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SURAT TUGAS

Nomor. 862/D/Fak.Psi UPI Y.A.I/VII/2023

Mengingat : Pelaksanaan Tri Dharma Pendidikan Tinggi dalam pengembangan ilmu dan penelitian, dengan ini Dekan Fakultas Psikologi UPI Y.A.I menugaskan kepada:

Dr. Evi Syafrida Nasution, S.Psi, M.Psi

Untuk pertemuan ilmiah internasional "The 1st International Conference on Health and Medicine" di Faculty of Medicine Universitas Pattimura Ambon, 26-27 Juli 2023.

Demikian surat tugas ini dibuat untuk dapat dilaksanakan dengan penuh tanggung jawab.

Jakarta, 24 Juli 2023

Dekan,

Dr. Kuncono Teguh Yunanto, S.Psi, MM



CERTIFICATE OF APPRECIATION

No: 038/02/ICHM/VII/2023

IS PRESENTED TO:

Dr. Evi Syafrida Nasution, S.Psi., M.Psi., Psikolog

as

Oral Presenter

Title: DYNAMICS OF SELF-INJURY BEHAVIOR IN ADOLESCENTS
FROM A BROKEN-HOME FAMILY

The 1st International Conference on Health and Medicine

Faculty of Medicine, Universitas Pattimura

“The Island Doctors-Overcoming Challenges for Improved Health”

Ambon, July 26-27, 2023

No SKP: 2456/PB/A.4/07/2023

Participant 12 SKP | Speaker 14 SKP | Moderator 6 SKP | Committee 3 SKP

Chairman of The Committee

dr. Parningotan Yosi Silalahi, Sp.S., FINA

Dean of Faculty of Medicine
Universitas Pattimura

Dr. dr. Bertha J. Que, Sp.S., M.Kes.



Program and Abstract Book

ICHM 2023

**The 1st International Conference
on Health and Medicine**
Faculty of Medicine Universitas Pattimura

“The Island Doctors-Overcoming Challenges
for Improved Health”

26 & 27 July 2023 - Hybrid Conference - Hotel Santika Premiere Ambon

ichm-fkunpatti.akademisi.co.id

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Preface: Chairman ICHM

It is with great pleasure and a profound sense of accomplishment that I welcome you to the First International Conference on Health and Medicine (ICHM 2023) with the theme "The Island Doctors - Overcoming Challenges for Improved Health." This groundbreaking conference, hosted by the Faculty of Medicine, Pattimura University, marks a significant milestone in our journey to advance healthcare and well-being in coastal and small island communities. Held as a Hybrid Conference on July 26th and 27th, 2023, at Hotel Santika Premiere Ambon, this event has brought together dedicated minds from various disciplines to engage in meaningful discussions and share their invaluable insights.

The central focus of this conference revolves around the distinctive challenges faced by communities living in coastal and small island regions. Our program encompasses a diverse range of topics, addressing the unique health concerns specific to marine and maritime environments. From marine health and tropical infectious diseases to psychology, anthropology, and sociology of coastal communities, each aspect plays a crucial role in shaping the well-being of those residing in these regions. We have also explored the significance of traditional and herbal medicine, acknowledging their relevance in small island communities. Biomedical science, public health, nutrition, and occupational health are among the other essential areas of discussion during this conference. Furthermore, we delve into the critical aspects of sports health, emergency medical care, and mental health within coastal and island communities.

Throughout this conference, we have had the honor of hosting distinguished experts who graced us with their profound insights as keynote speakers. The symposiums have proven to be intellectually stimulating, and the oral and poster parallel sessions have showcased the innovative research endeavors of many brilliant minds.

Our journey towards advancing healthcare in coastal and small island communities has only just begun. As we share our findings and insights with each other, we strengthen our resolve to face these challenges collectively. The passion and dedication demonstrated by the researchers, medical personnel, and academic scholars who participated in this conference have been truly inspiring.

Lastly, I extend my heartfelt gratitude to all the oral-poster presenters, participants, committee members, sponsors, and volunteers who have worked tirelessly to ensure the success of this event. Your presence and active engagement would lay the groundwork for a brighter future of collaboration and progress in the field of health and medicine.

In conclusion, I hope that the interactions and discussions held during this conference will ignite further collaboration and research endeavors that contribute to the well-being and health of coastal and small island communities worldwide. Let us carry forward the knowledge gained here and continue striving towards a healthier and brighter future.

Thank you, and I wish you a fruitful and enriching experience at the ICHM 2023.

Warm regards,

dr. Parningotan Yosi Silalahi, Sp.S., FINA
ICHM 2023 Chairman





About ICHM 2023

The 1st International Conference on Health and Medicine (ICHM 2023): The Island Doctors-Overcoming Challenges for Improved Health is organized by the Faculty of Medicine, Pattimura University (FK UNPATTI) in Maluku Province, Indonesia. The conference is scheduled to take place on July 26 & 27, 2023.

The conference's primary focus is on the unique program of "island doctors" offered by FK UNPATTI. This program aims to prepare medical graduates to provide optimal health services to community members living in the archipelago, particularly in areas with limited access to medical facilities. Given Maluku Province's geographical characteristics, with more sea area than land, developing marine and island health is crucial for the safety and well-being of people residing on small islands, cruise ships, and participating in maritime activities.

As the only Faculty of Medicine in Maluku, FK UNPATTI plays a significant role in improving health services and medical care available to island communities. Graduates from FK UNPATTI are equipped with specialized knowledge, skills, and personality development necessary to address the challenges of providing medical services in remote and island regions. The competence of these island doctors is expected to contribute to the improvement of healthcare in Maluku and Indonesia.

The conference aims to address the demand for high-quality health services by promoting and showcasing scientific research in the field of island marine health. Given the rapid development of science and technology in medicine and health, research plays a crucial role in meeting the community's health needs. Therefore, the conference seeks to foster the exchange of knowledge and research findings related to island marine health, enabling attendees to learn from various studies conducted worldwide and adapt the findings to the local context in Maluku.

The conference will provide a platform for researchers, medical professionals, scholars, and students to share their latest research findings, innovative ideas, and experiences related to island marine health. Various topics may be covered, such as advancements in medical technology, public health strategies, preventive measures for island communities, and other relevant areas aimed at improving healthcare services in remote and island regions.

Publication is considered one of the most effective methods to disseminate research findings, and this conference may result in the publication of the presented research in scientific journals and other academic platforms. Additionally, the conference could also lead to the establishment of international collaborations and partnerships to further enhance research and healthcare initiatives in the field of island marine health.

The 1st International Conference on Health and Medicine: The Island Doctors-Overcoming Challenges for Improved Health is expected to be an important event that showcases the efforts and progress made by FK UNPATTI in addressing the unique healthcare challenges faced in the archipelagic province of Maluku, Indonesia.



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Hospitality member

Fahera Payapo, S.Pd





Welcome Speech

Prof. Dr. M. J. Saptенno, S.H., M.Hum.
Rector of Universitas Pattimura

Assalamualaikum warahmatullahi wabarakatuh
Salam Sejahtera bagi kita semua, syalom.
Om Swastiastu
Namo Buddhaya
Salam kebajikan
HOTUMESE

Praise be to God Almighty, for by His grace has brought us together at the first International Conference on Health and Medicine, organized by the Faculty of Medicine, Universitas Pattimura, under the theme "Island Doctors-Overcoming Challenges for Improved Health."

As we are aware, Maluku stands as the largest archipelagic province in Indonesia. Consequently, we face unique challenges, including in the health sector, compared to other regions in the country.

To address these challenges, the Faculty of Medicine Universitas Pattimura, as the first medical faculty in Maluku, plays a vital role through its three pillars of higher education or what we call TriDharma, consisting of education, research, and community services. Synergically, this strategic approach aims to produce high-quality doctors who can excel and provide the best health services in the archipelago setting. Moreover, hosting this international conference allows for the exchange of knowledge, ideas, and best practices in pursuit of this goal.

The vision of the Faculty of Medicine, Universitas Pattimura, strongly aligns with that of Universitas Pattimura - the realization of an excellent university with a strong character and a rich archipelago culture by 2035.

Congratulations to the Dean, lecturers, staff, and students of the Faculty of Medicine, Universitas Pattimura, for successfully organizing the first International Conference, with enthusiastic participants and presenters coming from various regions in Indonesia.

I am also grateful to the Minister of Health Republic of Indonesia for their participation as a keynote speaker at this event.

Our sincere thanks go out to all our partners and sponsors who have supported the Faculty of Medicine, Universitas Pattimura, in making this event possible.

To all participants, I encourage you to make the most of this conference, seizing the opportunity to gain valuable knowledge and expand your scientific networks at both the national and international levels.

We hope that this conference becomes a regular event hosted by the Faculty of Medicine Universitas Pattimura, with different health aspects, and the Faculty of Medicine Universitas Pattimura will continue to strive to develop itself to improve the quality of graduates for a better quality of healthcare, especially in the Indonesian archipelago.
Thank you very much.



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Wassalamualaikum warahmatullahi wabarakatuh
Salam Sejahtera bagi kita semua, syalom
Om shanti shanti shanti om
Namo Buddhaya
Salam kebajikan
HOTUMESE



Kampus
Merdeka
Kampus Merdeka
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Principle Speech

Dr. dr. Bertha J. Que, Sp.S., M.Kes.
Dean of Faculty of Medicine, Universitas Pattimura

With utmost gratitude, I extend my thanks to God Almighty for bestowing His blessings and grace upon us, allowing the realization of The First International Conference on Health and Medicine, organized by the Faculty of Medicine, Universitas Pattimura. This significant event, centered around the theme of "Overcoming challenges for improved health," is scheduled to take place on July 26 and 27, 2023.

It is my sincere hope that this conference will serve as a platform for all participants to enhance their understanding and knowledge, share valuable experiences, exchange scientific ideas, and foster meaningful collaborations in the fields of medicine and health, with a special emphasis on the concerns of island doctors.

I wholeheartedly acknowledge and appreciate the dedication of everyone who has volunteered their efforts to bring this conference to fruition. This marks a momentous milestone as the first international conference organized by FK UNPATTI since its establishment in 2008, and we anticipate that it will pave the way for future editions.

Your valuable feedback is eagerly anticipated, as it will guide us in continuously improving the execution of our future conferences.

May God's blessings be upon each and every one of us.

Hotumese.





Speakers

Keynote Speaker



Ir. Budi Gunadi Sadikin, CHFC, CLU
Minister of Health Republic of Indonesia

Welcoming Speech



Prof. Dr. M. J. Saptanno, S.H., M.Hum.
Rector of Universitas Pattimura

Principal Speech



Dr. dr. Bertha J. Que, Sp.S., M.Kes.
Dean of Faculty of Medicine, Universitas Pattimura

Invited Speakers



M. Luisa Canals, Ph.D, MD
Meritime Health/Sanidad Health, University of Cadiz
(Spain)



Prof. Dr. dr. M. Guritno Suryokusumo, DEA
University of Indonesia
UPN Veteran Jakarta
(Indonesia)



Prof. Dr. Ilona Denisenko
International Maritime Health Association,
Regional Medical Office, Moscow
(Russia)



Prof. Dr. Hermien L. Soselisa, M.A.
Universitas Pattimura
(Indonesia)



Prof. Laszlo Szekely, MD., Ph.D.
Kanoinea University Labotiry,
Stockholm
(Sweden)



Prof. Dr. Jean Pujo
Medical Director SAMU 973 - Technical advisor
at the Regional Health Agency
(French Guiana)



Laksma TNI (Purn) Dr. dr. Harmin Sarana MM FS, Sp. B., Sp. KL., Subsp. KT (K)
Collegium Chairman of the Association of Marine Medicine Specialists (Perdokla)
(Indonesia)





Schedule

	WIT (+9 GMT)		Program
	Start	End	
Wednesday, 26th July 2023	08.30	08.55	Registration
	08.55	09.00	Mitigating Hospitality
	09.00	09.05	Opening
	09.05	09.09	Sing Indonesia Raya together
	09.09	09.14	Praying
	09.14	09.23	Committee Chairman Report
	Welcome Speech		
	09.23	09.35	Rector of Pattimura University: Prof. Dr. M. J. Saptenno, S.H., M.Hum.
	09.35	09.40	Tifa Traditional Dance
	09.45	10.15	Keynote Speaker: Ir. Budi Gunadi Sadikin, CHFC, CLU
	10.15	10.35	Principal Speaker: Dr. dr. Bertha J. Que, Sp.S., M.Kes (What is Island Doctor in Medical Faculty?)
	10.35	10.50	Coffee Break
	Panel 1 (Invited Speakers)		
	10.50	11.00	Pre-test
	11.00	11.20	Prof. DR. Hermien L. Soselisa, M.A (Anthropology and sociology of costal and island society)
	11.20	11.50	Laksma TNI (Purn) Dr. dr. Harmin Sarana MM FS, Sp. B., Sp. KL., Subsp. KT (K) (Maritime Medicine Specialist : A Key Role in Improving Maritime Health in The Indonesian Archipelago)
	11.50	12.10	Prof. Dr. dr. M. Guritno Suryokusumo, DEA (Health care for DCS in Traditional Diver)
	12.10	12.30	Q n A
	12.30	13.00	Phillips Promotion
	13.00	14.00	Break Time
	14.00	14.05	Preparing the audience for entering each breakout room
	14.05	16.00	Parallel session presentation in breakout room and virtual poster hall
	08.30	16.00	Virtual Poster Hall <i>Open for all participant</i>
	14.05	16.00	Poster Judging Time (Please ensure that the presenter is engaged in the Q&A section of their own poster related to the Virtual Poster Hall)



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Thursday, 27th July 2023	08.30	09.00	Registration
	09.05	09.10	Opening Day 2
	Panel 2 (Invited Speakers)		
	09.00	09.10	MAHRE-NET (video only)
	09.10	09.30	M. Luisa Canals, Ph.D, MD
			<i>(MAHRE-net International Long-term studies possibilities: Diabetes and Obesity in Seafarer)</i>
	09.30	09.50	Prof. Dr. Jean Pujo
			<i>(Out-of-hospital emergency care)</i>
	09.50	10.10	Prof. Dr. Ilona Denisenko
			<i>(Global Marine and maritime health)</i>
	10.10	10.30	Prof. Laszlo Szekely, MD., Ph.D
			<i>(Potential Utilization of marine and maritime natural resources for medical purposes)</i>
	10.30	11.00	Q n A
	11.00	11.10	dr. Arkipus Pamutu, Sp.F.,M.Kes
			<i>(Medical Ethics)</i>
	11.10	11.20	dr. Ony Wibriyono Angkejaya, Sp.An.,M.Kes
			<i>(Patient safety in Coastal Area)</i>
	11.20	12.05	Cont. Parallel session presentation in breakout room
	08.30	15.00	Virtual Poster Hall
			<i>Open for all participant</i>



Oral Presenter Abstracts





Wednesday, 26th July 2023

Room 1 (Nature's Treasure: Biomedical science, traditional medicine, and herbal remedies in small islands)
7 Mins (Talks) + 3 Mins (QnA)
Moderator: Rachmawati Dwi Agustin S.Si., M.Si.,M.Sc. Tech Admin: Ittaqi Judge: Dr. Cecilia A. Seumahu, S.Si.,M.Si
Role of Multiplex PCR in Detection of Silent Infection caused by Sexually Transmitted Bacteria in Urine
Rizalinda Sjahril
The Roles of BIR Domain of Survivin in Cell Apoptosis and Proliferation: An In Silico Study
Silviatun Nihayah
Comparison of the Diversity of Pasteurella multocida DNA Fragment Profiles in Three Different Master Mixes
Muhammad Ibrahim Desem
Effect of Virgin Coconut Oil (VCO) Administration in Combination with Black Cumin Oil (Nigella Sativa) on TNF Alpha Gene Expression in Wound Healing in Diabetic Rats with Ulcer
Eliza Arman
Modern Dressing Based on Chitosan and Curcumin Biofilm: An Possibility of wound care for Diabetic Ulcer Treatment
Fiane de Fretes
Novel Regulatory Genes Identification of Chondrosarcoma using Integrated Bioinformatics Analysis
Mohamad Dimas Ismail
In silico Study of The Potential of Curcuma longa and Phyllanthus niruri Bioactive Compounds on Epidermal Growth Factor Receptor (EGFR) as anti-breast cancer
Moh Dliyaud
MnSOD promotes apoptosis of BT-549 triple negative breast cancer cells by modulating survivin, caspase-9, and caspase-3 expressions
Septelia Inawati Wanandi





Role of Multiplex PCR in Detection of Silent Infection caused by Sexually Transmitted Bacteria in Urine

Rizalinda Sjahlil^{1,*}, Monika Fitria Farid², Yenni Yusuf³, Mardiah Tahir², Ilhamjaya Patellongi⁴

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Abstract

Introduction: Sexually Transmitted Infections among women is usually without symptoms. The diagnosis is supported by Gram staining, immunofluorescence detection from smeared swabs, bacterial culture, and/or molecular testing. However, the cervical or vaginal swab collection procedure which requires the use of speculum causes some women reluctant to get tested. This research aimed to identify silent infections due to sexually transmitted bacteria among asymptomatic women by using urin specimen to aid an early detection by a less invasive procedure. **Methods:** adult married women without vaginal and lower abdominal symptoms who came for pap smear at a public health centre in Kabupaten Barru, Sulawesi Selatan, were asked to participate and collect their first void urine. Ten milliliters of urine were centrifuged at 3000 rotation per minute to obtain sediments, and a smear was made for Gram staining to detect diplococcus-negative Gram *Neisseria gonorrhea*, followed by DNA extraction, amplification, and visualisation of DNA bands. **Result:** From 34 urine samples (median age 31 years old) none were positive smear indicative for *Neisseria gonorrhea*, however DNA amplification revealed *Neisseria gonorrhea* in 1 sample (2.9%), *Ureaplasma urealyticum* 5 samples (14.7%), and no *Chlamydia trachomatis* nor *Mycoplasma genitalium* was detected. **Conclusion:** Multiplex PCR detection among asymptomatic women revealed 17.6% silent infection caused by sexually transmitted bacteria.

