review followed Arksey and O'Malley's framework and applied the PRISMA process for study selection. Searches were conducted in PubMed, ScienceDirect, and Google Scholar for studies published between 2016 and 2025. Eligible articles were quantitative studies involving pregnant women and reporting MHL measures. Twenty-four studies met the inclusion criteria and were charted according to population characteristics, instruments, MHL dimensions, self-care domains, and key outcomes. Data were analyzed using charting techniques and narrative synthesis. Higher maternal health literacy (MHL) is consistently associated with better pregnancy-related self-care behaviors, including adherence to antenatal visits, iron–folic acid supplementation, healthy nutrition, hygiene practices, physical activity, psychosocial well-being, and recognition of danger signs. Conversely, limited MHL contributes to delayed ANC, poor nutritional adherence, reduced ability to identify obstetric danger signs, and higher levels of pregnancy-related anxiety, while literacy-focused interventions have been shown to significantly improve self-care capabilities. In conclusion, strengthening MHL is essential to improve self-care practices and support maternal and neonatal health outcomes.

Keywords: *Maternal health literacy, Pregnancy self-care*

Resveratrol and Ferulic Acid as Non-Flavonoid Antidiabetic Candidates: Mechanisms, Bioavailability Challenges, and Formulation Prospects

Siti Nur Fatimah S. Mohamad¹, Zulfiayu Sapiun²

¹ Postgraduatee, Faculty of Pharmacy, Hasanuddin Univeristy, Indonesia.

² Departement of Pharmacy, Health Polytechnic of Gorontalo, Gorontalo, 405032, Indonesia

Email: mohamadsnfs22n@student.unhas.ac.id¹,
zulfiayu@poltekkesgorontalo.ac.id²

ABSTRAK

Diabetes mellitus is a chronic metabolic disorder characterized by hyperglycemia resulting from insulin resistance or impaired insulin secretion, and it contributes substantially to cardiovascular and renal complications. The global burden of diabetes continues to rise, including within Indonesia, highlighting the urgent need for safer and more effective therapeutic options. Resveratrol (RES) and ferulic acid (FA) are non-flavonoid compounds with broad antidiabetic activity mediated through the modulation of oxidative stress, inflammation, insulin sensitivity, and glucose metabolism. Resveratrol primarily exerts its effects through activation of the SIRT1 AMPK pathway, enhancement of GLUT4 translocation, suppression of hepatic gluconeogenesis, and protection of pancreatic β cells. FA demonstrates antidiabetic effects by inhibiting carbohydrate-digesting enzymes, improving insulin sensitivity, regulating hepatic metabolic enzymes, activating PI3K/Akt and AMPK pathways, and exerting strong antioxidant and anti-inflammatory activities that protect β cells from damage. Despite their promising pharmacological profiles, low bioavailability, rapid metabolism, and physicochemical limitations hinder their clinical effectiveness. This review highlights the molecular mechanisms of RES and FA and underscores the need for formulation innovations such as nanoencapsulation, transdermal delivery systems, and microneedle technology—to enhance their stability, absorption, and sustained therapeutic actions in diabetes management.

Keywords: Antidiabetic agent; Ferulic Acid; Resveratrol.

Dissolution Test of Sesewanuwa Leaf Fraction Tablets with Various Binders Using UV-VIS Spectrophotometry

Arlan K. Imran¹, Adinda Dj Tawape², Zulfiayu Sapiun³ Prisca S. Wicita⁴
^{1,2,3,4} Gorontalo Polytechnic of Health of Ministry of Health, Indonesia.

Email: *Arlan_imran@poltekkesgorontalo.ac.id¹*

ABSTRACT

The sesewanua plant has potent anti-inflammatory activity, particularly in the n-Hexane: Ethyl Acetate fraction, which contains alkaloid compounds. However, consuming the fraction can cause discomfort, making it important to develop it into a tablet for more practical use. Binders are used in tablet formulations because they bind the tablet components and affect tablet quality. This study aimed to determine the effect of the type of binder (PVP, starch, and Na-CMC) on the dissolution test results of N-Hexane: Ethyl Acetate Fraction tablets using UV-Vis spectrophotometry. The dissolution test was conducted to evaluate how quickly the active ingredient dissolves from the tablet. Four formulas were tested: F0 (without binder), F1 (5% PVP), F2 (5% starch), and F3 (5% Na-CMC). The formula with the best results was F2, containing 5% starch as the binder, with a dissolution percentage of 80.91%. This is because starch is the best binding agent because it can increase the percentage of active ingredient dissolution in tablets. Therefore, it can be said that the addition of starch provides the best results with a dissolution percentage that meets the requirements.

Keywords: Sesewanuwa Plant; Tablet; Binder; Dissolution

Green Shell Filter (GSF): An Innovative Eggshell-Based Media for CO Absorption in Cigarette Smoke

Arief Dwiyanto Patamani¹, Ruslin Hasan¹, Fitriani Sudirman¹, Faisal¹

¹ Department of Environmental Sanitation, Poltekkes Kemenkes Gorontalo, Indonesia.

Email: faisal@poltekkesgorontalo.ac.id

ABSTRACT

Cigarette smoke is a significant source of indoor air pollution containing carbon monoxide (CO), a toxic gas that is harmful to human health. This study aims to analyze the effectiveness of 10 cm thick eggshell media in a Green Shell Filter (GSF) device in reducing CO levels from cigarette smoke indoors. This study used a pre-experimental method with a one-group pretest-posttest design. The study was conducted with three repeated measurements. A 10 cm thick layer of eggshell media was used in the GSF to evaluate the consistent reduction in CO levels produced by a single cigarette before and after filtration. Data were analyzed using the Wilcoxon signed-rank test. The GSF device with 10 cm thick eggshell media effectively reduced CO levels from 516 ppm to 45 ppm. The GSF demonstrated significant CO absorption capacity, with an average absorption efficiency of 91%. The statistical test with the Wilcoxon signed-rank test showed a significant reduction in CO levels ($p = 0.002$). The Green Shell filter, which utilizes 10 cm thick eggshells, is an effective and precise technology for reducing carbon monoxide levels from cigarette smoke indoors.