Keywords: silent infection, *Neisseria gonorrhoea*, *Ureaplasma urealyticum*, *Chlamydia trachomatis*, *Mycoplasma genitalium*, urine



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The Roles of BIR Domain of Survivin in Cell Apoptosis and Proliferation: An In Silico Study

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Abstract

Survivin, known as Baculovirus Inhibitor of apoptosis protein Repeat Containing-5 (BIRC5), is an inhibitor apoptotic protein that is highly expressed in highly proliferative cells, including cancer cells. We aimed to investigate the dual roles of BIR domain within survivin in inhibiting apoptosis and inducing cell proliferation through *in silico* study. Protein-protein interaction (PPI) networks of survivin was analyzed using Cytoscape software. The involved signaling pathways were determined using Kyoto Encyclopedia of Genes and Genomes (KEGG) database and functional enrichment analysis. Furthermore, the binding affinity of BIR domain in survivin with targeted proteins involved in cell apoptosis and proliferation was visualized by molecular docking analysis. Based on PPI network and functional enrichment analysis, we selected two proteins involved in apoptosis (XIAP and caspase-9), and two in cell proliferations (CDK1 and INCENP) to be further analysed for their binding with BIR domain of survivin. These proteins bind to the BIR domain of survivin at Thr34, Thr48 and Ser20 residues to regulate the apoptotic and proliferative process. In conclusion, the Thr34, Thr48 and Ser20 residues within BIR domain play a critical role in the dual roles of survivin. This in silico study provides insights regarding the function of survivin in cancer regulation that need to be further validated experimentally. Therefore, BIR domain of survivin may be considered as a potential target for cancer therapy.

Keywords: survivin, BIRC5, BIR domain, apoptosis, proliferation





Comparison of the Diversity of *Pasteurella multocida* DNA Fragment Profiles in Three Different Master Mixes

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Abstract

Pasteurella multocida is a Gram-negative bacterium that causes various diseases in various animal species. In addition, this bacterium is classified as a zoonotic disease agent. This bacterium is known to have a diversity that can be detected through serological testing, protein profile analysis, gene sequence analysis, and random amplified polymorphic DNA (RAPD) analysis. This study aimed to compare and analyze the diversity of *P. multocida* from Indonesia based on RAPD using primer M13 in three commercial master mixes from different manufacturers (Amersham, Intron, and Meridien). Ten bacterial isolates were used in this study. DNAzol was used to extract the DNA. DNA amplification was performed by PCR at 95°C for 3 minutes, 30 × (95°C for 30 seconds, 44°C for 58 seconds, and 72°C for 70 seconds), 72°C for 7 minutes. The RAPD product was then electrophoresed on 1.5% agarose gel. The results indicate different patterns of DNA fragments in each master mix, namely 3–7 bands generated with a range ranging from 392–2,538 bp (Amersham), 6–8 bands with 307–3,100 bp (Intron), and 5–10 bands with 305–2,937 bp (Meridien). Using the hierarchical clustering analysis of the band patterns of RAPD profiles, four (Intron and Meridien) and five clusters (Amersham) were formed. The data was then compared to the data from protein profile analysis. In conclusion, *P. multocida* diversity is well-demonstrated by RAPD and the interpretations could be different from one master mix to another. Therefore complementary data must be included in the analysis to minimize the discrepancy between multiple master mixes results.

Keywords: biodiversity, *Pasteurella multocida*, RAPD





Effect of Virgin Coconut Oil (VCO) Administration in Combination with Black Cumin Oil (*nigella sativa*) on TNF Alpha Gene Expression in Wound Healing in Diabetic Rats with Ulcer

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Abstract

Traditional medicine is continuously developed to overcome the limitations of modern medicine seeking the treatment of diabetic ulcers. Virgin coconut oil (VCO) and black cumin oil (*nigella sativa*) have various therapeutic effects mainly attributed to anti-inflammatory. The purpose of this study was to determine the effect of the combination of VCO and cumin oil (*nigella sativa*) on the expression of the alpha TNF gene in wound healing in diabetic ulcer model mice. This study used an experimental approach. The study sample consist of 30 rats divided into 6 groups; control, VCO, cumin oil (*nigella sativa*), a combination of VCO and cumin oil (*nigella sativa*) 1:1, 2:1 and 1:2. Diabetic rats were induced using streptozotocin and wounds was made with *disposable biopsy punch* with a diameter of 10 mm. Skin tissue was collected after the 7th and 14th day of treatment. Gene expression was analyzed using RT PCR and RNA isolation stage using Triazole reagent, while synthesis of cDNA using synthesis kits. experimental groups were analyzed using the one-way ANOVA. The results found that the combination of VCO and black cumin oil (*nigella sativa*) have a significant difference on average between groups with a p-value of 0.000. In conclusion, the combination of VCO and black cumin oil (*nigella sativa*) decreased the expression of the alpha TNF gene resulting in increasing the speed of wound healing in rats with a diabetic ulcer.

Keywords: black cumin oil, VCO, alpha TNF, wound, diabetic ulcer



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Modern Dressing Based on Chitosan and Curcumin Biofilm: An Possibility of wound care for Diabetic Ulcer Treatment

Fiane de Fretes^{1*}, Rosiana Eva Rayanti^{2*}, Agung R. Gintu³, Timoty Theogracia Siwalete^{4*}

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Abstract

The present medical and pharmaceutical research is trying to find treatment solutions with advanced but economical biomaterials and, as much as possible, utilizing natural materials that can be applied to the human body. This application aims to overcome infection in wounds, one of which is diabetic ulcers which require appropriate materials, namely those containing curcumin, one of the spices found in Indonesia. On the other hand, one of the advanced biomaterials is Chitosan Biofilm. This biofilm is recommended to treat Diabetic Ulcers as a wound dressing because it has bioactivity, is anti-infective, anti-inflammatory, and promotes cell regeneration at the same time. This research conducted an experimental study by synthesizing chitosan from crab shells (*Portunus* sp) through the process of maceration then applying it as a wound dressing. In making the biofilm, chitosan was mixed with curcumin from turmeric extract to improve the performance of the biofilm as a wound dressing. The resulting biofilm was transparent yellow. Physicochemical tests showed that the Chitosan - Curcumin Biofilm had antibacterial, antioxidant, and SPF protection and was included in the "Very Strong" level. The transparent biofilm can make it easier for medical personnel to see tissue repair without opening the wound dressing. In addition, the raw materials are readily available, potentially reducing the cost of wound care for patients with decubitus ulcers. Based on these results, it was concluded that this Biofilm can be recommended for future experimental studies and has the potential as a wound dressing for Diabetic Ulcers.

Keywords: Biofilm, Biomaterial, Chitosan, Curcumin, herbal medication



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Novel Regulatory Genes Identification of Chondrosarcoma Using Integrated Bioinformatics Analysis

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Abstract

Recent treatment options in managing chondrosarcoma (CS) are still limited to surgery, followed by chemotherapy and/or radiotherapy. However, the precise mechanisms and genes associated with CS progression remain largely unexplored. This study aims to investigate the core regulatory genes implicated in the molecular mechanisms of CS.

Differentially Expressed Genes (DEGs) were obtained using GEO2R. DAVID database was used to analyze the function and pathways enrichment of DEGs. Protein-protein interaction (PPI) network was established by STRING and visualized by Cytoscape software. Then, the essential genes were analyzed using cytohubb and MCODE plugin resulting in seven hub genes associated with CS progression. For validation, we then analyzed these genes based on their expression and survival, performed by using the UALCAN database. Additionally, the cBioPortal database and Tumor Immune Estimation Resource (TIMER) were used to analyze the genetic alteration and immune cell infiltration associated with the hub genes, respectively. Moreover, the interactions of microRNAs (miRNAs) with the hub genes were constructed using the Network analyst database. A total of 114 common DEGs were found between CS samples and normal cartilage samples. These genes are predominantly associated with Focal Adhesion, which significantly promotes tumor cell survival, migration, and invasion. The PPI network acquired from the STRING database was imported to the cytoHubba plugin and MCODE of Cytoscape. Seven hub genes were screened using the above plugin based on the degree method (which includes CCND1, CDK6, CAV1, MLC1, SQSTM1, GAPDH, and FOXO1). According to the validation analysis, all hub genes have a diagnostic value, and the CDK6, SQSTM1, and FOXO1 genes have a significant association with CS progression. MiRNAs analysis revealed that miR-20b-5p has a potential binding with CCND1, CDK6, CAV1, MCL1, and SQSTM1 genes. Meanwhile, miR-15a-5p has a potential binding with the FOXO1 gene. This study provides a novel seven robust hub genes that may serve as a potential biomarker for CS through an integrated bioinformatic analysis. However, additional experiments are required to validate the key genes and the biological pathway obtained from this study.

Keywords: Chondrosarcoma, Differentially Expressed Genes, Bioinformatic analysis



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In silico Study of The Potential of *Curcuma longa* and *Phyllanthus niruri* Bioactive Compounds on Epidermal Growth Factor Receptor (EGFR) as anti-breast cancer

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Abstract

The bioactive compounds *Curcuma longa* and *Phyllanthus niruri* are known to have many health benefits, including their ability to anti-cancer agents. This study aims to explore the potential of the bioactive compounds in *C. longa* and *P. niruri* on the Epidermal Growth Factor Receptor (EGFR) as anti-breast cancer agents using an in silico approach. The EGFR receptor is a receptor that has an essential role as an anti-cancer. This study to evaluate the potential of *C. longa* and *P. niruri* on EGFR 7aei as anti-cancer. Data for the bioactive compounds and EGFR 7aei proteins were obtained from the PubChem and RSCD PDB databases. Probability activity is carried out using a PASS Online web server. Further, Specific docking using AutoDock Vina was performed to simulate the EGFR-Compound interaction. The docking results were analyzed using the Discovery Studio 2019 software. Based on several selected bioactive compounds, it is predicted to be able to inhibit and induce apoptosis of cancer cells and have activities related to cancer development pathways. And three bioactive compounds have the highest activity as anti-cancer. The first is lupeol for antineoplastic, antineoplastic (breast cancer), caspase 3 stimulant; the second is quercetin for apoptosis agonist, and the third is isoquercitrin for chemopreventive and proliferative diseases treatment, anticarcinogenic, and antioxidant. And these compounds have lower binding affinity than ATP as the native ligand. The results showed the potential anti-cancer activity of bioactive compounds from *C. longa* and *P. niruri* on EGFR. It could assist in the development of promising therapeutic agents for anti-cancer treatment.

Keywords: bioactive compound, *C. longa*, *P. niruri*, anti-cancer, Epidermal Growth Factor Receptor (EGFR).



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MnSOD promotes apoptosis of BT-549 triple negative breast cancer cells by modulating survivin, caspase-9, and caspase-3 expressions

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Abstract

Triple negative breast cancer (TNBC) is the most aggressive breast cancer subtype that is lack of estrogen, progesteron, and HER2 reseptors. TNBC cells highly express manganese superoxide dismutase (MnSOD) antioxidant to suppress reactive oxygen species-induced apoptosis and promote oncogenic signaling; thereby, becoming more aggressive. This study aimed to investigate the effect of MnSOD knockout (KO) on TNBC cell apoptosis through assessing the expressions of survivin, caspase-9, and caspase-3. We first simulate the interactions of MnSOD with apoptosis-relevant proteins using computational methods based on protein-protein interaction network and molecular docking analysis. Using BT-549 TNBC cells containing CRISPR/Cas9-edited MnSOD gene, we assess the mRNA expressions of MnSOD and survivin using qRT-PCR assay, while the protein expressions of MnSOD, survivin, caspase-9, caspase-3 were determined using Western blot assay. This study demonstrates that MnSOD-KO decreased the binding affinity between MnSOD and survivin, in line with the significant reduction of survivin mRNA and protein expressions. Consequently, the protein expressions of caspase-9 and caspase-3 increased in MnSOD-KO cells. Therefore, we conclude that MnSOD plays a pivotal role in BT-549 cell apoptosis by modulating the gene expressions of survivin, caspase-9, and caspase-3. Further studies are needed to elaborate the MnSOD signaling pathways involving closely related apoptotic proteins.

Keywords: MnSOD, TNBC, apoptosis, survivin, caspase-9, caspase-3





Room 2 (Thriving in Challenges: Exploring Public health, and nutrition in coastal and small islands communities)
7 Mins (Talks) + 3 Mins (QnA)
Moderator: dr. Nathalie E. Kailola, MKes. Tech Admin: Salwa Judge: dr. Ritha Tahitu, M.Kes
Nurses Perceived Barriers Toward Pressure Injury Prevention In ICU: A Scoping Review
Syamsuriah Lansa
Supporting and Inhibiting Factors of Continuous Professional Development Implementation on Nurses in Hospitals: A Scoping Review
Dewarawati Patandean
A New Model of Nurse Performance Improvement using the Flourishing Healthcare-Mu Application
Elsye Maria Rosa
Relationship between dietary pattern and hyperuricemia incidence in the coastal community of Saparua, Central Maluku Regency on 2021
Bertha Jean Que
Micronutrients Contribution of Barred Spinefoot (<i>Siganus doliatus</i>) in the Jefman Island Waters, Raja Ampat Regency to Local Community
Jacob Uktolseja
Community Respons in Preventing behavior of COVID-19 in Bogor City in 2020
Alfons Maryono Letelay
Improving the Quality of Public Health and Nutritional Standards for Coastal and Small Islands Communities: A Health Project to Attain Sustainable Development Goal 3 in Indonesia
Ari Wibowo
The Effectiveness of Health Promotion Using Leaflets and Lectures in Changing Knowledge and Attitudes of Breastfeeding Mothers About Exclusive Breastfeeding in Dusun Talaga Ratu, Kairatu
Ira Deseilla Pawa
Cardiocerebrovascular Disease Research in Banda Baru Village, Central Maluku District Indonesia
Bertha Jean

Nurses Perceived Barriers Toward Pressure Injury Prevention



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In ICU: A Scoping Review

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Abstract

The incidence of pressure injuries in the ICU can increase morbidity and mortality in patients as well as harm the hospital. Nurses play an important role in the prevention of pressure injuries in the ICU. However, a number of nurses perceived barriers in carrying out the role. Several studies about barrier to the implementation of pressure injury prevention in the ICU, have been done before. This study aims at reviewing the research and conducting maps with the approach of scoping review. Literature searches are carried out by electronic machines on 5 databases, PubMed, Science Direct, Cochrane, Wiley, and Google Scholar with a time limit 2010-2023, in English or Indonesian language and in full text. Keyword of the study based on The Joanna Briggs Institute (JBI) recommendations with population criteria: "ICU nurse or intensive care nurse, or critical care Nurse", concept: "pressure injury prevention or pressure ulcer prevention, or decubitus prevention and decubitus prevention", and context: "barrier". Out of 9,768 articles, 6 articles meet the study purposes. After the analysis, five themes were identified, heavy workload, lack of knowledge and skills, insufficient resources, unstable patient condition and lack of priorities. Pressure injuries in ICUs can be prevented with multidisciplinary efforts and team cooperation in reducing such barriers. The support of the hospital is expected to facilitate nurses in the implementation of maximum pressure injury prevention to suppress the incidence of pressure injuries in the ICU.

Keywords: ICU, Nurse, Pressure Injury Prevention, Barrier



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Supporting and Inhibiting Factors of Continuous Professional Development Implementation on Nurses in Hospitals: A Scoping Review

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Abstract

This research aims to determine the supporting and inhibiting factors for implementation of Continuous Professional Development for nurses in hospitals. The research method uses Scoping Review which is used to map the literature. The synthesis method uses PEOS modification. Articles were obtained from the Google Scholar search engine and the PubMed and ScienceDirect electronic databases. The results of this research indicate that from the 72 articles with relevant titles and abstracts, 8 articles were found that met the inclusion and exclusion criteria. The results of the research found that there were five themes supporting and inhibiting the implementation of Continuous Professional Development for nurses in hospitals, namely organizational culture, supportive environment, attitudes and motivation, staff shortage and lack of support, and lack of access to training. Conclusion of CPD is important to safely and effectively providing patient-centered care in hospitals. In today's rapidly changing healthcare context, it is important for educators and managers to understand the factors that increase the impact of CPD. This scoping review has highlighted the importance of a positive workplace culture, adaptability to rapidly changing contexts, and the strong leadership in utilizing motivated individuals and teams to understand the relevance of CPD to their practice work and it being supported to access workplace learning.