Keywords: Carbon monoxide; Cigarette smoke; Eggshell; Green Shell Filter; Indoor air quality

Herbal Transdermal Patch as Antihyperglycemic in Male White Rats (*Rattus norvegicus* L.)

Fihrina Mohamad¹, Nangsih Sulastri Slamet², Hartati¹, Rizka Daud¹

*1*Department of Pharmacy, Poltekkes Kemenkes Gorontalo, Gorontalo, Indonesia

2 Department of Chemical Engineering, Politeknik Negeri Ujung Pandang, South Sulawesi Province, Indonesia

Email : *fhrinamohamad@poltekkesgorontalo.ac.id¹, Asih191287@gmail.com², hartati.apt24@gmail.com³, rizkadaud@poltekkesgorontalo.ac.id⁴*

ABSTRACT

Diabetes mellitus remains a major public health concern in Indonesia, with the 2023 Indonesian Health Survey (SKI) reporting an increase in national prevalence from 2.0% in 2018 to 2.2% in 2023. In Gorontalo Province, diabetes cases are predominantly classified as type 2 diabetes (46.1%), highlighting the growing burden of hyperglycemic disorders in the region. Prolonged use of synthetic antidiabetic drugs may heighten the risk of adverse effects, underscoring the need for safer and more practical therapeutic alternatives. A transdermal delivery system in the form of a Herbal Transdermal Patch (HPT) represents a promising innovation. Three medicinal plants abundantly found in Gorontalo—Muntingia calabura (kersen), Pandanus amaryllifolius (pandan), and Tithonia diversifolia (insulin plant)—have been reported to exhibit antihyperglycemic properties. This study aimed to evaluate the antihyperglycemic activity of HPT formulated with varying extract concentrations in male rats. A true experimental design was employed using four formulations: F1 (gel base), F2 (20:150:600), F3 (20:75:600), and F4 (10:150:600). Blood glucose levels were measured every three days using a glucometer. The results showed that F4 produced the greatest average reduction in blood glucose, reaching 270 mg/dL on day nine. However, one-way ANOVA revealed no significant differences among the treatment groups ($p > 0.05$). These findings indicate that although HPT tends to reduce blood glucose levels, variations in extract concentration among the tested formulations did not produce statistically significant differences in antihyperglycemic effectiveness.

Keywords: *Herbal Transdermal; Antihyperglycemic activity; Diabetes mellitus, Medical plant extract; Pandanus amaryllifolius*

Differences Of Leukocyte Index In Various Classifications Of Hypertension In Pregnancy

Nanda Wahyudi¹, Sri Sujawaty²

¹ Poltekkes Kemenkes Gorontalo, Indonesia.

² Poltekkes Kemenkes Gorontalo, Indonesia.

Email: nandawahyudiapril@gmail.com ¹, sujawatysri76@gmail.com²

ABSTRACT

Hypertension in pregnancy remains a significant contributor to maternal and perinatal morbidity, with inflammatory mechanisms characterized by a surge in leukocytes playing a key role in its pathophysiology. This study aimed to analyze variations in leukocyte indices across different classifications of hypertension in pregnancy. Using a cross-sectional, retrospective descriptive design, leukocyte counts and inflammatory indices were compared between groups to identify patterns associated with disease severity. Statistical analysis used the Independent T-test. A P value of 0.01 (<0.05) indicated that there was a difference in the means of the preeclampsia and severe preeclampsia groups. This indicated that the severe preeclampsia group had a higher leukocyte indices than the moderate preeclampsia group.

Keywords: pregnancy, hypertention, leukocyte

Occupational Exposure to Resuspended PM₁₀ in Semi-Enclosed Warehouses: The Role of Material Storage Type and Ventilation in Risk Mitigation

Deddy Alif Utama¹, Fitriani Sudirman¹, Bun Yamin M. Badjuka¹, Syakila Gita Diandra¹

¹ Department of Environmental Sanitation, Poltekkes Kemenkes Gorontalo, Indonesia

Email: deddy.alif@poltekkesgorontalo.ac.id

ABSTRACT

Indoor particulate pollution in building material stores is often exacerbated by poor ventilation design and inherent friability of stored materials. This study aimed to analyze the health risks associated with resuspended PM₁₀ exposure by examining the critical roles of material storage type and ventilation profile. An observational study utilizing the Environmental Health Risk Assessment (EHRA) approach was conducted on 15 workers, employing a composite air sampling technique across three distinct zones: the Cement Warehouse (semi-enclosed), the Mixed Material Warehouse, and the Display Area (naturally ventilated). The results revealed an extreme disparity, with PM₁₀ concentration in the Cement Warehouse reaching 177.79 µg/m³ due to a 'pollutant trap' effect. This significantly surpassed both the Mixed Material Warehouse (11.61 µg/m³), which features low-emission material storage, and the Display Area (11.43 µg/m³), which benefits from effective cross-ventilation. Risk analysis projected that workers in the semi-enclosed cement storage area face unsafe health risks (RQ>1) after 10 years of service, a finding significantly different from the other two zones, which remained safe. In conclusion, the combination of dry bulk material storage in a semi-enclosed space is the primary determinant of PM₁₀ resuspension risk, thus requiring risk mitigation efforts to prioritize technical controls, specifically mechanical ventilation improvements.

Keywords: Environmental Health Risk Assessment; Material Storage Type; PM₁₀; Semi-Enclosed Warehouses; Ventilation Profile

Family And Community Empowerment Model To Improve Early Detection Of Hypertensive Disorders In Pregnancy

Puspita Sukmawaty Rasyid¹, Yusni Podungge², Nancy Olii³, Rahma Dewi Agustini⁴, Sri Sujawati⁵, Hajah Salmah Haji Mohd Noor⁶

^{1,2,3,4,5} Department of Midwifery, Politeknik Kesehatan Kementerian Kesehatan Gorontalo, Gorontalo, Indonesia.

⁶ Brunei Nurses Association, Bandar Seri Begawan, Brunei Darussalam, Brunei Darussalam.

Email: puspitarasyid@poltekkesgorontalo.ac.id¹, yusnipodungge31@gmail.com², oliinancy7@gmail.com³, rahma.senior@gmail.com⁴, sujawati@gmail.com⁵, salmahnoor2484@gmail.com⁶

ABSTRACT

The lack of early detection of maternal hypertension complications at the family level underscores the importance of strengthening the role of families and community-based networks to ensure a quick and effective response. The study aims to evaluate the effectiveness of the family empowerment model and community cooperation network in improving the early detection of hypertension complications and reducing maternal and neonatal complications. Purposive sampling technique with a number of K1 and K2 samples each of 60 pregnant women who first visited the health center and were detected to have hypertension where K1 received home visit intervention, education using booklets and standardized hypertension management and K2 received standardized hypertension management from the health center. Early detection knowledge, attitudes, and behaviors were assessed before and after the intervention using the T test. Maternal and neonatal complications were assessed during the follow-up of interventions supported by families and community networks in the village. This intervention significantly improved family knowledge, attitudes, and involvement in the early detection of hypertension ($p < 0.05$). Early detection ability and reduced complications of maternal hypertension in K1 compared to K2. Family empowerment and community-based network strengthening models significantly improve hypertension early detection behaviors and reduce maternal and neonatal complications.

Keywords: Maternal hypertension; the role of the family; Community networking

Knowledge and Attitudes towards Diabetes Mellitus Management in Women Indonesia: A Cross-Sectional Study

Nuryani¹, Suryana², Rosyanne Kurshargina³

¹*Departement of Nutrition, Health Polytechnic of Gorontalo, Indonesia*

²*Departement of Nutrition, Health Polytechnic of Aceh, Indonesia*

³*Departement of Nutrition, Universitas Muhamadiyah Jakarta, Indonesia*

ABSTRACT

Diabetes mellitus is a non-communicable disease that the prevalence has increased. Knowledge and attitudes about the disease and its complications are integrated into diabetes mellitus management. The study aimed to determine the association between knowledge and attitudes toward diabetes mellitus management in adult women. The study was conducted at Gorontalo Regency Indonesia from August to October 2023. A total of 225 respondents of adult women was included by simple random sampling. The knowledge and attitudes toward diabetes mellitus management were measured by structured questionnaires tested for validity and reliability. Diagnoses of diabetes mellitus were determined by fasting blood glucose through finger puncture based on ADA criteria. Univariate and bivariate data analysis with chi-square test using SPSS application with a value of $\alpha = 0.05$. Among 225 respondents who fulfilled the questionnaire, 15 (8.4%) had undiagnosed diabetes mellitus; most respondents were housewives, 218 (96.9%). The respondents had knowledge in category low 139 (61.8%) and negative attitude 156 (69.3%). The knowledge had a statistically significant association with attitude (p -value = 0.049). However, diabetes mellitus had no significant association with knowledge (p -value = 0,897) and attitude of diabetes mellitus management (p -value = 0,028). The study found undiagnosed diabetes mellitus, low level of knowledge and negative attitude toward diabetes mellitus management among adult women. Screening of diabetes mellitus in particular adult women to bring more undiagnosed cases for medical attention and education program through improving knowledge and attitude is mandatory to prevent the progression of diabetes mellitus.

KEYWORDS: knowledge, attitude, diabetes mellitus management

Android-Based Adolescent Reproductive Health Application (“Kepo Remaja”) As An Educational Media For Preventing Early-Age Pregnancy

Erlin Kiriwenno¹

¹ Department of Diploma in Midwifery, STIKes Maluku Husada, Indonesia

Email: kiriwennoerlin32@gmail.com

ABSTRACT

Adolescent pregnancy remains a reproductive health issue faced by many countries, including Indonesia. It is often associated with various health problems that may endanger the mother and the baby. Pregnancy at a young age poses significant health risks, highlighting the need for efforts to reduce adolescent pregnancy rates and mitigate its impacts through reproductive health education and improved access to adolescent-friendly health services. This study aimed to develop an Android-based reproductive health application, “Kepo Remaja,” as an educational tool for preventing early-age pregnancy. The research employed a Research and Development (R&D) design using the ADDIE model. Validation or feasibility testing of the Kepo Remaja reproductive health application was carried out by material experts and media experts. During the application development stage, a needs analysis was performed to determine required features, including a pretest survey (36 items), self-diagnosis, health checks (menstrual calendar, iron tablet monitoring), a health consultation service (covering health, religion, education, and general topics), reading materials (leaflets and a book on adolescent pregnancy prevention), and health information. The application was then developed and validated by experts. Material experts provided an average score of 94.26%, and media experts gave an average score of 94.31%, both falling into the “excellent” category. In conclusion, the Kepo Remaja Adolescent Reproductive Health Application is engaging, easy to understand, and has been proven feasible for use as an educational medium for preventing adolescent pregnancy.

Keywords: Adolescent Reproductive Health, Application, Early Pregnancy

Corn and Cassava Development Study on changes in albumin levels in energy-deficient experimental animals

Novian Swasono Hadi¹, Misnati¹, Mutia Reski Amalia¹, Denny Indra Setiawan¹, Anna Y. Pomalingo¹, Ayu Bulan Febri K.D.¹, Veny Delvia Pombaile¹, Agus Wijanarka², Weni Kurdanti²

¹ Polytechnic of Health Ministry of Health Gorontalo, Indonesia.

² Polytechnic of Health Ministry of Health Yogyakarta, Indonesia.