Keywords: Continuous Professional Development, Supporting Factors, Inhibiting Factors, Nurses, Hospitals



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A New Model of Nurse Performance Improvement Using The Flourishing Healthcare-MU Application

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Abstract

Flourishing is a state of optimal functioning associated with high levels of positive emotion, well-being, mental health, and psychological and social well-being. Nurses who have a high level of flourishing will tend to do work happily, in a comfortable working situation, thus nurses can provide optimal health services. The aim of this research is to improve the performance of nurses in hospitals with the application of Flourishing Healthcare-MU as a new model of assessment. The method used is the Flourishing Healthcare-MU application as a tool to measure the level of flourishing of nurses. In the application there are 12 questions consisting of 6 elements of the assessment of the level of flourishing, namely 1) Happiness and Life Satisfaction, 2) Mental and Physical Health, 3) Meaning and Purpose, 4) Character and Virtue, 5) Close Social Relationships, and 6) Financial and Material Stability, each element consisting of 2 questions. The sample in this study were nurses at the hospital. Data analysts in this study used SPSS, the subjects in this study were 89 nurses at PKU Muhammadiyah Karanganyar Hospital. The results of this study were that the Flourishing Healthcare-MU application was well received as a means of measuring nurse happiness with a total of 27 nurses feeling good and 62 nurses feeling very good. The implication in this study is that the level of flourishing possessed by nurses affects the performance of nurses.

Keywords: Health Applications, Flourishing, Nurse Performance.



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Relationship between dietary pattern and hyperuricemia incidence in the coastal community of Saparua, Central Maluku Regency on 2021

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Abstract

The prevalence of hyperuricemia in Saparua Hospital has increased from 2019 to July 2021 from 5.71% to 53.97% of a total 63 patients. Saparua as one of the longest coastal areas in Maluku has 85% fish consumption pattern. This allows the dietary pattern of the coastal community in Saparua become a risk factor of hyperuricemia. Therefore, this study aims to determine the relationship between dietary pattern and hyperuricemia incidence in the coastal community of Saparua, Central Maluku Regency. This type of research is an observational analytic study with a *cross sectional* design using *consecutive sampling* technique. Respondents were interviewed using the *Semi-Quantitative Food Frequency Questionnaire* (SQ-FFQ) and checking uric acid levels using the *Easy Touch*. The data was calculated manually and then analyzed using the *nutrisurvey* 2007 and the *Statistical Package for the Social Science* (SPSS) 25 application. The results showed from total of 395 respondents, 58.5% very often consumed ($\geq 2x/day$) high-purine foods, namely layang fish (momar). 40.3% of the respondents consumed the amount of purines per day in the high category, while the normal category was 29.9% and the low category was 29.9% of the respondents. The prevalence of hyperuricemia was founded on 57.5% respondents and not hyperuricemia was 42.5% respondents. The *chi square test* analysis results found a significant relationship between dietary patterns based on the amount of food (consumption of purines) and the hyperuricemia incidence in the coastal community of Saparua, Central Maluku Regency with $p (value) < 0.001$ ($p < 0.05$).

Keywords: Hyperuricemia, Dietary Pattern, Coastal Community, Saparua





Micronutrients Contribution of Barred Spinefoot (*Siganus doliatus*) in the Jefman Island Waters, Raja Ampat Regency to Local Community

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Abstract

Barred spinefoot in the Jefman Waters, Raja Ampat Regency, contains micronutrients to alleviate the hidden hunger of the local community. Therefore, the research objective was to estimate potential micronutrients in barred spinefoot based on its biomass in the Jefman Waters, Raja Ampat Regency, and its contribution to the local community. The fish were caught with a guiding barrier net, and their length and weight were measured. The length and weight data were analyzed using FISAT II software. The results show that the asymptotic length (L_{∞}) was 24.97 cm, the growth coefficient (K) was 1.0.year⁻¹, the natural mortality coefficient (M) was 1.88.year⁻¹, and the fishing mortality coefficient (F) was 2.15.year⁻¹, exploitation rate (E) was 0.53, with the estimated maximum sustainable yield (MSY) being 2.17 tons.year⁻¹. Based on maximum sustainable yield, the potential calcium, iron, protein, omega 3, and zinc were 1011.22, 16.04, 401.45, 2.15, 32.98 kg. year⁻¹; selenium and vitamin A was 399.28, and 770.35 mg. year⁻¹, respectively. On average, barred spinefoot can contribute recommendation daily intake of calcium, iron, protein, omega 3, zinc, selenium, and vitamin A to the local community, respectively was 0.44, 0.79, 54.36, 0.87, 1.83, 3.85, 0.52 % of total Jefman Island community per year. In conclusion, barred spinefoot can contribute micronutrients to the Jefman Island community in a small population; therefore, this local community should be using other fishes as sources of micronutrients.

Keywords: *Siganus doliatus*, micronutrients, hidden hunger, Jefman Island community, Raja Ampat



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Community Respons in Preventing behavior of COVID-19 in Bogor City in 2020

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Abstract

The world was shocked by the outbreak of the coronavirus that causes a disease called COVID-19. To reduce the number of COVID-19 cases, that is to prevent transmission by implementing health protocols. This study aims to determine the public's perception of the COVID-19 case in the community.

This paper is part of the results of research on the relationship between comorbidities and preventive behavior for COVID-19 cases, namely about public perceptions of COVID-19 cases in Bogor City. Data were collected using a guideline that was compiled based on the criteria of a qualitative study through in-depth interviews (in-depth interviews). The previous guidelines were tested for validity, then the data was displayed through transcripts, and a data matrix to facilitate the analysis of data presented descriptively.

The results of the research on public perceptions of COVID-19 are that people understand the dangers posed if they do not follow the health protocols implemented by the government. Quantitative data shows that the correct use of masks when outside the home is only 18.0%, washing hands with soap is 80.3%, using hand sanitizers correctly is 26.2%, maintaining distance or physical distancing is 90.2%, and correct coughing and sneezing behavior by 60.7%. In general, the results of research data have not been encouraging for the prevention of COVID-19, so you will be vulnerable to COVID-19 infection if you ignore health protocols, especially by wearing masks correctly. Therefore, in general, the results of public perception obtained have not been able to reduce the number of COVID-19 cases.

Keywords: Perception, COVID-19, Prevention, Health protocols



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Improving the Quality of Public Health and Nutritional Standards for Coastal and Small Islands Communities: A Health Project to Attain Sustainable Development Goal 3 in Indonesia

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Abstract

This paper aims to address the challenges in improving the quality of public health and nutritional standards in Indonesian coastal and small islands communities with the overarching goal of achieving Sustainable Development Goal (SDG) 3 targets. The communities face unique health and nutritional challenges due to geographical isolation, limited resources, and environmental factors. Previous studies have highlighted the need for tailored interventions that consider the specific needs of these communities. Existing literature reveals a gap in research focusing on comprehensive health projects that integrate access to healthcare services and improvement of nutritional standards in the Indonesian context. There is no similar research has been conducted that specifically investigates the proposed health project for Indonesian coastal and small islands communities in achieving SDG 3 targets. This research employed a systematic approach, including a literature review, benchmarking of successful projects from other countries, and adaptation of interventions to the Indonesian context. The findings suggest that the proposed interventions, such as improving access to healthcare services and enhancing nutritional standards, have the potential to positively impact public health outcomes in coastal and small islands communities. Lessons learned from benchmarking projects provide valuable insights into successful strategies that can be adapted and implemented in the Indonesian context. The proposed intervention plan aligns with the objectives of SDG 3. The findings have implications for both scientific research and practical implementation, providing a roadmap for policymakers and practitioners to effectively address the health and nutritional challenges in Indonesian coastal and small islands communities and contribute to the achievement of SDG 3.

Keywords: coastal and small islands, health project, public health and nutritional standards, Sustainable Development Goal 3, Indonesia



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The Effectiveness of Health Promotion Using Leaflets and Lectures in Changing Knowledge and Attitudes of Breastfeeding Mothers About Exclusive Breastfeeding in Dusun Talaga Ratu, Kairatu

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Abstract

Optimal infant growth and development are influenced by exclusive breastfeeding. Exclusive breastfeeding means the infants are only given breast milk without additional fluids or other foods. WHO and UNICEF have recommended an exclusive breastfeeding program for infants aged 0 to 6 months. UNICEF stated that from 2015-2021, the percentage of exclusive breastfeeding was only 47% globally. Exclusive breastfeeding coverage in Maluku is still below the national standard of 80%, and in Kairatu village, it only reached 53%, the lowest in Dusun Talaga Ratu, reaching only 11%. This issue was influenced by a lack of knowledge that will impact the attitudes and actions of the mothers and a lack of education from health workers. This study aimed to determine the effectiveness of health promotion on the knowledge and attitudes of breastfeeding mothers using leaflets and lectures on exclusive breastfeeding in Dusun Talaga Ratu. This study was quasi-experimental; the sample size was the entire population, which consisted of 15 people. The data were analyzed using the Wilcoxon test. The results showed the effectiveness of health promotion with leaflets and lecture media in changing the knowledge and attitudes of breastfeeding mothers about exclusive breastfeeding in Dusun Talaga Ratu, with a p-value of knowledge ($p = 0.001$) and attitude ($p = 0.001$). Health promotion using leaflets and lectures effectively changed breastfeeding mothers' knowledge and attitudes about exclusive breastfeeding in Dusun Talaga Ratu. We recommend that health workers improve the provision of exclusive breastfeeding using leaflets and lectures.

Keywords: Health Promotion, Leaflet, Exclusive Breastfeeding





Cardiocerebrovascular Disease Research in Banda Baru Village, Central Maluku District Indonesia

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Abstract

Cardiocerebrovascular Disease (CVD) was estimated overall and separately for the 10 most common global causes of CVD-related death including stroke. Globally, there were an estimated 422.7 million prevalent cases of CVD (95% UI: 415.53 to 427.87 million cases) in 2015. This aim of this study was to determine the prevalence of cardiocerebrovascular disease in Banda Baru Village, Central Maluku District in 2019, so that further prevention efforts can be made. The residents of Banda Baru Village are refugees from Banda Island due to the earthquake which finally settled in this new village. This research was a descriptive study with cross sectional approach by doing interview, questionnaire and research variable measurement. Among 168 response, prevalence of cardiocerebrovascular disease that can be detected was hypertension with number of cases almost half of total response as much 44%. Response with hypertension most suffered by female as much 69,2% cases of female response. Majority of response were not hyperglycemia as much 95,2% of response. hyperuricemia with number of cases were 56,2% of response. Response with hyperuricemia most suffered by male as much 63,2% cases of female response. Hypercholesterolemia with number of cases were 56,5% of response. Response with hypercholesterolemia most suffered by female as much 54,7% cases of female response. Risk of CVD on this research, majority of response were at mild risk (<10%) as much 81%, and only 19% had a moderate to severe risk of CVD (moderate 10 - <30%, severe 30-> 40%). The risk factors associated with risk of CVD on this research were gender, hypertension history, increased BMI, and increased cholesterol levels.

Keywords: Cardioserebrovascular disease, hypertension, hyperuricemia, hypercholesterolemia, obesity.



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Room 3 (Health Paradise: Nurturing Coastal Communities Encompassing tropical infectious diseases, non-communicable diseases (NCDs))
7 Mins (Talks) + 3 Mins (QnA)
Moderator: dr. Amanda Manuputty. Sp.,DV.,M.KedKlin Tech Admin: Tri Judge: dr. Is Asmaul Hataul, SpPD
Combination of DSMES Through Telehealth and Hypnotherapy Optimizes Self-Care Behavior and Decreases HbA1c Levels T2DM Patients
Paulus Subiyanto
A-20 Years of Advances in Laboratory Diagnostic Platforms for Dengue Infection
Nastiti Intan Permata Sari
Population-Based Impact of Smoking, Drinking, and Genetic Factors on HDL-cholesterol Levels in J-MICC Study Participants
Yora Nindita
Association Between Long-Term Wildfire Smoke Exposure and Blood Cadmium Levels in Active Smoker in Sidoarjo, Indonesia
Devyana Dyah Wulandari
Challenge and Possible Solutions in Detection of Japanese Encephalitis Virus (JEV) in remote area
Masri sembiring Maha
Analysis of Knowledge and Risk Perception of Diabetes Mellitus Type 2 in Communities in the Working Area Kebonsari Community Health Center
Windy Yuana
Community Empowerment on Hypertension Prevention in Coastal Village Pabean Udik Indramayu as an Effort to Accelerate Village Development in Indramayu
Hikmah Muktamiroh
The Relationship between Engine Noise Intensity and Hearing Disorders in Driver's Boat Hook in Wayame Village, Ambon City, 2022
Rodrigo Limmon



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Combination of DSMES Through Telehealth and Hypnotherapy Optimizes Self-Care Behavior and Decreases A1C Levels in T2DM Patients

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Abstract

An important key to optimal diabetes management is engaging in Diabetes Self-Management Education and Support (DSMES) programs to minimize the risk of complications. However, negative attitudes, stress levels, and resistance to adherence to medication, diet and physical activity are often the main barriers. This study aims to explore the effectiveness of the combination of DSMES telehealth and hypnotherapy for optimizing self-care behavior and reducing A1C levels in Type 2 DM patients. This study used a quasi-experimental approach and a comparative study with pretest-posttest and cohort design for three months. The number of respondents was 40 patients, randomly selected and divided into the intervention and control groups. Characteristics of the respondents were female (60%), average age 55.3 (31-65) years, and highly educated (80%). A significant increase in the average self-care behavior before and after the intervention occurred in the intervention group, which was 33.5, in the control group it decreased by 0.3. The average decrease in A1C in the intervention group was 1.53 and 0.02 in the control group. There was a significant difference in mean self-care behavior, and A1C levels, in the two types of intervention ($p = 0.000$; $p = 0.030$ with an alpha of 5%). DSMES through telehealth combined with hypnotherapy provides a synergistic effect with the usual medical care given to DMT2 patients. This approach not only increases the accessibility of health care but also overcomes the psychological barriers associated with lifestyle changes and is worthy of further research.

Keywords: A1C, DSMES, Hypnotherapy, T2DM, Telehealth.





A-20 Years of Advances in Laboratory Diagnostic Platforms for Dengue Infection

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Abstract

Introduction: This study provides a comprehensive overview of laboratory diagnostic platform for dengue infection, focusing on innovation and technological advances. Dengue is a significant global health threat, accurate, and timely diagnosis is essential for effective disease management. **Objective:** The study aims to assess different diagnostic platforms' strengths, limitations, sensitivity, and specificity and provide a comprehensive understanding of their utility in diverse healthcare settings. **Methods:** This review explores laboratory diagnostic platforms from the period between 2003 and 2023, with a particular emphasis on platforms suitable for resource-limited settings. Electronic databases searched were performed in PubMed and Science Direct, with a period filter. More than 20 in total of articles were used in this study. **Results:** The most laboratory diagnostic for dengue infection used the molecular method, while the lateral flow assay is a suitable diagnostic technology platform for use in areas with limited resources. The selection of an appropriate diagnostic platform should consider factors such as sensitivity, specificity, cost, infrastructure requirements, and ease of implementation. **Conclusion:** Further research and development are needed to improve the performance and accessibility of diagnostic platforms, particularly in resource-limited settings.

Keywords: Advances, Dengue, Laboratory Diagnostic.





Population-Based Impact of Smoking, Drinking, and Genetic Factors on HDL-cholesterol Levels in J-MICC Study Participants

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Abstract

Background: Environmental and genetic factors are suggested to exhibit factor-based association with HDL-cholesterol (HDL-C) levels. However, the population-based effects of environmental and genetic factors have not been compared clearly. We conducted a cross-sectional study using data from the Japan Multi-Institutional Collaborative Cohort (J-MICC) Study to evaluate the population-based impact of smoking, drinking, and genetic factors on low HDL-C. **Methods:** Data from 11,498 men and women aged 35–69 years were collected for a genome-wide association study (GWAS). Sixty-five HDL-C-related SNPs with genome-wide significance ($P < 5 \times 10^{-8}$) were selected from the GWAS catalog, of which seven representative SNPs were defined, and the population-based impact was estimated using population attributable fraction (PAF). **Results:** We found that smoking, drinking, daily activity, habitual exercise, egg intake, BMI, age, sex, and the SNPs *CETP* rs3764261, *APOA5* rs662799, *LIPC* rs1800588, *LPL* rs328, *ABCA1* rs2575876, *LIPG* rs3786247, and *APOE* rs429358 were associated with HDL-C levels. The gene-environmental interactions on smoking and drinking were not statistically significant. The PAF for low HDL-C was the highest in men (63.2%) and in rs3764261 (31.5%) of the genetic factors, and the PAFs of smoking and drinking were 23.1% and 41.8%, respectively. **Conclusions:** The present study showed that the population-based impact of genomic factor *CETP* rs3764261 for low HDL-C was higher than that of smoking and lower than that of drinking.