Email: novianhadi@poltekkesgorontalo.ac.id

ABSTRACT

*Stunting remains a major public health challenge in Indonesia, which ranks among the top five countries with the highest prevalence of stunted children globally. Stunting not only impairs linear growth but also affects cognitive development and increases the risk of metabolic diseases in adulthood. Local food sources such as corn and cassava contain essential nutrients that may support recovery from protein–energy malnutrition (PEM) and offer potential as alternative functional foods in stunting management. This study aimed to determine the effect of corn-based and cassava-based diets on serum albumin levels in white rats (*Rattus norvegicus*, Wistar strain). An experimental study using a Completely Randomised Design (CRD) was conducted with four treatment groups and five replications. Treatments included a normal diet, a low-protein diet, and low-protein diets supplemented with corn flour, cassava flour, or a combination of both. Twenty-five rats were selected through random sampling and observed for eight weeks. Serum albumin levels were analysed before and after the intervention using the Wilcoxon test. Results showed that the low-protein diet group experienced a decrease in albumin concentration, confirming the deteriorating effect of protein deficiency on visceral protein status. In contrast, all groups receiving corn flour, cassava flour, or their combination exhibited significant increases in albumin levels. The greatest improvement was observed in the corn-flour-supplemented group, followed by the combined-flour and cassava-flour groups. These findings suggest that corn and cassava flours provide adequate nutritional support to enhance albumin synthesis even under lowprotein dietary conditions. In conclusion, supplementation with corn and cassava flour effectively improves serum albumin levels in rats experiencing protein–energy malnutrition. As locally available and affordable food sources, these ingredients have strong potential for development in community-based nutrition interventions aimed at reducing stunting. Further research exploring amino acid composition, mechanistic pathways, and long-term physiological effects is recommended to strengthen their application in nutrition rehabilitation programs.*

Keywords: Malnutrition, Albumin, Corn, Cassava

**Factors Related to the Nutritional Status of Toddlers in the District Tabongo :
Analysis of Subject Survey Data Nutrition Program Planning**

**Misnati ¹, Mutia Reski Amalia ², Denny Indra Setiawan ³, Novian S. Hadi ⁴,
Imran Tumenggung ⁵**

^{1,2,3,4,5} Polytechnic of Health Ministry of Health Gorontalo, Indonesia.

Email: misnati@poltekkesgorontalo.ac.id ¹,
mutiaamalia@poltekkesgorontalo.ac.id ², deni.poltekkesgorontalo.ac.id ³,
novian@poltekkesgorontalo.ac.id ⁴, imran@poltekkesgorontalo.ac.id ⁵

ABSTRACT

Nutritional status toddler is one of the indicator important in evaluate quality health society , because toddler is in a period of very rapid growth and development as well as prone to to problem nutrition . Problems nutrition in toddlers Still become issue health global community , including in Indonesia. The World Health Organization (WHO) reported in 2022 that around 148.1 million toddler experiencing stunting, 45 million experiencing wasting, and 37 million experience excess (overweight) worldwide (1). The results of the 2022 Indonesian Nutritional Status Survey (SSGI) show The prevalence of stunting was 21.6%, wasting was 7.7%, and underweight was 17.1% (2). These figures still on top standards set by WHO, namely prevalence of stunting <20% and wasting <5% (3). Conditions the indicates that problem nutrition toddlers in Indonesia need attention seriously , especially related factors that influence it . Research objectives This is know related factors with nutritional status toddlers in the sub-district Tabongo . Research This is study observational analytic with cross sectional design with using secondary data from the Nutrition Program Planning Course survey . Weight history birth and exclusive breastfeeding influence on underweight and nutritional status short stature in toddlers . Underweight is also influenced by diversity group food served . Malnutrition besides influenced by exclusive breastfeeding is also influenced by protein consumption , knowledge and PHBS.

Keywords: Short ; Underweight; Malnutrition

Economic Status And Nutritional Profile As Determinants Of Anemia In Preconception Women

Anieq Mumthi'ah Al Kautzar¹, Wahyuni², Nurhidayat Triananinsi³, Nurfaizah Alza⁴, Dwi Desyani Astuti⁵

¹ Universitas Islam Negeri Alauddin Makassar, Indonesia.

² Politeknik Kesehatan Kementerian Kesehatan Manado, Indonesia.

³ Universitas Islam Negeri Alauddin Makassar, Indonesia.

⁴ Politeknik Kesehatan Kementerian Kesehatan Gorontalo, Indonesia.

⁵ Prodi Sarjana Kebidanan Universitas Megarezky, Indonesia.

Email: muthiah_alkautsar@yahoo.com¹, wahyuni0891@gmail.com²,
nurhidayat.triananinsi@uin-alauddin.ac.id³,
nurfaizah.alza@poltekkesgorontalo.ac.id⁴, dwidesyaniastuti2012@gmail.com⁵

ABSTRACT

Anemia remains a significant public health concern among women in the preconception period, and its occurrence is closely related to nutritional and socioeconomic disparities. Women with adequate nutritional intake including balanced macro- and micronutrients accompanied by vitamin C consumption tend to have a lower risk of anemia compared to those experiencing chronic energy deficiency. This study aimed to determine the association between economic status, nutritional status, and anemia among preconception women at Minasa Upa Public Health Center, Makassar. The research was conducted from May 16 to July 14, 2025, with a total sample of 50 preconception women selected through purposive sampling. Data on economic status, nutritional status, and hemoglobin levels were collected using structured questionnaires and anthropometric and laboratory assessments. The findings demonstrated a significant relationship between economic status and anemia incidence, indicating that women with lower socioeconomic conditions were more likely to experience anemia. Additionally, nutritional status was significantly associated with anemia, where women with undernutrition showed a higher prevalence of low hemoglobin levels. These results highlight the need for targeted education and nutritional counseling for preconception women, emphasizing balanced dietary intake, iron-rich food consumption, and awareness of anemia-related reproductive health risks. Strengthening preventive strategies prior to conception is essential to reduce anemia-related complications.

Keywords: *Anemia; Economic Status; Nutritional Status; Praconception Women*

Impact of a Self-Efficacy–Based Sleep Hygiene Intervention on Sleep Quality and Sleep Hygiene Practices in Patients With Type 2 Diabetes Mellitus

Irmariani Irbar^{1*}

¹ Politeknik Kesehatan Gorontalo, Indonesia

Email: irmairbar007@gmail.com

ABSTRACT

Introduction: Sleep disturbances are commonly experienced by patients with type 2 diabetes mellitus (T2DM) and are associated with poor glycemic control, reduced sleep quality, and an increased risk of complications. Sleep hygiene is an effective non-pharmacological intervention; however, its implementation is often hindered by low patient self-efficacy. Objective: To evaluate the effectiveness of a self-efficacy–based sleep hygiene education program on sleep quality and sleep hygiene practices among patients with T2DM experiencing sleep disturbances. Materials and methods: Forty-six participants (intervention n=23; control n=23) were enrolled in a quasiexperimental study. The intervention group received a two-week self-efficacy–based sleep hygiene education program. Sleep quality and sleep hygiene practices were assessed using the Pittsburgh Sleep Quality Index (PSQI) and the Sleep Hygiene Index (SHI) during pre-test and post-test stages. Results: There was a significant difference in mean PSQI scores ($p=0.026$) and SHI scores ($p=0.025$) between the intervention and control groups following the intervention. Conclusion: The findings indicate that a self-efficacy–based sleep hygiene education intervention is effective in improving sleep quality and sleep hygiene practices among patients with T2DM.

Keywords: *Diabetes Mellitus Type 2, Sleep Hygiene, Self Efficacy Theory, Sleep Quality, Sleep Hygiene Index (SHI)*

Caregiver Communication and Adolescent Knowledge and Attitudes on Reproductive Health in Orphanages

Novi Wulan Sari^{1*}, Evi Hasnita², Yunitiza³, Erit Rovendra⁴

¹ Department of Midwifery, Institution, Fort De Kock University, Bukittinggi, Indonesia.

² Master of Public Health Program, Fort De Kock University, Bukittinggi, Indonesia.

³ Department of Entrepreneurs, Institution, Fort De Kock University, Bukittinggi, Indonesia.

⁴ Department of Physiotherapy, Institution, Fort De Kock University, Bukittinggi, Indonesia.

Email: noviwulansari@fdk.ac.id

ABSTRACT

Adolescents in orphanages may lack access to comprehensive reproductive health information. Caregiver communication is a potential determinant of adolescents' knowledge and attitudes regarding reproductive health. To examine the relationship between caregiver communication patterns and adolescent knowledge and attitudes toward reproductive health in orphanages. A quantitative cross-sectional study with simulated data (n=120) was conducted. Communication, knowledge, and attitude scores were measured on scales of 0–100. Pearson correlation and multiple linear regression were used. Open communication was predominant (approx. 64%). Communication score correlated positively with knowledge ($r = 0.50$, $p < 0.001$) and attitude ($r = 0.63$, $p < 0.001$). In regression models, communication score significantly predicted knowledge ($\beta = 0.45$) and attitude ($\beta = 0.54$) after adjusting for age, gender, and months in orphanage. Open and empathetic caregiver communication is associated with better reproductive health knowledge and attitudes among adolescents in orphanages. Training caregivers in communication skills and integrating reproductive health education into orphanage programs are recommended.

Keywords: *communication patterns; reproductive health; orphanage*

Community Health Worker Performance and Diabetes Prevention Behaviors Among Pregnant Women

Eka Rati Astuti¹, Nancy Olii²

^{1,2}Poltekkes Kemenkes Gorontalo, Indonesia.

Email: ratiastuti10@gmail.com¹

ABSTRACT

Diabetes mellitus (DM) during pregnancy increases the risk of adverse maternal and neonatal outcomes, particularly in low-resource settings where community health workers play a central role in preventive education. This study examined the association between Community health workers' educator performance and DM prevention behaviors among pregnant women in a primary health care setting. A cross-sectional design was implemented from January to October 2025 at Puskesmas Kota Timur, Gorontalo City, Indonesia, involving 24 respondents: Community health workers recruited through total sampling and pregnant women selected through proportionate random sampling. Data were collected using validated questionnaires assessing five domains of educator performance and five indicators of prevention behaviors. Analyses were conducted using SPSS version 25 with a significance level of $\alpha = 0.05$. Community health workers showed strong performance in message clarity (79.2%) and educational frequency (70.8%), but weaker performance in follow-up counseling (45.8%). Pregnant women demonstrated high adherence to dietary modification (75.0%) and glucose screening (83.3%), while adherence to physical activity remained low (41.7%). Bivariate analysis indicated a significant association between Community health workers' educator performance and DM prevention behaviors ($p < 0.05$). These findings highlight the importance of strengthening cadre competencies through structured training, supportive supervision, and improved educational media to enhance diabetes prevention during pregnancy. Future longitudinal studies are recommended to confirm causal pathways.

Keywords: *Community health workers, diabetes mellitus, health education, pregnancy, prevention behavior*

Evaluation of the Utilization of the Special MCH Book for Small Babies in the Working Area of Tanjung Paku Public Health Center, Solok City, 2024

Wahyuni¹, Sari Ida Miharti², Iva Fassarella³

¹ Fort De Kock University, Indonesia.