Keywords: HDL-cholesterol; drinking; smoking; single nucleotide polymorphism; gene-environmental interaction.





Association Between Long-Term Wildfire Smoke Exposure and Blood Cadmium Levels in Active Smoker in Sidoarjo, Indonesia

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Abstract

Indonesia is one of the countries with the largest smoking population in the world, where Indonesia ranks fifth as the world's largest consumer of cigarettes. In one cigarette and the smoke it produces contains various kinds of chemicals as well as several dangerous heavy metals, one of which is cadmium (Cd). Cadmium (Cd) in the human body can acutely and chronically cause disturbances in the respiratory system, disruption of bone growth which can cause bone fragility. This study aims to determine the relationship between length of exposure to cigarette smoke and blood cadmium levels in active smokers in the Sidoarjo region, Indonesia. Determination of cadmium (Cd) levels was carried out by the Atomic Absorption Spectroscopy (AAS) method. Based on the examination results, the highest cadmium content was 8.567 ug/L and the lowest cadmium content was 0.030 ug/L. The results of statistical analysis using the Kruskal Wallis test showed a value of $P = 0.000$ ($p < 0.05$). It can be concluded that there is a relationship between length of exposure to cigarette smoke and blood cadmium levels in active smokers in the Sidoarjo region.

Keywords: Smoke, cadmium, AAS





Challenge and Possible Solutions in Detection of Japanese Encephalitis Virus (JEV) in remote area

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Abstract

Japanese Encephalitis Virus (JEV) is the most common virus that found to be causing acute encephalitis syndrome, especially in Asia countries. JEV is the virus transmitted by mosquitoes causing a zoonotic disease. This virus is usually developed in water birds that live in pigs and humans, where humans are as the end hosts. The resulting clinical symptoms vary from mild ones such as the flu to coma and even death, while 20-30% of those alive leave particular symptoms such as intellectual impairment, paralysis, repeated seizures and speaking inability. The diagnosis of JEV has so far been a challenge, especially in that performed in humans because the period of viremia in humans is very short. Therefore, besides WHO standard tests, such as ELISA (IgM), the obtained samples from spinal fluid or blood requires special expertise. In addition, the available detection kits used are still very limited. So, efforts in developing more efficient, inexpensive, fast and high sensitivity inspection methods and detection kit are necessary. Alternative examinations currently under development include the use of biosensors by using nanotechnology with silver nanoparticles (AgNPs), whose method is based on optical principle, or with carbon nanoparticles (CNPs), whose method is based on electrochemical carbon electrode, which both could be further developed as rapid detection test kits (RDT) for detection in human population in remote area and latex agglutination test (LAT), which could be used as rapid on-site screening assay for surveillance of JEV in population. In addition, *the presence of JEV antigen could also be detected via combining fluorescent and nanoparticles method through visualization of changes in light absorbance by silver nanoparticles (AgNPs) upon occurrence of JEV antigen-antibody bindings. Here, these challenges accompanied by the possible solutions for better and faster detection of JEV for being explored in coming researches will be discussed.*

Keywords: Japanese encephalitis virus, viral infection, detection kit, remote area, surveillance





Analysis of Knowledge and Risk Perception of Diabetes Mellitus Type 2 in Communities in The Working Area Kebonsari Community Health Center

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Abstract

Background: Diabetes mellitus is still a world health problem. Knowledge and perception of risk is very important to prevent diabetes mellitus. This study aims to analyze knowledge and perceptions of the risk of type 2 diabetes mellitus in the community in the Working Area of the Kebonsari Health Center. **Subjects and Methods:** A cross-sectional study was conducted in the working area of the Kebonsari Health Center from August to September with a total of 136 subjects selected using a two-stage random sampling technique. The dependent variable is type 2 diabetes control behavior. The independent variable is perceived risk of type 2 diabetes. The data instrument used is primary data. The data were analyzed using the chi-square test. **Results:** The hypothesis states that knowledge has a positive effect on risk perception. The test results for the path coefficient between knowledge and risk perception showed that the value of the knowledge path coefficient on risk perception was > 0.1 ($\beta = 0.396$) and the p value < 0.05 (p value < 0.001). Thus the hypothesis is proven which means that knowledge has a positive effect on risk perception. **Conclusion:** The better the respondent's knowledge about type 2 diabetes mellitus, the more they feel they are at risk of suffering from type 2 diabetes mellitus. Healthy.

Keywords: Knowledge, Perceived Risk, Type 2 Diabetes Mellitus





Community Empowerment on Hypertension Prevention in Coastal Village Pabean Udik Indramayu as an Effort to Accelerate Village Development in Indramayu

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Abstract

The coverage of health services for people with hypertension in the Indramayu district, based on the results of the first blood pressure measurements, is still low. This coverage is the third-lowest in the West Java region. Based on this, the community service team of the Faculty of Medicine UPN Veteran Jakarta, consisting of six lecturers and four medical students, conducted a community service aimed at increasing community empowerment towards the prevention of hypertension in the coastal village of Pabean Udik, Indramayu, West Java. This activity took place offline and online, including training on measuring blood pressure, filling out a logbook, and providing a blood pressure cuff. In this training, five cadres received hypertension prevention training for the first time, and five others refreshed their training. In addition, the ten cadres who participated in the blood pressure measurement and logbook training regularly conducted hypertension prevention education and blood pressure checks on one hundred people in the surrounding community and reported them in the logbook. The contents of the logbook include guidelines for the prevention and control of hypertension, a column for recording blood pressure, vegetables and fruits consumed, and efforts to regulate their lifestyle. This logbook is reported by the cadres to the health centre. In this activity, one hundred people had their blood pressure measured periodically and consumed fruits and vegetables. Thus, the concept of community empowerment as a contributor to accelerating village development was successfully implemented.

Keywords: Accelerate Village Development, Coastal Village, Community Empowerment, Hypertension Prevention





The Relationship Between Engine Noise Intensity And Hearing Disorders in Driver's Boat Hook in Wayame Village, Ambon City, 2022

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Abstract

Hearing loss can be interoretred as a decrease in the ability to hear in a wide range with a level that can be assessed subjectively to total deafnes. The job as a beheading boat driver who when working side by side with the propulsionengine is a very risk to be exposed to noise. Where in this case noise is the one of factors that affect the to occurrence of hearing loss. The study aims to see the relationship between the intensity of engine noise and hearing loss in the beheading boat driver in wayame village. This study use an observasionalanalitical research method with a cross-sectional approach. Subject collected 61 repondens with sampling using total sampling technique. Collecting data using a quistionnaire, measuring the intensity of engine noise using a sound level meter andd measuring the drivers hearing loss using audiometry. The variabel studies were the intensity of machine and hearing loss using the Chi-Square test. The result of this study indicate that there is a significant relaiontshp between the machine noise intensity and hearing loss, with $p=0,020$

Keywords: Noise Intensity, Hearing Loss.





Room 4 (Ocean Wellness: Marine and maritime health, an immersive environment that combines elements of the marine ecosystem with health-related information and activities)
7 Mins (Talks) + 3 Mins (QnA)
Moderator: dr. Marthen Yoseph Matakupan Tech Admin: Kaprian Judge: dr. June Luhulima, SpKL / dr. Farah Ch. Noya, MHPE., PhD
Health-risk Mapping of Coastal Residents in Lombok Island
Eustachius Hagni Wardoyo
Evaluation of the Coastal Medicine Program
Boy Subirosa Sabarguna
Quality Assurance in Coastal Medicine
Boy Subirosa Sabarguna
Diagnostics of the Coastal Medicine Community
Boy Subirosa Sabarguna
Soft Skill Based Learning for Marine Medicine Specialists
Boy Subirosa Sabarguna
Brown algae as natural marine wealth with multiple antimicrobial activities on human pathogens: a mini-review
Novaria Sari Dewi Panjaitan
Peel Off Face Masker From Coffee Grounds-Chitosan
Agung Gintu
Antibacterial Potential of Cladophora sp Compounds Against PBP1b and 2 Target Proteins in Escherichia coli BBacteria using In Silico Studies
Sulthon Yassar
Fishermen Health Prediction Model in West Seram District, Indonesia
Sahrir Sillehu
Factors Influencing Non Adherence to Antiretroviral Therapy in Maluku Archipelago, Indonesia: A Mixed-Methods Study
Presli Glovrig Siahaya





Health-risk mapping of coastal residents in Lombok Island

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Abstract

Background: Health-risk mapping of coastal residents is an increasing issue, it is beneficial for tactical and strategical planning for health resistance, especially for archipelagic country. The aim of this study is to describe health-risk mapping of coastal residents in Lombok.

Methods: Coastal mapping to classify 4 beach types: sandy beaches, Rocky Coast, Delta and Embayment, resident house' distance from shoreline is measured and occupation identified by secondary resources.

Results: The shoreline' length of Lombok Island is 513.9 km. Beach type consist of sandy beaches is 393.77 km (76.6%), rocky coast is 103.92 km (20.2%), embayment is 14.06 km (2.8%) and delta is 2.15 km (0.04%). Number of households living within distance of 2 km away from shoreline is 24,890 houses. Thirty eight percent length of sandy beach is occupied by coastal residents, 67% length of embayment and 13% length of Rocky beach. Occupation of household are fishermen 7,467 (30%), traditional divers 3,230 (13%), tourism sector 1,300 (5%) and other informal occupation 12,893 (52%). Health risk is grouped based on occupation and place of stay. Health risk of fishermen (Joint pain and mild-moderate deafness), traditional diver (barotrauma and decompression sickness), tourism sector (skin burn, heatstroke) and other informal occupation (hypertension, hemorrhoid and pterygium).

Conclusion: Sandy beach is dominant beach type, followed by rocky coast, embayment and delta. Health risk of coastal residents are hypertension, hemorrhoid, pterygium, Joint pain, mild-moderate deafness, barotrauma, decompression sickness, skin burn and heatstroke.

Keywords: Coastal residents, Health-risk mapping, Lombok island



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Evaluation of the Coastal Medicine Program

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Abstract

Background. The performance of a health institution, such as a clinic or health center on the coast, can also be in a hospital, of course, must be continuously designed and developed so that it can meet the expected needs and can be developed and improved measurably, one of which is to carry out regular program evaluations and carry out appropriate follow-ups. continuous. The purpose of this paper is to convey one way of program evaluation activities at one of the health centers on the coast. **Method.** Start by making a proposal for determining the problem about performance, compare with target also last years and objectives, licensing the health center, collecting data, analyzing and submitting results, and writing a paper. It is observational research by processing primary data from data collection, discussed with secondary data and literature. **Results and Discussion** identify problem priorities, causes of problems, best alternative solutions to problems followed by realistic and implementable program development proposals. **Conclusions and recommendations.** A program evaluation has been carried out by producing proposals for further action programs. Suggestions as in the proposal to be carried out on an ongoing basis, so that it becomes an example for the next program.

Keywords: Program Evaluation, Puskesmas, problems, data analysis, development proposals, action programs





Quality Assurance in Coastal Medicine

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Abstract

Background. Service quality needs to be measured and maintained high, in accordance with the goals to be achieved, so it is important that this effort is carried out continuously so that quality improvement can continue. How to measure and assess the quality of services that are appropriate and sustainable will provide an overview of improvements and improvements that can be accounted for. The Purpose, to provide examples of measuring service quality and how to measure it in coastal medicine. The method used is to determine indicators that are measured against: competence, safety and patient safety, effectiveness and efficiency as well as patient satisfaction with important indicators that need to be measured. Measured semi-quantitatively with a score of 1 to 5, not important to very important. Then evaluate and make recommendations for improvement. Results and Discussion, obtained a measure of service quality followed by looking at the problem, then providing suggestions for improvement. Thus the quality of service can be carried out through Quality Assurance efforts which are continuously improved. It is important to do it in a careful way so that the results are realistic and challenging, not just a formality. Conclusions and recommendations. There are examples of measuring Quality Assurance and conducting evaluations to improve service quality.

Keywords: Quality Assurance, Coastal medicine, measurement, evaluation, quality improvement.



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Diagnostics of the Coastal Medicine Community

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Abstract

Background. Therapy for patients, apart from recovering the patient, also needs to prevent and train the community to be able to deal with transmission by increasing the community's ability to diagnose diseases in the community. The importance of community diagnosis is to prevent people from getting the disease indirectly. The aim is to make efforts to carry out research to determine the diagnosis of immunity in the Coastal Health Institute, so that it can have a pattern of treatment that can be carried out continuously. The method starts with finding problems related to knowledge, attitude and behavior to disease in community and problem priorities, causes and problem solving priorities, conducting research efforts to diagnose and make improvement efforts. **Results and Discussion,** there is clarity of problem related to community diagnosis, so that research proposals can be implemented to deepen so that important things can be identified for improvement. **Conclusions and recommendations.** Examples of stages and activities for the Diagnostics of Community that can be adapted to other areas, of course, are recommended to be carried out further, continuously so that the problems that arise are not repeated.

Keywords: community diagnosis, medicine in coastal areas, problems, research, improvement



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Soft Skill Based Learning for Marine Medicine Specialists

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Abstract

Background. Learning is currently experiencing major changes related to sophisticated technology and human thinking, supported by changes in learning behavior that are fast, instant and logical. This condition has been carried out by Chat GBT which suggests that lecturers should change, in the same direction, if it is not suspected that they are not needed anymore. Initially because learning is based on knowledge and thinking only, with the current conditions that require innovation, the mental attitude and behavior that supports it will become an important component after thinking. Thus we must use soft skills which include thinking, mental attitude and superior behavior. The aim is to design soft skill-based learning in the 3 types of learning that exist in Marine Medicine Specialists, in outline to see the differences and advantages in implementation. **Method.** A study of 3 types of learning was carried out, and adjusted with suitable soft skills so as to produce higher quality learning compared to just using chat GBT alone, the advantages and disadvantages will be seen. **Results and Discussion.** There are 3 types of learning that are adapted to soft skills, with one example each to clarify. Thus, it will be seen the advantages that can be achieved, of course besides that there are weaknesses. **Conclusions and Suggestions.** Soft skill-based learning can be done with a supportive mental attitude and behavior to achieve superior learning in Marine Medicine Specialist Education. Suggestions, more extensive studies and trials and wider examples are needed so that the benefits of soft skills can be seen more clearly.

Keywords: learning design, soft skills based, marine medicine specialist, thinking, attitude mental, behavior.



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Brown Algae As Natural Marine Wealth With Multiple Antimicrobial Activities On Human Pathogens: A Mini-Review

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Abstract

Due to the threat of the emergence of bacterial resistance to public health and food safety, there is an urgent need to seek out new sources of antimicrobial compounds. Brown macroalgae, often known as brown seaweed, have acquired popularity as a source of antibacterial chemicals. They include a variety of phytochemical substances with antibacterial characteristics that have been examined for potential applications as antibacterial compounds. Although the antimicrobial activity of crude extracts is generally not attributed to single compounds, but can be developed with combinations of metabolites, interest in brown macroalgae has been widely described due to their unique composition in polyphenols such as florotanins, polysaccharides such as fucoidans, and pigments such as fucoxanthin, which have been widely reported. Active against pathogenic and putrefactive bacteria. Phlorotannins from brown macroalgae, such as *Desmarestia aculeata*, *Fucus vesiculosus* and *Ectocarpus siliculosus*, are one of the many secondary metabolites produced by marine macroalgae, and they are currently receiving special attention for their strong antibacterial and cytotoxic properties. The antimicrobial activity of brown macroalgae, mainly due to the fluorotannins it contains, has been tested and studied on a variety of both Gram-negative and Gram-positive bacteria. In order to meet the demand for biomass and contribute to improving the quality and traceability of the seaweed product business as a whole, a study is needed to investigate the richness and potential of marine biodiversity. Here, the antimicrobial activity of brown macroalgae is reviewed in detail following the most widely reported recent studies conducted worldwide.

Keywords: brown algae, antimicrobial activities, antibacterial, bacterial resistance, natural marine products





Peel Off Face Masker From Coffee Grounds-Chitosan

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Abstract

Face's skin was one of sensitive skin covering human body. For the womans, face skin was the importat part to care. But sometimes the skin care product causing the bad side effect to the skin and to the body health. Because of this, the Pharmaceutical and Cosmetics research initiated to produce the advance materials to applied in the Cosmetics formulations. In this study treated the proccessing of Coffee grounds became the suitable compounds for skin care. The Coffee grounds were activated to increasing it performance. The Coffee grounds were mixing with the Chitosan to made the Biofilm then apply as Peel Off Face Masker. The results of antibacterial, antioxidant and SPF protection in all treatments showed "strong" to "very strong" activity range. Based on this results concluded that this face masker recommended to producing as skin care product.