² Fort De Kock University, Indonesia

³ Fort De Kock University, Indonesia

Email: wahyuni@fdk.ac.id ¹, sariidamiharti@fdk.ac.id ²,
ivafassarella123@gmail.com ³

ABSTRACT

Background: Low Birth Weight (LBW) remains a leading cause of neonatal mortality. The Special Maternal and Child Health Book for Small Babies (KBK) is designed to support integrated monitoring and care between health services and families. Objective: To evaluate the utilization of the KBK book in the Tanjung Paku Public Health Center Work Area, Solok City, in 2024. Methods: A qualitative descriptive policy study involving 14 purposively selected informants. Data were collected through semi-structured interviews, observations, and document review, then analyzed using content analysis. Results: Input components showed adequate human resources, funding, and infrastructure, although specific local government policies were not yet available. The process included planning, organizing, implementation, and monitoring by the head of the health center and program coordinators. The output evaluation indicated that KBK book utilization was categorized as good. Conclusion: The utilization of the KBK book has been implemented effectively and supports improved care for small babies. Strengthened monitoring and regulatory support are needed for program sustainability.

Keywords: Low Birth Weight; KBK Book; Utilization

The Effect of Animated Video Education in Improving Cervical Cancer Knowledge among Perimenopausal Women

Nurfaizah Alza¹, Nurhidayat Triananingsih², Amrawati³, Nurhidayah¹, Rina Sulisthia Arbie¹, Endah Yulianingsih¹

¹ Midwifery Department, Health Polytechnic of The Ministry of Health Gorontalo, Indonesia

² Midwifery Department, Alauddin State Islamic University Makassar, Indonesia

³ Bachelor of Midwifery Department, Megarezky University Makassar, Indonesia

Email: nurfaizah.alza30@gmail.com¹, nurhidayat.triana@gmail.com², amranrcha@gmail.com³, dhayatasa@gmail.com¹, rinasulisthia@poltekkesgorontalo.ac.id¹, endahyulianingsih@poltekkesgorontalo.ac.id¹

ABSTRACT

Cervical cancer in Indonesia ranks second after breast cancer, with a new case count of 36,964 (16.8%) and a mortality figure of 20,708 cases. The lack of knowledge regarding cervical cancer is a significant factor that can influence the attitudes and behaviors of perimenopausal women in preventing cervical cancer. The objective of this study is to assess the impact of animated video education on the knowledge level of perimenopausal women about cervical cancer. This research employs a quasi-experimental design utilizing a one-group pretest and posttest methodology. A total sample of 67 respondents was determined through purposive sampling techniques. Data were analyzed using the paired t-test. The results indicated a t-value of -6.673 with a significance value of $0.000 < 0.05$. Therefore, it can be concluded that there is an effect of animated video education in improving cervical cancer knowledge among perimenopausal women.

Keywords: Servical Cancer; Perimenopausal; Video

Relationship of Sociodemographic and Clinical Characteristics to Medication Compliance and Its Impact on the Quality of Life of Hypertensive Patients at RSUD Siti Fatimah Az-Zahra Palembang

Reza Agung Sriwijaya¹, Rini Isromarina²Della Viriya³
^{1,2,3}STIFI Bhakti Pertiwi Palembang

Email: agungsriwijayareza@gmail.com

ABSTRACT

Hypertension is a chronic disease that requires high medication adherence to prevent complications and improve quality of life. This study aims to determine the relationship between sociodemographic and clinical characteristics with medication adherence, as well as its impact on the quality of life of hypertensive patients at RSUD Siti Fatimah, South Sumatra Province. This research used an observational analytic design with a cross-sectional approach involving 100 hypertensive patients. Data were collected using the MMAS-8 and WHOQOL BREF questionnaire, as well as observational data, and analyzed using the chi square and mann-whitney tests. The majority of respondents were female (53%), aged 18-59 years (52%), and had a junior to senior high school education (59%). Clinically, most patients had been undergoing treatment for ≤ 5 years (61%), had abnormal blood pressure (55%), and had comorbidities (69%). The analysis a significant relationship between gender ($p=0,008$) and blood pressure ($p=0,008$) with the level of medication adherence. No significant relationship was found between age ($p=0,564$), education ($p=0,097$), comorbidities ($p=0,397$) and duration of treatment ($p=0,193$) with medication adherence. Additionally, there was a significant relationship between medication adherence and patient's quality of life ($p=0,001$). These findings indicate that sociodemographic and clinical characteristics influence the level of medication adherence, which significantly impacts the quality of life of hypertensive patients. Therefore, efforts to improve patient education and implement personalized approaches are crucial in improving patient adherence.

Keyword : Hypertension, MMAS-8, WHOQOL-BREF

An *In-Silico* Meta-Analysis Of Downregulated Tumor-Suppressor Micrnas As Targeted Therapy Candidates For Breast Cancer

Naufal Issan Beryldivito Iskandar¹, Sari Eka Pratiwi², Ridha Ulfah³

¹ Faculty of Medicine, University of Tanjungpura, Indonesia.

² Departement of Biology and Pathobiology, Faculty of Medicine, University of Tanjungpura Indonesia.

³ Departement of Public Health, Faculty of Medicine ,University of Tanjungpura, Indonesia.

Email: i1011231067@student.untan.ac.id¹, sariikapratiwi@medical.untan.ac.id², ridhaulfah@medical.untan.ac.id³

ABSTRACT

Background: Challenges in breast cancer therapies, such as hematological toxicity, radiation risks, and treatment resistance, bring out the urgency of a novel therapeutic approach. Purpose: This research aims to identify significantly downregulated tumor suppressor miRNAs in breast cancerous tissues compared to normal tissues that may serve as potential targets for a novel therapeutic strategy. Methods: A meta-analysis was performed in silico using computational tools to identify downregulated miRNA across microarray datasets of miRNA expression employing thresholds of P-value ≤ 0.05 and $\log_2FC < -1.5$. Result: Five datasets meeting the inclusion criteria were analyzed, identifying 5 downregulated miRNAs. Further Kyoto Encyclopedia of Genes and Genomes (KEGG) pathway and functional enrichment analyses revealed that only hsa-miR-494-3p exhibited significant associations with genes critical to breast cancer pathogenesis, such as CDK4/6, IGF1R, and PTEN, which target breast cancer pathway. Conclusion: This study identifies hsa-miR-494-3p as the most promising candidate for the development of miRNA-based targeted therapies in breast cancer.