Keywords: Antioxidant, Chitosan, Coffee, Cosmetics, Skin Care



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ANTIBACTERIAL POTENTIAL OF *Cladophora* sp COMPOUNDS AGAINST PBP1b and 2 TARGET PROTEINS IN *Escherichia coli* BACTERIA USING In Silico Studies

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Abstract

Introduction : *Escherichia coli* is a commensal bacteria in the large intestine that has the potential to cause infection. More than 50% cases of urinary tract infection (UTI) originate from *E. coli*. Target proteins are known to be one of them is Penicillin Binding Protein 1b (PBP) and PBP 2 function as enzymes that catalyze the formation of cell walls. Several studies have shown that extract from *Cladophora* sp. has an antibacterial effect on *E. coli*. Phytochemical screening of chloroform extract has a higher ZOI than decoct. This research is looking for phytochemical compounds from *Cladophora* sp. that can bind to both proteins through in silico studies in order to obtain new drug candidates.

Method : Prediction of the pharmacokinetic profile and physicochemical properties using pkCSM online tools. 44 *Cladophora* sp compounds were tested in silico by binding it to PBP1b and PBP2 proteins using the Pyrx Autodock Vina program with Moenomycin and CPD4 controls. Protein and ligand visualization using BIOVIA discovery studio.

Result : *Cladophora* sp. has 14 compounds that have bond energy values that exceed the control ΔG -7,1 kcal/mol. 40 compounds can be considered as potential drug candidates based on the requirements of the Lipinski rule of five and 42 compounds meet the requirements for intestinal absorption, and 43 are not hepatotoxic. 33 compounds had absorption through the skin, 24 compounds penetrated the blood-brain barrier, and 23 compounds of total clearance value was higher than the control. 9 compounds had a good distribution volume, 8 compounds had unbound value greater than the control.

Conclusion : The phytochemical compound *Cladophora* sp. has binding interaction to PBP1b and PBP2 proteins so that it has the potential to become a candidate for a new antibacterial drug.

Keywords : *Cladophora* sp., *Escherichia coli*, PBP1b, PBP2, CPD4, Moenomycin, ADMET, In Silico





Fishermen Health Prediction Model in West Seram District, Indonesia

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Abstract

The prevalence of traditional divers in Maluku Province experiencing health problems is 82%. The aim of the study was to develop a prediction model for fisherman health in West Seram District, Indonesia. Methods: A cross-sectional design was used to construct fisherman's health prediction models. Data was collected by means of a survey using a questionnaire that had been tested for validity and reliability. The research sample is 114 respondents. Data were analyzed using multiple logistic regression. Results: Smoking habits affect fishermen's health with a p-value of 0.016. Sports habits affect the health of fishermen with a p-value of 0.005. Diving habits affect the health of fishermen p-value 0.001. The health history of parents affects the health of fishers with a p-value of 0.021. The health history of parents is a factor that is predicted to have a dominant influence on the health of fishers, the value of $\text{Exp}(B) = 6.7$ means that fishermen whose parents have a history of health problems are at risk of 6 times experiencing health problems compared to fishermen whose parents do not have health problems. Conclusion: Fishermen's health is influenced by various factors such as smoking habits, exercise habits, diving habits, and fishermen's medical history. It is suggested to fishermen in West Seram Regency to maintain their health by stopping smoking, doing sports activities, and doing health regularly at first-level health facilities for fishermen's health detection.

Keywords: fishermen's health prediction model, smoking habits, exercise habits, diving habits, parents/ health history



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Factors Influencing Non Adherence To Antiretroviral Therapy In Maluku Archipelago, Indonesia: A Mixed-Methods Study

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Abstract

Background: The main goal of antiretroviral therapy is to improve disease-free survival, suppress HIV replication, and improve immune function. Noncompliance ARVs will have an impact on treatment failure. Treatment failure in HIV patients, causing a decrease in CD4 and opportunistic infection. This study aims to determine the factors that influence non-adherence to antiretroviral therapy in patients with HIV in Maluku, Indonesia. **Methods:** Prospective study of mixed methods (sequential model). 258 patients aged ≥ 18 have been using ARV for > 6 months, and 12 patients have been interviewed. Analysis of quantitative data in this study using SPSS 22. The bivariate analysis looks at the relationship between variables using Chi-squared. Multivariate analysis is to know the factors that influence noncompliance most using regresi logistic tes. Interview transcript analysis is to data qualitative. **Results:** Total non-adherent patients 184 (71.3%). Factors that affect poor adherence to antiretroviral therapy: gender factors (OR = 0370, $p = 0.024$), the factor of health services running out of medication (OR = 3,146, $p = 0.024$), economic factors (OR = 7,031, $p = 0.000$), presence HIV factor will be disappeared after taking ARVs (OR = 3,383, $p = 0.026$) and the perception factor on when to feel healthy keep taking medication (OR = 0141, $p = 0.013$). The results of the interview are obtained factors affecting noncompliance that individual factors (employment, drug users, busy and forgot), factor antiretroviral drug (number of pills, side effects), health services factor (counseling services, access to health care, transportation), disease progressivity factors, economic factors, social factors (enclosed with HIV status, stigma, and discrimination), perception factors, the religious factor, culture factor, alternative medicine factor). **Conclusion:** Individual factors, social factors, antiretroviral factors, health service factors, social factors, economic factors, disease progressivity factors, cultural factors, religious factors, factors affecting the alternative treatment non-adherence to antiretroviral therapy in HIV patients.

Keywords: HIV, AIDS, non-adherence, antiretroviral, ARV, compliance, noncompliance



Room 5 (Exploring Community Resilience and Seafarer's Health Hub : Understanding the social, cultural, mental health and psychological aspects, Occupational health, emergency, sports health and medicine in marine and maritime environment that contribute to the resilience and well-being of these communities)
7 Mins (Talks) + 3 Mins (QnA)
Moderator: dr. Jerome Lekatompessy Tech Admin: Sarinah Judge: dr. Sherly Yakobus, Sp.KJ / dr. Ony W. Angkejaya, Sp.An, M.Kes
Dynamics of Self-Injury Behavior in Adolescents from a Broken Home Family
Evi Syafrida Nasution
Identification of Stress, Anxiety, and Depression Levels of Master of Hospital Administration Students at UMY in Preparation for Thesis Defense using the DASS-42
Qurratul Aini
The Effectiveness of Cognitive Behavioral Therapy for Smoking Cessation : A Systematic Review of Randomized Controlled Trials
Pedro Sanggara
The Relationship between Academic Achievement and Physical Activity of 3rd Year Students of The Faculty of Medicine, Pattimura University in 2022
A. Muh. Aenum Adelita
The Relationship of Workload With The Event of Postural Kyphose on Farmers in Kormomolin District, Tanimbar Islamic Regency in 202
Kezia N. Laisina
The Relationship between Workload and the Incidence of Postural Kyphosis in Baggage Workers at The Port of Yos Sudarso Ambon
Diah Putu Chandra
Relationship between Work Position and Low Back Pain in Dock Workers in Dobo
Milinia Siarukin



Dynamics of Self-Injury Behavior in Adolescents from a Broken Home Family

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Abstract

Adolescence is a critical period of life with various biological, environmental, and social changes. When facing conflict, some teenagers choose to do self-injury to divert the pressure they are experiencing. The purpose of this study was to determine the dynamics of self-injury behavior of adolescents from broken-home families. This research methodology uses a qualitative approach, the case study method. Collecting data using interview techniques and psychological tests. One subject was a teenage girl who had self-injured several times in the past year and came from a broken home. The data analysis technique used is thematic data analysis. The results of this study show that the subject's background self-injury is due to family problems and the environment. This affects the formation of personality associated with self-injury behavior, namely introverted personality, difficulty communicating feelings, and low self-esteem. This is in line with what was stated by Fieldman (in Monty & Tresno, 2005) high self-injury behavior occurs in victims of violence, anti-social individuals, experiencing obstacles in expressing anger because they feel inferior and withdraw from the environment. The subject self-injured by slashing his wrist and deliberately making his medical condition worse, just to divert the pressure he felt without any desire to kill himself, but this coping could not solve the problem and was only temporary. The conclusion of this study is that the subject self-injured because of family and environmental factors. Self-injury behavior in the form of cutting hands and making medical conditions worse was realized by the subject without any intention to commit suicide. However, this still could not solve the problem he was facing and only temporarily diverted the pressure he was feeling.

Keywords: *self-injury, adolescents, broken home family*



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Identification of Stress, Anxiety, and Depression Levels of Master of Hospital Administration Students at UMY in Preparation for Thesis Defense using the DASS-42

Qurratul Aini

Abstract

This research aimed to identify the levels of stress, anxiety, and depression experienced by Master of Hospital Administration (MARS) students at Universitas Muhammadiyah Yogyakarta (UMY) during the preparation for their thesis defense, using the Depression Anxiety Stress Scale (DASS). The study involved participants who were in the final stages of their program and were currently preparing for their thesis defense. Data were collected using the DASS questionnaire, a validated and reliable instrument for measuring stress, anxiety, and depression levels. The findings of this research provide insights into the psychological challenges faced by MARS students at UMY during the thesis preparation phase, as assessed by the DASS, and offer a foundation for the development of targeted interventions.

Keywords: stress, anxiety, depression, students, Depression Anxiety Stress Scale (DASS)



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The Effectiveness of Cognitive Behavioral Therapy for Smoking Cessation : A Systematic Review of Randomized Controlled Trials

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Abstract

Recent study in 2019 showed that fisherman, most common profession in small island communities particularly in coastal areas, is the occupation with the highest percentage of active smokers in Indonesia, reaching 44.5%. Smoking counts as a major risk factor for diseases with high mortality such as Acute Coronary Syndrome and lung cancer. This study aims to analyze the effectiveness of Cognitive Behavioral Therapy (CBT) in smoking cessation, as one of the feasible modalities to apply in every region, including remote islands in Indonesia. The systematic review was conducted based on the PRISMA guidelines. Pubmed, ScienceDirect, Cochrane were searched. From 834 results, 7 articles met the inclusion and exclusion criteria and were closely associated with the main topics of Randomized Controlled Trials of CBT and smoking cessation. Selected journals were assessed based on the therapeutic approach, outcome, and period of therapy. Result indicates the lowest abstinence by CBT solely was 18% and the highest was 58.33%. When combined with other treatments such as behavioral activation, contingency management, acceptance and commitment therapy (ACT), or modified into a culturally specific CBT, the smoking cessation outcome improves with the highest yields up until 100%. Interestingly, CBT has been shown to be effective in both face-to-face and over-telephone counseling. This systematic review demonstrates the efficacy of CBT for quitting smoking habits as a single modality or in combination with adjunctive treatment, whether administered in person or remotely. Such knowledge would be useful with intergrative collaboration between patient, health care, and therapist in coastal and small island community.

Keywords: smoking cessation, Cognitive Behavioral Therapy, CBT, small island, coastal areas



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The Relationship Between Academic Achievement and Physical Activity of 3rd Year Students of The Faculty of Medicine, Pattimura University In 2022

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Abstract

Physical activity can be applied daily to achieve good health conditions and later can support the education process, which will have an impact on academic achievement. The general objective of this study was to determine the relationship between academic achievement and physical activity among third-year students at the Faculty of Medicine, University of Pattimura in 2022. This was a quantitative analytic study with a cross-sectional design using a consecutive sampling technique. This research was conducted at the Faculty of Medicine, University of Pattimura in 2022, involving 3rd year students with a total of 68 students. The data were analyzed using the Fisher Exact test. The results of the study obtained 20.6% light physical activity, 58.8% moderate physical activity, and 20.6% heavy physical activity. The distribution of the frequency of physical activity for 3rd year students showed that female students did more physical activity with heavy and moderate intensity than male students. The results of bivariate analysis using the Fisher exact test obtained a p value = 0.428, indicating that there is no significant relationship between academic achievement and physical activity. However, students have a higher percentage of moderate physical activity than light physical activity. Physical activities such as cycling, walking, and others that are carried out regularly can maintain health and avoid non-communicable diseases.

Keywords: physical activity, academic achievement



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The Relationship of Workload With The Event of Postural Kyphose on Farmers in Kormomolin District, Tanimbar Islamic Regency in 2022

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Abstract

The incidence of postural kyphosis (stooped posture) is a disorder of musculoskeletal disorders in which the spine curves forward more than 40 degrees. One of the factors that influence the occurrence of postural kyphosis is the workload, where the workload consists of the work period, work duration and the weight of the carrying load. The purpose of this study was to determine the relationship between workload and the incidence of postural kyphosis in farmers in Kormomolin District, Tanimbar Islands Regency in 2022. The research method used was analytic with a cross sectional research design using a questionnaire and an inclinometer. The results of the study on 55 male farmers who became respondents showed that 32 (58.2%) of them had postural kyphosis and 23 (41.8%). The results of research on workloads show 58.2% of respondents who have a working period of > 10 years, the longest working duration is 7-8 hours by 52.7% and the weight of the load being transported shows 60% who carry a heavy load of > 18kg. The chi-square analysis test shows that the workload is the period of service ($p = 0.000$), duration of work ($p = 0.000$) and the weight of the load ($p = 0.023$). It can be concluded that there is a significant relationship with $p < 0.05$ between workload and the incidence of postural kyphosis in farmers in Kormomolin District, Tanimbar Islands Regency in 2022.

Keywords: Postural Kyphosis, wordload, inclinometer



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The Relationship between Workload and the Incidence of Postural Kyphosis in Baggage Workers at The Port of Yos Sudarso Ambon

Samuel Maruanya¹, Diah Putu Chandra Desni Saraswati S^{1*}, Parningotan Yosi Silalahi¹, Wijaya Johanesh Chendra¹, Laura B. S. Huwae¹, Is Ikhsan Hataul¹, Ivanmorl Ruspanah¹

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Abstract

Postural kyphosis is an increase in the curvature of the spine that is visible along the spine. The incidence of postural kyphosis (hunchback posture) can be seen in the spine forward more than 40 degrees. Work as a luggage worker is done manually where there is a risk of spinal problems, one of which is postural kyphosis. This study aims to examine the relationship between workload and the incidence of postural kyphosis in baggage workers at Yos Sudarso port. This study used an observational analytical research method with a cross-sectional design. Sampling using consecutive sampling technique, using a questionnaire before research and direct measurement of the angle of kyphosis using an inclinometer and direct observation of the sample. In data analysis using Chi-Square test. The results of the analysis in this study showed a significant relationship between workload, namely the weight of the load ($p = 0.013$), working time ($p = 0.002$), and working period ($p = 0.000$) with the incidence of postural kyphosis. And obtained the value of the correlation coefficient r at the weight of the load $r = 0.280$, working time $r = 0.365$, and service life $r = 0.482$ which shows a low and moderate correlation.

Keywords : Postural kyphosis, workload



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Relationship between Work Position and Low Back Pain in Dock Workers in Dobo

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Abstract

Low Back Pain is one part of musculoskeletal disorders, which contributes as a cause of disability that requires treatment. Dock workers are cargo loading and unloading workers (TKBM) who have the potential to experience low back pain related to the work performed. In this case, the body's posture during labor is very instrumental, and is one of the factors supporting the occurrence of low back pain. This study aims to determine the relationship between the work position and low back pain in dock workers in Dobo. This study used an observational analytic method with a cross-sectional design. The sampling used a consecutive sampling technique. Data was collected using the Oswestry Disability Index Questionnaire and Rapid Entire Body Assessment sheet. To analyze the data, Somer's D test was used. The analysis results in this study show a significant relationship between the work position and low back pain in dock workers in Dobo ($p = 0.002$) and a moderate level of relationship strength ($r = 0.286$). This implies that certain work positions may contribute to the development of low back pain.

Keywords: *Work position, low back pain, dock workers*



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Thursday, 27th July 2023

Room 1 (Nature's Treasure: Biomedical science, traditional medicine, and herbal remedies in small islands)
7 Mins (Talks) + 3 Mins (QnA)
Moderator: Rosdiana Mus. M.Biomed; Tech Admin: Yeris Judge: Dr. Dra. Maria Nindatu, M.Kes
Effect of Galoba (Hornstedtia sp.) Extract Plasma Glucose Levels in Hyperglycemia Mice (Mus musculus)
Yuniasih Taihuttu
Histopathology of Pancreas Hyperglycemic Mice (Mus musculus) Treated With Ethanol Extract of Galoba Fruit (Hornstedtia sp.)
Halidah Rahawarin
The Effect of Galoba Fruit Extract on Malondialdehyde (MDA) Serum Level of Hyperglycemic Mice (Mus musculus) Streptozotocin-Induced
Yuan Ivani Rumengan
Effect of Galoba (Hornstedtia sp.) Extract on Heart MDA Levels in Hyperglycemia Mice
Rachmawati Dwi Agustin
Andrographis paniculata, a Potential Supplementary Therapy for Cardiovascular diseases. A systematic review of recent studies on the effects and possible mechanisms of action.
Eziefule Oluebube Magnificent
The Effect of Polar and Non Polar Extracts of Mahkota Dewa Fruit (Phaleria Macrocarpa) on Pain Relief in Endometriosis Model Mice
Ivanna Beru Brahmana
Biorelevant Dissolution Models to Assess Precipitation of Weak Base Drug
Viviane Annisa
Inhalation of Galoba Fruit (Hornstedtia sp.) on Reducing Mice (Mus musculus) Anxiety
Epo Masita Ramsani Masaoy



Effect of Galoba (*Hornstedtia* sp.) Extract Plasma Glucose Levels in Hyperglycemia Mice (*Mus musculus*)

Randy Ahmad Nur Latuconsina¹, Yuniasih Mulyani Jubeliene Taihuttu^{2*}, Vina Zakiah Latuconsina³, Halidah Rahawarin⁴, Rahmi R. Latief⁵, Is Asma'ul Haq Hataul⁶

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Abstract

Hyperglycemia is a medical condition in which plasma glucose levels increase beyond normal limits. Chronic hyperglycemia can cause various complications in the organs. Galoba is a potential endemic flora in Maluku that contains antioxidative compounds that can reduce plasma glucose levels. This study aims to determine the effect of galoba extract on fasting plasma glucose levels in hyperglycemia mice. This research was a true experimental research with pretest and posttest control group design. The 30 mice were divided into five treatment groups, namely: negative control (K-), positive control (K+:mice treated with metformin), galoba extract concentrations of 100% (P1), 75% (P2), and 50% (P3). All groups were induced with streptozotocin for 5 days at a dose of 40 mg/kg. K+ was given a dose of metformin 0.2 ml, while P1, P2, and P3 were given galoba extract 0.2 ml with a concentration of 100%, 75%, and 50% for 21 days after induction. Fasting plasma glucose was measured before and after treatment on days 7, 15, and 22. The observation data were analyzed with Two-Way MANOVA. The results showed that galoba groups proven to reduce fasting plasma glucose levels in hyperglycemia mice significantly ($p=0.000$). The fasting plasma glucose levels of P1, P2, and P3 group which returned to normal post streptozotocin induction on this study was due to secondary metabolite compounds that have antioxidative properties such as phenolics, flavonoids and terpenoids that play a role in preventing cell damage caused by reactive free radicals and insulin sensitivity.

Keywords: Hyperglycemia, Galoba, Fasting Plasma Glucose Levels



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Histopathology of Pancreas Hyperglycemic Mice (*Mus musculus*) Treated With Ethanol Extract of Galoba Fruit (*Hornstedtia* sp.)

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Abstract

The damage of pancreatic β -cells can affect the synthesis of insulin which plays a role in blood glucose regulation, insulin deficiency can cause hyperglycemia. Chronic hyperglycemia leads to increased production of free radicals (ROS) that cause oxidative stress and aggravate pancreatic β -cell damage. Galoba contains antioxidants that can prevent pancreatic β -cell damage and reduce plasma glucose levels. This research aims to determine the histopathological overview of the pancreas in hyperglycemic mice treated with ethanol extract from galoba fruit. This study was true experimental research with post-test only control group design. A total of 24 adult male mice were taken randomly and divided into six groups, namely normal control (KN), negative control (K-), positive control (K+: treated with metformin 1.3 mg), and groups of mice given ethanol extract of galoba fruit concentrations of 100% (P1), 75% (P2), and 50% (P3) for 21 days and previously induced with streptozotocin at a dose of 40 mg/kg for 5 days. Measurement of fasting plasma glucose (FPG) and histopathology preparations were collected on day 22. The average FPG of K- measured 168 mg/dL with a damage score of 1.5, while P1, P2, and P3 each had a damage score of 1 and FPG were 85, 88, and 84 mg/dL. The data was tested by Kruskal Wallis with the result of $p=0.002$, then by Mann Whitney there was no significant difference between P1, P2, and P3 with K- ($p=0.127$). It was concluded that administration of galoba fruit ethanol extract with concentrations of 100%, 75%, and 50% can repair pancreatic damage.

Keywords: *Galoba, Hyperglycemia, Histopathology, Pancreas, Streptozotocin*



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The Effect Of Galoba Fruit Extract On Malondialdehyde (MDA) Serum Level Of Hyperglycemic Mice (*Mus musculus*) Streptozotocin-Induced

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Abstract

Hyperglycemia is a state of increased blood sugar levels. In a state of hyperglycemia, glucose autooxidation will occur which causes an increase in the production of Reactive Oxygen Species (ROS) in the body so that it will lead to a state of oxidative stress characterized by an increase in malondialdehyde (MDA) levels. Galoba fruit is an endemic fruit in Maluku Province that contains antioxidants. Antioxidants contained in galoba fruit can help endogenous antioxidants to overcome oxidative stress. This study aims to determine the effect of galoba fruit extract on serum MDA levels of hyperglycemia mice induced by streptozotocin. This study is an experimental study with post-test only control group design and random sampling. The sample consisted of 24 mice divided into 6 groups, namely normal control (KN), negative control (K-), positive control (K+), treatment 1 (P1), treatment 2 (P2), and treatment 3 (P3). The KN group was only given a standard diet, the K- group was only induced streptozotocin, the K+ group was induced streptozotocin and treated with metformin for 21 days, and the P1, P2, and P3 groups were induced streptozotocin and given galoba fruit extract as much as 1.77mg/ml, 1.33mg/ml, and 0.89mg/ml for 21 days. After treatment, the mice were dissected to collect blood serum from the heart of the mice to measure MDA levels. Serum MDA levels were measured by the TBARS method, which is a colorimetric method with TBA that will react with MDA and produce a color that can be measured by absorbance with a UV-vis spectrophotometer. The average serum MDA levels of mice in the KN, K-, K+, P1, P2, and P3 groups were 358.75 nmol/mg, 1278.75 nmol/mg, 522.08 nmol/mg, 526.16 nmol/mg, 442.66 nmol/mg, and 432.41 nmol/mg, respectively. The MDA data obtained were then tested with one way ANOVA and obtained a value of $p=0.00$ which means that there is a significant difference between each treatment. Based on the Tukey test, both P1, P2, and P3 have the same effect on reducing serum MDA levels of mice after being induced by streptozotocin with P3 providing the greatest decrease.

Keywords: Hyperglycemia, galoba fruit, mice, streptozotocin (STZ), malondialdehyde (MDA)



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Effect of Galoba (*Hornstedtia* sp.) Extract on Heart MDA Levels in Hyperglycemia Mice

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Abstract

Galoba (*Hornstedtia* sp.) is a Maluku endemic plant that contains antioxidants such as flavonoids, quinones, monoterpenoids, and sesquiterpenoids. The content of these antioxidants can reduce oxidative stress in hyperglycemia. This study was conducted to determine the effect of Galoba extract on heart malondialdehyde (MDA) levels in hyperglycemic mice. This research has an experimental post-test-only control group design. Galoba was extracted using a 96% ethanol solvent. Twenty-four mice split into six experimental groups: (KN) healthy mice; (K-) MLD-STZ-induced mice; (K+) mice induced by MLD-STZ and treated with metformin at a dose of 1.3 mg/kgBW; (P1) Mice induced by MLD-STZ and treated with 100% Galoba extract; (P2) Mice induced by MLD-STZ and treated with 75% Galoba extract; (P3) Mice induced by MLD-STZ and treated with 50% Galoba extract. The treatment of mice was carried out for 21 days. The oxidative stress parameter used was to measure MDA levels in the hearts of mice after being induced with MLD-STZ at a dose of 40 mg/kgBW using the TBARS method. The results showed that the MDA levels in each group were (KN) 373.67 nmol/mg; (K-) 961.08 nmol/mg; (K+) 539.67 nmol/mg; (P1) 724.25 nmol/mg; (P2) 605.67 nmol/mg; (P3) 463 nmol/mg. It can be concluded that giving galoba can reduce MDA levels, with P3 showing the highest decrease.

Keywords: Hyperglycemia, Galoba, Mice, Malondialdehyde, Heart





***Andrographis paniculata*, a Potential Supplementary Therapy for Cardiovascular Diseases: A systematic review of recent studies on the effects and possible mechanisms of action**

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Abstract

Cardiovascular diseases have become an emergency in the world as the World Health Organization reports it claiming the lives of an estimated 17.9 million people yearly. According to RISKESDAS in 2018, 1.5% of mortality in Indonesia is spurred by cardiovascular diseases with coronary heart disease, and hypertension as the primary causes. The need for new drugs to treat cardiovascular diseases is growing, and many alternative medicines from plants are being investigated. *Andrographis paniculata*, a plant, whose local name is “sambiloto” in Indonesia has been used in the supplementary treatment of a variety of diseases in Asia. This systematic review aims to investigate recent reports on *Andrographis paniculata* in the complementary treatment of cardiovascular diseases, focusing on the effects and mechanisms of action. We searched 3 databases systematically and included 19 non-clinical studies (in vivo animal studies only or in vivo and in vitro studies whose mechanism of action was centered on the in vivo animal study). *Andrographis paniculata*, or extracts or compounds isolated from *Andrographis paniculata* exert notable effects on cardiovascular diseases via its anti-inflammatory and anti-oxidant actions which results in relieving adverse cardiac remodeling, inhibiting cardiac hypertrophy and improving diabetic hyperglycemia and insulin deficiency that can cause diabetic cardiomyopathy. In addition, it can offer cardiac protection and halt the progression of heart damage. *Andrographis paniculata* also possesses an anti-hypertensive effect and ameliorates aortic valve calcification. This review found substantial evidence and proposed a molecular mechanism that supports *Andrographis paniculata* as a potential supplementary therapy for cardiovascular diseases.

Keywords: *Andrographis paniculata*, cardiovascular diseases, in vivo



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The Effect Of Polar And Non Polar Extracts Of Mahkota Dewa Fruit (*Phaleria Macrocarpa*) On Pain Relief In Endometriosis Model Mice

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Abstract

Endometriosis is a chronic gynecological disease with complaints of pain that greatly interferes with the activities of women. Mahkota dewa (*Phaleria macrocarpa*) contains flavonoids as strong antioxidants and has analgesic effects. This research aims to determine the Mahkota dewa polar and non-polar extract's effect on pain reduction in endometriosis model mice. Laboratory experimental research with a *posttest only* design. Inclusion criteria: female mice Mus musculus strain Balb/c, 1.5-2 months old, 20-30 gram weight, similar strain. Exclusion criteria: sick or dead mice. 36 mice were divided into 9 groups: normal (healthy), negative control (endometriosis, 0.5 µg Na-CMC), positive control (endometriosis, letrozole 6.5 µg), treatment 1 (endometriosis, polar extract 3.75 mg/kgbb), treatment 2 (endometriosis, polar extract 7.5 mg/kgbb), treatment 3 (endometriosis, polar extract 15 mg/kgbb), treatment 4 (endometriosis, non-polar extract 3.75 mg/kgbb), treatment 5 (endometriosis, non-polar extract 7.5 mg/kgbb), and treatment 6 (endometriosis, polar extract 15 mg/kgbb). Mice were tested using the *hot plate* method at 50°C, 15 seconds, by observing the amount of stretching and analyzed using *One way Anova*. The polar extract on the 21st and 28th day of exposure was significant with $p=0.037$ and $p=0.000$ ($p<0.005$), while the non-polar extract was not significant with $p=0.293$ and $p=0.955$. The strongest analgesic activity is treatment 3 of 32.28%. Mahkota dewa polar extracts have an effect on reducing pain in endometriosis model mice, while non-polar extracts have no effect. A dose polar extract 15 mg/kgbb is effective in reducing pain.

Keywords: Mahkota dewa, non-polar extract, polar extract, endometriosis, pain.



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Biorelevant Dissolution Models to Assess Precipitation of Weak Base Drug

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Abstract

The impact of precipitation can affect the amount of drug absorbed, thereby affecting the amount of drug in the systemic body. The precipitation process is preceded by a supersaturation phase, caused by decreased drug solubility in the gastrointestinal tract. This precipitation occurs for weak base drugs with low solubility. When the drug entering the small intestine, the solubility of weak base drugs decrease, then occurs supersaturation, which leads to precipitation, so that the bioavailability of the drug will decrease. The impact of low bioavailability is low treatment efficacy. Precipitation testing of water-soluble weak base drugs can be carried out by the pH shift method to describe the gastrointestinal pH gradient from gastric to small intestine. This pH change process can cause supersaturation and then trigger precipitation, especially for weak base drugs. The methods that can be used is a modification of the USP dissolution are two-compartment or multi-compartment model. The choice of dissolution medium plays an important role in the test results. The use of biorelevant medium can produce closer in vitro and in vivo correlations than the use of buffers. Generally, the medium used to simulate the weakly condition in the small intestine is FaSSIF (Fasted State Simulated Intestinal Fluid) or FeSSIF (Fed State Stimulate Intestinal Fluid) medium. The medium used to simulate the acidic condition in the stomach is FaSSGF (Fasted state simulated gastric fluid) or FeSSGF (Fed state simulated gastric fluid) medium.

Keywords: Biorelevant medium, dissolution method, precipitation, supersaturation, bioavailability





Inhalation of Galoba Fruit (*Hornstedtia* Sp.) on Reducing Mice (*Mus Musculus*) Anxiety

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Abstract

Anxiety disorder is still a common form of mental disorder that often occurs. Aromatherapy inhalation is treatment technique by utilizing the olfaction system to provide anxiolytic or relaxant effects. This research is a laboratory experimental study with a pre post test control group design and random sampling (simple random sampling). Twenty male mice of the balb/c strain were used in this study. The research was carried out by giving inhalation of the aroma of soaked and pounded galoba fruit. Inhalations were given one hour daily for fourteen days. The results of the two-way ANOVA statistical test at the level (5% significance) showed that there was no significant difference between the experimental groups. However, it shows that the effect of reducing anxiety in the treatment group given wet galoba inhalation is better than the treatment group given crushed galoba inhalation. The conclusion of this study was that there was a decrease in anxiety in the group of mice given soaked galoba fruit inhalation but it was not statistically significant compared to crushed galoba fruit inhalation.

Keywords: Anxiety, Inhalation, Aromatherapy, Galoba, Mice



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Room 2 (Thriving in Challenges: Exploring Public health, and nutrition in coastal and small islands communities)
7 Mins (Talks) + 3 Mins (QnA)
Moderator: Elpira Asmin, SKM., M.Kes Tech Admin: Mayang ; Judge: dr. Ritha Tahitu, M.Kes
Chemical Characteristics of Cereal Based on Local Food from Flores to Prevent Stunting
Nur R. Adawiyah Mahmud
Chemical Characteristics and Microbial Identification of Fish Fermented Food by Flores Ethnic
Nur R. Adawiyah Mahmud
The Socio-Demographics and Clinical Characteristics And CD4 Profile of HIV/AIDS Patients Receiving First-Line Antiretroviral Therapy at a Public Hospital in Palu
Alwiyah Mukaddas
Analysis of the Problem of the Low Achievement of Larvae Free Index in Trenggalek District, East Java Province 2023
Nur Sahiral Layaly
Determinants of Hypertensive Incidence in Coastal Communities on Hiri Island, Ternate City
Fera The
The prevalence of eye diseases in the coastal community of Kei Islands
Stazia Noijs
Analyzing the Relationship between Personal Hygiene, Environmental Sanitation, and Soil-Transmitted Helminth (STH) Worm Infection among Children Aged 3-8 Years in Oesena Village, Amarasi District, Kupang Regency, East Nusa Tenggara
Agustina W. Djuma
Incidence and Risk of Communicable and Non-Communicable Disease For Small Island Community/Developing States: A Systematic Review
Arya Simanjuntak





Chemical Characteristics of Cereal Based on Local Food from Flores to Prevent Stunting

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Abstract

Stunting is caused by undernutrition which is part of malnutrition which means deficiencies, excesses, or imbalances in a person's intake of energy and or nutrients. *Malnutrition* rates in *East Nusa Tenggara* were about 35.3% in 2022, and become the highest rate in Indonesia. The program that gives additional nutrition from local food-based becomes one strategy to prevent stunting. One of the local food-based from Flores is *Jagung titi*. *Jagung titi* was made traditionally from roasted corn, then flaked using two river stones. This research aimed to study the chemical characteristic of cereal based on *jagung titi* (flaked corn) (CCF) and pumpkin flour (PF). This cereal was formulated from cracker corn flour and pumpkin flour in three compositions (90% CCF + 10% PF; 80% CCF + 20% PF; and 70%CCF + 30% PF). The proximate analysis of samples using the AOAC method. CCF in 100 grams contains 76.18% carbohydrate, 9.03% protein, 2.18% fat, 0.96% ash, and 5.77% water. PF in 100 grams contains 43.9% carbohydrate, 12.53% protein, 5.35% fat, 7.14% ash, and 21.81% water. The chemical properties of cereal products can be affected by the formulation of CCF and PF. The third cereal composition (70% CCF + 30% PF) was the highest rate of acceptability by consumer panelists for the sweet flavor, aroma, and texture. This cereal product was promising as alternative nutritional local food to prevent stunting due to its effectiveness in presentation and consumption.