Keywords: Breast cancer; *In silico*; Meta-analysis; MicroRNA, Targeted therapy

Availability Level of Medicine at Kota Selatan and Piloloda'a Public Health Centers in 2024

Muhammad Ridho Jasin¹, Madania², Teti Sutriyati Tuloli³

^{1, 2, 3} Department of Pharmacy, Faculty of Sports and Health, Gorontalo State University

Email: *ridhojasin58@gmail.com*

ABSTRACT

The availability of medicines in public health centers is an important indicator of healthcare service quality, as shortages or excess stock can affect effectiveness and budget efficiency. This study aims to determine the level of medicine availability at Kota Selatan and Piloloda'a Public Health Centers in 2024 based on conformity to the formulary, medicine requests, receipts, and availability categories. A descriptive-analytical method with a cross-sectional approach was applied, using retrospective data from the 2024 Medicine Usage and Request Report (LPLPO). The analysis included calculating percentages of conformity to the formulary, requests, and receipts, and determining availability levels according to Kemenkes RI (2010) formula and the classification system by Carolien et al. (2017). The results showed formulary conformity of 82% at Kota Selatan and 67% at Piloloda'a, both below the 95% standard. Request conformity reached 151% and 199%, exceeding the recommended 100–120% range, while receipt conformity was 71% and 56%, below the 100% standard. Availability categories ranged from sufficient, insufficient, to excessive, with most items classified as insufficient. These findings indicate that medicine management at both centers is suboptimal, and discrepancies between planning, requesting, and receiving cause stock imbalances, requiring coordination with the pharmaceutical unit.

Keywords: Medicine availability, medicine management, public health center

Self-Management based on Transcultural Nursing in Patients with Gynecological Cancer: Concept Analysis

Apriliani Yulianti Wuriningsih^{1,2}, Yati Afiyanti¹

¹ Faculty of Nursing, Universitas Indonesia, Indonesia

² Faculty of Nursing, Universitas Islam Sultan Agung

Email: apriliani.ui@gmail.com

ABSTRACT

Introduction: Gynecological cancer affects the female reproductive system, including the uterus, ovaries, and cervix. In Indonesia, the incidence and mortality rates for gynecological cancer continue to increase, making it a major health problem in communities with diverse cultural backgrounds. Objective: To conduct a concept analysis of transcultural nursing-based self-management in patients with gynecological cancer. Method: The concept analysis used the eight-step concept analysis method according to Walker and Alan (2019) to clarify the meaning of a concept. Results: Culture and care are two important phenomena of particular concern to transcultural nursing. Cancer care is generally influenced by specific cultural factors that influence patient self-management and treatment decision-making. Conclusion: Transcultural nursing-based self-management in gynecological cancer is important for nurses' understanding by identifying the attributes, antecedents, and consequences of the concept. Healthcare professionals play a crucial role in supporting women to ensure adequate symptom management.

Keywords: Self-management; transcultural nursing; gynecological cancer; decision making

The Effect Of Caffeine Consumption And Stress On The Short-Term Memory Of Medical Students : A Literature Review

Hilwa Faradisa Taqiyyah¹

¹ Faculty of Medicine, Gorontalo State University, Indonesia

Email: hilwa_kedokteran@mahasiswa.ung.ac.id¹

ABSTRACT

The increasing consumption of coffee and significant academic pressure among medical students may adversely affect short-term memory capacity. This study seeks to consolidate scientific evidence concerning the correlation between coffee intake, stress levels, and short term memory performance in medical students. The methodology entailed purposive sampling of literature comprising Indonesian and English articles published between 2021 and 2025, which were examined over a one-month period and analysed by qualitative-descriptive techniques. The findings suggest that low-to-moderate caffeine consumption can improve short-term memory via adenosine receptor antagonism, heightened hippocampus activity, and enhanced synaptic plasticity. In contrast, excessive consumption during acute stress may amplify stress-hormone reactions, diminish cognitive flexibility, and hinder memory function. In conclusion, coffee may provide cognitive advantages; nevertheless, its impact on memory is significantly influenced by dosage and simultaneous stress levels.

Keywords: Caffeine; Stress; Short-Term Memory; Cognitive Function; Medical Students

Effectiveness of Self management Intervention in Community on Management of Type 2 Diabetes Mellitus: A Systematic Review

Martinus Tangnga¹

¹Universitas Indonesia

Email: tangngamartinus20@gmail.com

ABSTRACT

The rising global prevalence of type 2 diabetes mellitus (T2DM) underscores the urgent need for sustainable and community-centered management strategies. Community-based self-management interventions have become increasingly relevant because they empower individuals to actively manage their condition, increase accessibility to diabetes education, and utilize local resources to support long-term behavioral and lifestyle changes essential for glycemic control. This systematic review aimed to evaluate the effectiveness of community-based self-management interventions on glycemic control and quality of life among adults living with type 2 diabetes mellitus. Following the PRISMA 2020 guidelines, seven Randomized Controlled Trials (RCTs) published between 2020 and 2024 were systematically reviewed. The studies involved a total of 1,193 participants from various countries, including the United States, Ghana, China, Nepal, and Taiwan. The interventions assessed included digital education platforms, community health worker (CHW)-led programs, and community-based cooking interventions designed to enhance diabetes self-management skills. The majority of the reviewed studies reported improvements in HbA1c levels, self-care behaviors, and participants' quality of life. However, the effectiveness of these interventions varied depending on factors such as intervention duration, sample characteristics, and sociocultural context. Multicomponent interventions that integrated education, social support, and CHW engagement demonstrated the most consistent and beneficial outcomes across studies. Community-based self-management interventions show promising potential in improving glycemic control, enhancing self-care behaviors, and increasing quality of life in adults with T2DM. Despite these positive findings, the limited number of studies, heterogeneity in intervention design, and potential methodological limitations weaken the overall strength of evidence.