Keywords: Chemical characteristic, flaked corn, pumpkin, cereal, stunting



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Chemical Characteristics and Microbial Identification of Fish Fermented Food by Flores Ethnic

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Abstract

Mudu and *Mbarase* are two local fish fermented foods which have been known for a long time in the culture of Flores community. These two fermented food was made using high salt fermentation process. *Mudu* is made from fish (tuna and *rastrelliger* family) innards while *Mbarase* is made from rabbitfish (*Siganus* Sp.). This study aimed to analyze the chemical characteristics and identify microbial content in these two samples. Chemical characteristic here was proximate analysis and the microbial identification was done to lactic acid bacteria (BAL) identification. For the proximate analysis, *Mudu* contains 21.022% carbohydrate, 11.8% protein, 0.42% fat, 6.587% ash, 60.171% water, and 1.94% fiber. *Mbarase* contains 7.732% carbohydrate, 25.19% protein, 4.558% fat, 5.13% ash, 57.29% water, and 0.16% fiber. BAL identification was done by morphology observation with clear zone around colony, gram test and catalase test. Clear zone can be clearly seen in *Mudu* sample and slightly seen in *Mbarase* sample. We can only assume that this fermentation were lactic acid fermentation by assuming that the already lactic bacteria was consuming carbohydrate which already in fish.

Keywords: Fish Fermentation, *Mudu*, *Mbarase*, Proximate



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The Socio-demographics and Clinical Characteristics and CD4 Profile Of HIV/AIDS Patients Receiving First Line Antiretroviral Therapy at a Public Hospital in Palu

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Abstract

The Joint United Nations Program on HIV/AIDS (UNAIDS) set the pushful 90-90-90 target in 2015. It can be a difficult target to achieve without a comprehensive understanding of HIV epidemiology. This study aims to identify demographic and clinical characteristics and determine the difference between CD4 counts pre and post-antiretroviral therapy in HIV patients of HIV/AIDS at a Public Hospital in Palu. A retrospective cross-sectional study of 27 HIV/AIDS patients was conducted between January 2011 and December 2015. Data were collected from medical records and electronic registries for HIV/AIDS patients. The study included 27 patients with complete data set from 230 patients, 63% productive age (25 - 44 years), 77,8% male, 85,2% were employed, 48,1% were well educated (from senior high school and equal), and 59,3% were married. The majority of patients acquired HIV through heterosexual transmission, 40,7%. At the time of the first clinic visit, 40,7% of patients had WHO stage III HIV infection. The rates of Candidiasis and TB coinfections were 22,2% and 18,5%, respectively. ZDV/3TC/NVP (74,1%) is the most commonly used antiretroviral combination. The baseline CD4+ cells count was < 350 cells/mm³ in 100% (n = 27) of patients, CD4+ median 126 cells/mm³. After ART 6 months, two patients had a normal range CD4 500-1300 cells/mm³, CD4+ median 203 cells/mm³. There was a significant increase in CD4 count after ARV therapy (p=0,000; p<0,05). It suggests that ARV therapy can improve CD4 and immune recovery in HIV/AIDS patients.

Keywords: CD4, Antiretroviral, HIV/AIDS





Analysis of the Problem of the Low Achievement of Larvae Free Index in Trenggalek District, East Java Province 2023

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Abstract

Dengue Hemorrhagic Fever in Trenggalek Regency has not shown a significant decrease in cases due to the low achievement of the Larvae Free Index which has not reached the national target. This study aimed to identify the causes of the problem and formulate alternative solutions to the problem of Larvae Free Index in the Trenggalek Regency. This observational descriptive study analyzes the problem of Larvae Free Index in the Trenggalek DisHealth Officetrict. Respondents amounted to three people who were taken using a purposive sampling technique. Data collection uses secondary data from the Trenggalek DisHealth Officetrict Profile. The cause problem is identified using a fishbone diagram and the CARL methods to determine the root of the problem. Identification of the root cause problem using the in-depth interview method. Based on the fishbone diagram, the causes of the problems identified are in the officers so that priority treatment of the causes of the problems is carried out using the CARL methods, problems are found related to the lack of socialization in the community. The root cause of the problem is that coordination between cross-programs is not yet optimal, the performance of officers is not optimal in socializing in the community, officers have multiple tasks, and socialization activities are not yet scheduled regularly. Based on this, further cross-program coordination is needed, increasing the quantity and quality of health workers, and making routine socialization schedules that are expected to be able to boost the achievement of the Larvae Free Index.

Keywords: Dengue Hemorrhagic Fever, Health Problem Analysis, Larvae Free Index



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Determinants of Hypertensive Incidence in Coastal Communities on Hiri Island, Ternate City

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Abstract

Hypertension is one of the non-communicable diseases characterized by the increase in blood pressure above normal. The global prevalence of hypertension is around 1,28 billion adults, mostly living in low and middle-income countries. Hypertension that left in the long term can cause complications and sudden death. Determinants or risk factors for hypertension incidence are divided into modifiable and non-modifiable. Coastal communities surrounded by the sea are at significant risk of hypertension. Hiri Island is one of the islands and coastal areas in Ternate City with the highest incidence of hypertension. This study aims to determine the relationship between non-modifiable determinants (age and sex) and modifiable determinants (history of salt consumption, vegetable consumption, physical activity, and obesity) with the incidence of hypertension. This research used observational analysis with a cross sectional approach using accidental sampling techniques of 113 adults >18 year old respondents in the community on Hiri Island. The data were analyzed bivariately (Chi square). The results of the analysis found 52 diagnosed hypertension and 61 undiagnosed hypertension and showed a significant relationship between modifiable determinants with hypertension, such as salt consumption ($p = 0.002$), vegetable consumption ($p = 0.001$), physical activity ($p = 0.000$), and obesity ($p = 0.016$). Some non-modifiable determinants did not have significant relationship, such as age ($p = 0.062$) and sex ($p = 0.699$). Based on the data result, it could be concluded that the modified determinants have a close relationship with the incidence of hypertension. Education related to prevention is needed to reduce the incidence of hypertension and it complications.

Keywords: Determinant, hypertension, Hiri Island



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The prevalence of eye diseases in the coastal community of Kei Islands

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Abstract

Estimates of the prevalence of disease are required to prepare the availability of healthcare services, the financial costs, and the quality of life associated with having the condition. Kei Island has numerous problems with eye disease every time, but there has been no study before to identify the prevalence of it. This study aims to identify the prevalence of eye diseases, specifically in the coastal community of the Kei Islands. A cross-sectional study was conducted based on secondary data on Hati Kudus Hospital including Kei Island communities that distributed on six subdistricts, one city, and two islands. Participants underwent ophthalmic examination, consist of visual acuity testing, external eye examination, fundus examination, cover testing, and objective and subjective refraction. A total of 962 patients were screened, while the majority of the patient (40%) had cataracts, followed by myopia (20%), dry eye (16%), presbyopia (8%), hypermetropia (6%), asthenopia (4%), pterygium (3%), others (2%), and glaucoma (1%). Based on the age category, most cataract cases were found in the elderly age (46%) and asthenopia in the teenager age (48%). The majority of the vision abnormalities in the community are a result of age-related and need the appropriate management to prevent complications. Our results highlight the importance of regular eye examinations for all age groups in the community to detect and prevent eye disorders. Increasing awareness about eye health is essential.

Keywords : eye diseases, coastal community, prevalence



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Analyzing the Relationship between Personal Hygiene, Environmental Sanitation, and Soil-Transmitted Helminth (STH) Worm Infection among Children Aged 3-8 Years in Oesena Village, Amarasi District, Kupang Regency, East Nusa Tenggara.

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Abstract

Worms are a disease caused by intestinal parasites and remain a public health problem in Indonesia. The most common worm infections are caused by soil-borne helminths (STH). STH is transmitted through the soil and most commonly infects children. The purpose of this study was to investigate risk factors for her STH worm infection in her children aged 3-8 years from Oesena Village, Amarasi District, Kupang Regency. The type of study used is an observational analysis study with a cross-sectional study design. The sample size for this study was 68 of her randomly selected. Data on helminthiasis were obtained from stool examinations using native methods, whereas data on personal and environmental hygiene were collected by questionnaire interviews and observations. Data were analyzed using the chi-square test and proceeded to calculate the prevalence (RP). Twelve patients (17.6) were infected with STH as a result of stool examination. 14.6% were infected with *Ascaris lumbricoides*, 1.5% with *Strongyloides stercoralis* and 1.5% with hookworm. Personal hygiene at risk for his STH worm infection of her 3 to 8 years old child in Oesena village, Amarasi district, Kupang district, played on the floor with a prevalence (RP) of 10.37. This includes the habit of washing your hands afterward and wearing your shoes. RP = 9.78, nail clipping habit RP = 3.23. Risk factors for STH worm infection in children aged 3-8 years in Oesena Village, Amarasi District, Kupang Regency, East Nusa Tenggara Province include Personal Hygiene were The habit of washing hands after playing on the ground, Habit of wearing footwear, and Habit of cutting nails.

Keywords: Soil Transmitted Helminth; Higiene; Sanitation



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Incidence and Risk of Communicable and Non-Communicable Disease For Small Island Community/Developing States: A Systematic Review

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Abstract

Introduction: Small Island Communities (SIDS) are remote, vulnerable areas with unique challenges like weather changes, limited healthcare access, and lack of research. Studies on diseases like obesity and depression are limited, and a systematic review is needed to assess current incidence and risk in these communities.

Aim: Determine incidence or risk of communicable or non-communicable disease for small island communities/developing states

Methods: A Systematic review used various search engines. Keywords utilized such as: "Small Island Community [MeSH] OR Small Island Developing States [MeSH]" AND "Incidence OR Prevalence OR Disease". All articles analyzed independently by all authors by titles, abstract and suitability with PEOS framework. All included studies analyzed for risk-of-bias using JBI critical appraisal tools.

Result: From 404.795 articles, we include 18 articles from Various countries, including Indonesia, Jamaica, Solomon Island and others, then synthesize by all authors then analyzed with JBI. The prevalence of contagious illnesses including worm infections, conjunctivitis, malaria, and COVID-19 is particularly high in small island settings in nations like Indonesia, Jamaica, Vanuatu, the Solomon Islands, and Fiji. Risk is enhanced by factors including socioeconomic status and educational attainment. With 88.4% of 1540 individuals testing positive for COVID-19, small island regions may potentially be contaminated. Non-communicable illnesses include lung cancer, stress, obesity, stunting, depression, and hypertension. JBI score for all included is 75%, considered moderate risk of bias

Conclusion: Small Island communities face diverse diseases, requiring research and tailored solutions due to economic, environmental, and socio-cultural factors.

Keywords: Communicable Disease, Epidemiology, Incidence, Non-Communicable Diseases, Small Island Community



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Room 3 (Health Paradise: Nurturing Coastal Communities Encompassing tropical infectious diseases, non-communicable diseases (NCDs))
7 Mins (Talks) + 3 Mins (QnA)
Moderator: Juen Carla Warella, S.Pd.,M.Si Tech Admin: Tri Judge : dr. Vebiyanti, M.Sc., Sp.P
Analysis of Training Zones and Vital Signs During Morning and Night Exercise in Athletes and Non Athletes Badminton
Andi Aryandy
Risk Factors Associated with Scabies Incident in Coastal Communities on Hiri Island, Ternate City
Rian Marsaoly
Molecular detection of the mefA and ermB genes that cause macrolide resistance in Streptococcus pneumoniae in Indonesia using conventional PCR and Next Generation Sequencing
Yustinus Maladan
Compliance of Filling the Clinical Pathway of Ischemic Stroke and Stemi in Indonesia
Telly Purnamasari
Determinant Factors of Taking Anti-Filarial Medication Behavior in the First Round of the Mass Drug Administration Program with Ivermectin, Diethylcarbamazine Citrate, Albendazole : A Cross-Sectional Study
Ikrimah Nafilata
From Influenza to COVID-19: What have Nurses experienced during the pandemic?
Angreit Angel Priskila Rompas
Evaluation of Analgesic Effect of Corn Silk (Zea mays L.) Infusion
Nidaan Khafiya
Analgesic Activity of Etanolic Corn Silk (Zea mays L) Extract
Nurlaili Saniyyah



Analysis of Training Zones and Vital Signs During Morning and Night Exercise in Athletes and Non-Athletes Badminton

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Abstract

Exercise timing can affect vital sign, such as heart rate (HR), temperature, blood pressure (BP) and training zone. This study aims to analyze of training zone and vital sign of athletes and non-athletes at morning and night badminton exercise. This study used a cross-sectional analytical survey based on predetermined inclusion and exclusion criteria. This study recruited male junior badminton players were divided into athletes morning group (n = 22), athletes night group (n = 22), and non athletes control group (n = 22). The results, showed that temperature, BP, BMI value classified as normal category. The night athletes group were obtained the significant results compared to morning athletes and non-athletes group ($p < 0.05$). Because the data is normally distributed, we presented in the mean \pm SD. The increased values at night athlete group, for temperature (36.84 ± 0.23), HR (83.23 ± 6.93), upper limit training zone (194.49 ± 1.81), and lower limit training zone (183.81 ± 2.33) compared the lower values at morning athletes group for temperature (36.42 ± 0.16), HR (81.45 ± 5.48), upper limit training zone (193.38 ± 1.66) and lower limit training zone (182.24 ± 1.88). However, the level of BP higher in morning athletes group (109.55 ± 10.45) when compared night athletes and non athletes group, which was statistically significant ($p < 0.05$). This conclusions is, both athletes and non athletes groups may have different effect for vital signs depends on time, that might affect the health quality of cardiovascular system in athletes and non athletes badminton. The limitations of this study are the small samples size, and in this research is not comparing values of vital sign and training zones between before and after exercise. Future research might analyze for hormonal, endocrine levels in athletes to get more precise research findings and compared of antioxidants and oxidants levels before and after exercise.

Keywords: Badminton athletes, non athletes, night exercise, morning exercise, vital sign, training zone



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Risk Factors Associated with Scabies Incident in Coastal Communities on Hiri Island, Ternate City

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Abstract

The majority of Indonesia population are coastal communities. Skin diseases are known as the most common health problems suffered by coastal communities. Scabies is a disease that can be transmitted easily in public places where people congregate. According to the World Health Organization (WHO), scabies is most prevalent in tropical countries and densely populated areas, including coastal areas. Susceptibility to scabies transmission is caused by environmental conditions, habits, and healthy living behaviors that are not optimal. Currently, there are lack of data related to the incidence of scabies in coastal communities, especially in Maluku Utara Province. This study was conducted to identify risk factors associated with the incidence of scabies in coastal communities on Hiri Island, Ternate City. The research design used in this study was a cross-sectional study. Sampling was carried out using accidental sampling techniques totaling 116 samples. The data were analyzed bivariately using the Chi square test. The results showed a significant relationship between age ($p = 0.000$), occupation ($p = 0.000$), personal hygiene ($p = 0.000$), use of shared personal tools ($p = 0.000$), and knowledge ($p = 0.000$) on the incidence of scabies. Meanwhile, there was no significant relationship between income above UMR and the incidence of scabies ($p = 0.155$). Based on the results of this study, health education has an important role to prevent scabies in coastal communities on Hiri Island, Ternate City, by initiating awareness-raising program to maintain personal hygiene, keeping eye on the residence hygiene, and bathing regularly.

Keywords: Risk factor, scabies, Hiri Island





Molecular detection of the *mefA* and *ermB* genes that cause macrolide resistance in *Streptococcus pneumoniae* in Indonesia using conventional PCR and Next Generation Sequencing

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Abstract

Resistance to antibiotics is one of the biggest challenges in tackling infectious diseases. One of the most common infectious diseases in Indonesia is pneumonia, which often attacks toddlers. Data on resistance to antibiotics used to treat pneumonia has not been widely reported in Indonesia. Meanwhile, case reports of resistance to both macrolide and β -lactam groups have been reported from several other countries. The purpose of this study was to identify the existence of the *ermB* and *mefA* genes that cause macrolide resistance and to identify mutations that cause β -lactam antibiotic resistance in *S. pneumoniae*. The presence of *ermB* and *mefA* genes was detected using PCR and followed by the Whole Genome Sequencing (WGS) method. β -lactam resistance is identified by the presence of certain mutations in the *pbp2x*, *pbp2a* and *pbp1a* genes from WGS data. The results of molecular identification of 50 samples showed that 32% of the samples carried the *mefA* gene and 18% carried the *ermB* gene. Both of these genes cause resistance to macrolide antibiotics. The existence of resistance data on *S. pneumoniae* will be very important information for clinicians and implementers of infectious disease control programs in giving appropriate antibiotics. This will support the implementation of personalized medicine-based treatment programs.