Keywords: Community-based intervention; Glycemic control; Quality of life; Self-management; Type 2 Diabetes Mellitus

The Report Of The Implementation Of Midwifery: Integrated Antenatal Care Programme Policies

Fitriani Singgih Perdana¹ , Sri Sumarni², Edy Susanto³

^{1,2,3}Poltekkes Kemenkes Semarang, Indonesia

Email: *fitrianisinggihperdana@gmail.com¹, srisumarnimmid@poltekkes-smg.ac.id², edysusanto@poltekkes-smg.ac.id³*

ABSTRACT

Background: Maternal mortality remains a public health challenge, with preeclampsia as a significant contributor, necessitating an in-depth evaluation of the implementation of the Integrated Antenatal Care (ANC) Program. Objective: This study aims to analyze the effectiveness of the Integrated ANC Program implementation and identify its main barriers, using the case of preeclampsia in Tegal Regency. Methods: This research is a systematic literature review using purposively sampled secondary documents (policies, scientific publications, program reports) from the 2014–2024 period, analyzed through content analysis. Results: The implementation of Integrated ANC proved effective in increasing service coverage and early detection of complications, but its effectiveness was constrained by financial, geographic, and human resource capacity barriers, as well as a suboptimal referral system. The case study in Tegal Regency confirmed that preeclampsia remains a leading cause of maternal death, driven by limitations in early screening, clinical management, and community participation. Conclusion: A holistic and collaborative policy approach is required to sustainably strengthen the maternal health system.

Keywords: Integrated Antenatal Care; Maternal Mortality; Preeclampsia

Overview Of The Implementation Of The primary Service Integration (ILP) Policy Using The Edward III Implementation Model At The Mamajang Public Health Center In Makassar City

Ilham Zulfikar¹, Besse Samsidarwati², Arirukmana Erwanto³

^{1,2,3} Public Health Program Study, Tamalatea University, Makassar, Indonesia.

Email: nsilham543@gmail.com¹, alfatirbessesam@gmail.com²,
mamanizam9999@gmail.com³

ABSTRACT

The Integrated Primary Care (ILP) policy is a key component of Indonesia's National Health System Transformation, aimed at improving the quality of primary health services through program integration, strengthened promotive-preventive efforts, streamlined service flow, and enhanced use of health information systems. Mamajang Health Center, as one of the primary healthcare facilities in Makassar City, has begun implementing ILP; however, a comprehensive description of its implementation has not been widely documented. This study aims to describe the implementation of the ILP policy at Mamajang Health Center in 2025 using George C. Edward III's Policy Implementation Model, which consists of four components: communication, resources, disposition, and bureaucratic structure. This research employed a qualitative descriptive approach. Informants were selected purposively, including the head of the health center, ILP program coordinators, healthcare workers, information system staff, and community health cadres. Data were collected through in-depth interviews, observation of service flow, and document review. Data analysis was conducted using the Miles and Huberman framework, consisting of data condensation, data display, and conclusion drawing. The results show that ILP implementation at Mamajang Health Center has progressed but remains suboptimal. In terms of communication, policy dissemination has taken place, yet the level of understanding among implementers regarding ILP workflows and service integration varies. Regarding resources, human resources remain limited, task distribution is often overlapping, and supporting infrastructure such as IT devices and integrated service rooms is not yet fully adequate. The disposition of implementers demonstrates good leadership commitment, although motivation and readiness among some staff members require improvement. In the bureaucratic structure aspect, ILP standard operating procedures (SOPs) have been established; however, cross-program coordination is not yet optimal, and monitoring-evaluation mechanisms require strengthening. Overall, ILP implementation at Mamajang Health Center is in a developing phase, yet it needs improvements in communication, resource availability, workforce capacity, and program coordination to ensure effective and sustainable implementation. This study is expected to provide insights for the District Health Office and Mamajang Health Center to strengthen ILP implementation and serve as a reference for future research on primary healthcare policy evaluation.

Keywords: Policy implementation, Integrated Primary Care, Health Center, Edward III Model.

The Effect Of Arumanis Mango (*Mangifera Indica* L.) Peel Extract As An Antihyperlipidemic On Total Cholesterol Levels In Vivo

Ifmaily¹, Sanubari Rela Tobat¹, Fakhri Alhafizh¹

¹Program Studi S1 Farmasi, Fakultas Farmasi, Universitas Perintis Indonesia, Padang, Indonesia

Email: ifmaily.72baru@gmail.com

ABSTRACT

Hyperlipidemia is a condition in which there is an increase in total cholesterol, triglycerides, Low Density Lipoprotein (LDL) levels and a decrease in High Density Lipoprotein (HDL) levels. The aim of this research is to determine the effectiveness of extracts from arumanis mango peel in reducing total

cholesterol levels in hypercholesterolemic rats induced by a high-fat diet (MLT) and Propylthiouracil (PTU). This research used 24 white male rats. They were divided into 6 groups: a negative control group (0.5% Na CMC), a positive control group, a comparison group (simvastatin), and test groups with doses of 75, 150, and 300 mg/kgBW. The inducers used are high-fat food (MLT) and PTU, which are given for 7 days and the extract is given for 14 days. Research results show that extracts from the dose group peel of arumanis mango fruit can reduce total cholesterol successively by 21.50%, 22.10%, and 23.25%. The extract of the arumanis mango fruit peel has antihyperlipidemic activity with significant values ($p < 0.05$) and the most effective dosage for reducing lipids is 300 mg/kgBW. In the histopathological examination, an ANOVA result was obtained where, Aortic Area, Lumen Area, and Percent Lumen Area had significant values ($p < 0.05$).

Keywords: *Antihyperlipidemia, Arumanis Mango Fruit peel, *Mangifera indica* L., MLT, Total Cholesterol*