Keywords: *Streptococcus pneumoniae*, pneumonia, *ermB*, *mefA*



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Compliance Of Filling The Clinical Pathway Of Ischemic Stroke And Stemi In Indonesia

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Abstract

Clinical Pathway (CP) is one of the national indicators of quality in hospitals. The current problems include, not all hospitals developed CP, implementation of CP has not been appropriate and low compliance with CP filling. The purpose of this study was to assess compliance with filling CP for ischemic stroke and ST-Elevation Myocardial Infarction (STEMI). The research was conducted in 2019 in 11 provinces in 20 class A and B government and private hospitals that had implemented ischemic stroke CP and STEMI. This is a case study using a mix method design. Quantitative data collection was carried out by assessing the CP ischemic stroke and STEMI form documents, to determine compliance in filling out the ischemic stroke and STEMI forms. Compliance is measured in five care services, namely medical care, nursing care, supporting care, pharmaceutical care, and nutritional care. Compliant if the percentage of filling in the CP is $\geq 80\%$. The total number of CP is 1094 consisting of 681 CP ischemic stroke and 413 CP STEMI. The results showed that compliance with filling CP for ischemic stroke was very low, only 32 out of 681 (5%) CP filled $\geq 80\%$ of the five care services. Compliance with filling in STEMI CP was also very low, namely 20% or 81 of 413 STEMI CP filled $\geq 80\%$ of the five care services. These findings concluded that compliance with filling CP is very low, which will have an impact on the quality of service for ischemic stroke and STEMI patients.

Keywords: compliance, clinical pathway, ischemic stroke and STEMI





Determinant Factors of Taking Anti-Filarial Medication Behavior in the First Round of the Mass Drug Administration Program with Ivermectin, Diethylcarbamazine Citrate, Albendazole : A Cross-Sectional Study

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Abstract

Filariasis is still endemic in Indonesia with the criteria for a microfilaria rate of >1%, therefore WHO extended the Mass Drug Administration (MDA) program with Ivermectin, Diethylcarbamazine Citrate, Albendazole (IDA). Pekalongan City is one of the filariasis endemic areas in Central Java, Indonesia, which will receive an extension of the MDA program in 2021 and 2022, with a survey coverage of <65% of the population. The aim of the study was to prove the determinant factors associated with IDA drug taking behavior in order to increase treatment coverage. Community-Based Survey conducted in 10 villages in 3 sub-districts in Pekalongan City with a Cross Sectional design using a structured questionnaire interview method, and a sample size of 546 respondents using Probability Proportional to Size and was taken by simple random sampling. Data analysis used the Chi Square statistical test and Logistic Regression. The age distribution of respondents > 42 years dominated by 54,0%, Female Gender dominated by 71,8%. Determinants of IDA Drug Distribution (p value = 0,000, PR value = 2,498, 95% CI: 1,400-4,459), Willingness to Take Second IDA Drugs (p value = 0,000, PR value = 5,325, 95% CI: 1,520-18,656), Assistance for Health Workers (p value = 0,000, PR value = 2,690, 95% CI: 1,681-4,306), Agree to IDA drug distribution (p value = 0,008, PR value = 1,593, 95% CI: 0,778-3,259) has a significant relationship with IDA drug taking behavior, and the logistic regression results of assisting health workers (OR = 76,002, 95% CI: 24,901-231,975) are the determinants most related to drug taking behavior IDA. It is necessary to assist health workers in the practice of taking IDA drugs in the next period. Health workers or health cadres must ensure that people actually take IDA drugs to increase treatment coverage, in order to accelerate the elimination of filariasis in Pekalongan City.

Keywords: Filariasis, IDA Drug Taking Behavior, Assistance by Health Workers





From Influenza to COVID-19: What have Nurses experienced during the pandemic?

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Abstract

Everyone, especially in health, has always remembered the COVID-19 pandemic. The rapid growth in a short period resulting from the rapid spread of the virus results in a service process that is almost chaotic in hospitals. At this time, healthcare workers cannot focus on the patient's physical care to prevent minimal mortality. On the other hand, spiritual, cultural, and social care is a challenge to remain met in the face of a growing case and a shortage in the number of health resources of limited purpose: to give patients the experience of interactions during the treatment process of the covid-19 pandemic: the research is undertaken qualitatively with an in-depth interview. Then it is analyzed by data reduction and display as a deduction. Results: This study has eight distinct subjects: The response of people to vaccinations, spikes in cases of covid-19 and "happy hypoxia", chaos during treatment, challenges of visitation and care patients die, euthanasia in the time of covid-19, the adaptation of spirituality and trust of the patient and family during treatment. Conclusion: During the COVID-19 pandemic, treatments made on patients significantly changed, greatly affecting the nurse at the time of a delta variant. This change is deeply affected. Recommendation: A nurse's experience shows that psychological preparedness is needed for a nurse to face a disaster later on. For governments, the scourge of disease is sometimes unpredictable. Preparedness of facilities for equipment, education, and certification requires a pandemic for health power and adequate healthcare resources to cope better with the pandemic in the future. Abstractions must highlight the practical implications of the findings for organizations and healthcare policies and ideas for strengthening the patient relationship during a public health emergency.

Keywords: Nurses, experiences, pandemic, COVID-19





Evaluation of Analgesic Effect of Corn Silk Infusion (*Zea mays* L.)

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Abstract

Corn silk (*Zea mays* L.) is a plant that is widely found in Indonesia but is still unexplored. In silico studies show that corn silk contains compounds that have potential as analgesics by inhibiting the work of the enzyme cyclooxygenase (COX) which can reduce the production of prostaglandins by arachidonic acid, but these studies have not been proven in vivo. This study aims to evaluate the analgesic effect of corn silk infusion. Corn silk was extracted by infundation method. Phytochemical screening test was conducted to determine the content in corn silk infusion. Analgesic effect was evaluated using analgesimeter rendal-selitto in 30 male wistar rats. The negative control group were given distilled water, the treatment groups were given 125, 250, and 500 mg/kgBW of corn silk infusion and positive control group given mefenamic acid suspension of 45 mg/kgBW. Corn silk infusion contains flavonoid, saponin, and alkaloid compounds based on phytochemical screening tests. The administration of corn silk infusion with doses of 125, 250, and 500 mg/kgBW produced a percentage of pain inhibition 13.2%, 13.89%, and 20.42% compared to mefenamic acid 25.11%. The greater analgesic activity was observed by the maximum dose of the infusion (500 mg/kgBW). The effect of the infusion was also statistically significant ($p < 0.05$) only in maximum dose. The result obtained from this study shows that the Corn silk infusion contained phytochemical constituents with analgesic activities, therefore could be used in the management of pain conditions. Further research is needed regarding the toxicity test and its mechanism of action.

Keywords: Analgesic, infusion, *Zea mays* L, corn silk.



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Analgesic Activity of Etanolic Corn Silk (*Zea mays L*) Extract

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Abstract

Zea mays Corn silk is an herbal plant that is used empirically to relieve pain. Corn silk is known to have alkaloid compounds (trigonelline and indole) and flavonoids (vitexine and apigenidine) that have potential analgesic effects. On the official website of Prediction of Activity Spectra for Substances (PASS), it is known that indole is useful as a cyclooxygenase and prostaglandin synthase inhibitor. This study aims to determine the anagesic activity of 70% Ethanolic corn silk (*Zea mays L*) extract using a rendal-selitto analgesimeter. The extract was evaluated at 125, 250 and 500 mg/kg BW. The positive control groups were treated with Mefenamic Acid 45 mg/kgBW, CMC Na 0,5% suspension was given to negative control. All treatment administrations were performed orally. Pain threshold was evaluated with Ugo-Basil analgesimeter and analgesic activity was calculated with percent inhibition of analgesic. The percent pain inhibition of Ethanolic corn silk (*Zea mays L*) extract 125, 250 and 500 mg/kg BW were about 23.24%, 27.47%, and 33.22% compared to mefenamic acid 26,93%. The 500mg/kg BW of Ethanolic corn silk (*Zea mays L*) extract showed significant analgesic activity ($p < 0.05$). In general, the data obtained from the present study elucidated that the extract possessed a significant analgesic activities and recommended for further studies to determine the mechanism of action action and toxicity.

Keywords: *Zea mays L.*, corn silk, Analgesic.



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Room 4 (Nature's Treasure: Biomedical science, traditional medicine, and herbal remedies in small islands)
7 Mins (Talks) + 3 Mins (QnA)
Moderator: dr. Marcelno Tatipikalawan Tech Admin: Kaprian Judge: Dr. Cecilia A. Seumahu, S.Si.,M.Si
Antibacterial Activity of Ethanolic Leaves Extract of Patiwala (<i>Lantana camara</i>) from Southeast Sulawesi Against <i>Staphylococcus aureus</i> and <i>Proteus mirabilis</i>
Theosobia Grace Orno
Antimicrobial Activities of Ethanol Extract from <i>Impatiens balsamina</i> L. Leaves against Paronychia Pathogens
Dian Natasya Raharjo
Activity of Etanol Extract Cinnamon (<i>Cinnamomum burmannii</i>) as a Mature Antibiofilm on <i>Staphylococcus aureus</i>
Yuda Perdana
Antibiofilm Activity of Ethanol Extract Bitter Melon Fruit (<i>Momordica charantia</i>) Against <i>Staphylococcus aureus</i>
Iftah Ghina Shafira
<i>Candida Lypolitica</i> as A Rare pathogen of Bloodstream Infections in Patients with Immunocompromised
Valentine Hursepuny
Effects of Hepatitis B Immunization Completeness on Hepatitis B Incidence among Children in Indonesia
Faisal
The Antioxidant Activity, Antibacterial Assay and the Application of Turmeric (<i>Curcuma domestica</i>) Crude Extract with Various Solvents
Agung Gintu
The effect katuk and torbangun leaf extracts on phenol content as an enhancer of breastfeeding
Apriningsih Apriningsih





Antibacterial Activity of Ethanolic Leaves Extract of Patiwala (*Lantana camara*) from Southeast Sulawesi Against *Staphylococcus aureus* and *Proteus mirabilis*

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Abstract

Patiwala leaves (*Lantana camara*) is one of the abundant natural ingredients in the tropics including Southeast Sulawesi province which can be used as an antibacterial. This study aims to determine the content of secondary metabolites of patiwala leaves and their antibacterial activity against *Staphylococcus aureus* and *Proteus mirabilis* using the Kirby-Bauer Disc diffusion method. Patiwala leaf simplicia was macerated using 96% ethanol. The results of the phytochemical screening of patiwala leaf ethanol extract contained alkaloids, flavonoids, phenols/tannins, saponins and terpenoids. Furthermore, the inhibition test of the ethanol extract of patiwala leaves was carried out. The positive controls used were ciprofloxacin and ampicillin while the negative controls used were DMSO. Based on the results of the average diameter of the inhibition zone of the ethanol extract of patiwala leaves on *Staphylococcus aureus* with concentrations of 25%, 50%, 75%, and 100% on Nutrien Agar media, namely 11 mm, 12 mm, 13 mm, and 15 mm, while on Muller Hinton Agar 10 mm, 11 mm, 11 mm and 13 mm. In addition, testing on *Proteus mirabilis* with concentrations of 25%, 50%, 75%, and 100% on NA media with an average of 12 mm, 12 mm, 13 mm and 15 mm, while on MHA media 10 mm, 12 mm, 13 mm, and 14 mm. This shows that the ethanol extract of patiwala leaves has potential as an antibacterial at the intermediate level against gram-positive and gram-negative bacteria.

Keywords: Ethanol extract, patiwala leaf, phytochemical screening, inhibition test



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Antimicrobial Activities of Ethanol Extract from *Impatiens balsamina* L. Leaves against Paronychia Pathogens

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Abstract

Paronychia is the infection of the nail folds due the damage of cuticle which symptoms include pain, itchiness and pus-formation. Acute paronychia caused by *Staphylococcus aureus* while chronic paronychia caused by *Candida albicans*. One of the herbal used to treat paronychia empirically is garden balsam leaves (*Impatiens balsamina* L.). The leaves are expected to contain phenolic and flavonoid compounds which have antimicrobial activity. The aim of this research is to find out the antimicrobial activity of balsam leaves thus herbal medicine can be developed. Antimicrobial assay is carried out on *Staphylococcus aureus* and *Candida albicans*. Test material used in this study is extracted with Ultrasonic-Assisted Extraction (UAE) and ethanol 80% as solvent. Antimicrobial assay is carried out with agar-diffusion cylinder-plate method using extract with concentration 6000, 8000, 10000, and 12000 ppm as well as gentamicin and ketoconazole as positive controls. Result shows that the 12000 ppm extract concentration's antimicrobial activity is similar to gentamicin while the other concentrations have lower antimicrobial activity compared to the positive controls. Determination of the total phenolic and flavonoid content are carried out to calculate the content in the extract and the total phenolic and flavonoid content obtained are 4,07 %GAE and 3,63 %QE respectively.

Keywords: *Impatiens balsamina*, Antimicrobial, Flavonoid, Paronychia, Phenolic





ACTIVITY OF ETANOL EXTRACT CINNAMON (*Cinnamomum burmannii*) AS A MATURE ANTIBIOFILM ON *Staphylococcus aureus*

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Abstract

Staphylococcus aureus is a bacterium that can form biofilms by adhesion to the surface, then *S.aureus* will colonize so that biofilms are formed. *Cinnamomum burmannii* is a plant that has potential as an antibacterial, but its effectiveness as an antibiofilm is unknown. The purpose of this study was to determine the inhibitory activity of biofilms by ethanol extract of *Cinnamomum burmannii* through an *in vitro* approach. The extraction of *Cinnamomum burmannii* (ECB) in this study used maceration method with 70% ethanol solvent. The extraction results were tested for antibiofilm activity using the *direct microscopic observation* method by measuring the number of microcolonies and the percentage of area in the biofilm. Statistical test using *One-Way ANOVA*. and continued with *Post Hoc* test with significance value $p < 0.05$. This study used 3 biological repeats, with 10 fields of view for microscopic observation. ECB can decrease the number of microcolonies compared to untreated controls at concentrations of 100.000 ppm; 200.000 ppm; and 400.000 ppm respectively with the number of microcolonies is $2398,67 \pm 315,92$; $1520,67 \pm 169,91$; and $874,00 \pm 45,13$ and untreated controls $2383,67 \pm 242,59$. Positive control (KP) of lysorine can decrease the number of microcolonies by $473,67 \pm 30,28$ which differs significantly from ECB and untreated control ($p < 0.05$). The percentage of observed biofilm areas decreased at ECB exposure to concentrations of 100.000 ppm; 200.000 ppm; and 400.000 ppm at $52,43 \pm 3,25\%$ respectively; $44,34 \pm 1,92\%$; and $30,50 \pm 4,19\%$. The percentage of biofilm area in the untreated control was $35,86 \pm 3,38\%$. KP can reduce the percentage of biofilm area by $27,78 \pm 1,76\%$ which is not significantly different compared to ECB exposure concentrations of 400.000 ppm. *Cinnamomum burmannii* ethanol extract has the ability to reduce the number of microcolonies and the percentage of *S.aureus* biofilm area at an optimum dose of 400.000 ppm.

Keywords: *Staphylococcus aureus*, biofilm, *Cinnamomum burmannii*



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ANTIBIOFILM ACTIVITY OF ETHANOL EXTRACT BITTER MELON FRUIT (*Momordica charantia*) AGAINST *Staphylococcus aureus*

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Abstract

Staphylococcus aureus is one of the bacteria that can form biofilm by adhering to a surface, then multiplying and forming a biofilm layer. *Momordica charantia* is a plant that has the ability to inhibit bacterial growth, but its effectiveness as an antibiofilm is unknown. This study aims to determine the activity of *Momordica charantia* in inhibiting biofilm growth through an *in vitro* approach. *Momordica charantia* extraction (EMC) in this study used maceration method with 70% ethanol solvent. The extraction results were tested for antibiofilm activity using the direct microscopic observation method by measuring the number of microcolonies and the percentage of area in the biofilm. Statistical test using One-Way ANOVA and continued with Post Hoc test with significance value $p < 0.05$. This study used 3 biological repeats, with 10 fields of view for microscopic observations. EMC can decrease the number of microcolonies compared to untreated controls with the number of microcolonies at concentrations of 100,000, 200,000 and 400,000 ppm respectively by 1577.67 ± 106.45 ; 491.67 ± 34.07 and 30.33 ± 1.52 compared to untreated controls with a total of 2750.33 ± 91.39 . The positive control (KP) of lysorin lowered it to 24.3 ± 14.5 which was not significantly different from the EMC dose of 400,000 ppm. The percentage of biofilm area was observed to decrease in EMC exposure with concentrations of 100,000, 200,000, and 400,000 ppm respectively by $43.67 \pm 1.52\%$; $40.67 \pm 2.08\%$ and $27.33 \pm 2.51\%$. The percentage of biofilm area in the untreated control was $45.33 \pm 2.51\%$. KP lowered the area by $15.33 \pm 2.08\%$ which differed significantly from EMC and untreated control ($p < 0.05$). *Momordica charantia* fruit ethanol extract has the ability to reduce the number of microcolonies and reduce the percentage of mature biofilm area of *S. aureus* with an optimum concentration of 400,000 ppm.

Keywords: *Momordica charantia*; antibiofilm; biofilm; *Staphylococcus aureus*



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***Candida Lypolitica* as A Rare pathogen of Bloodstream Infections in Patients with Immunocompromise**

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Abstract

Background

Candida lipolytica is rare etiology of bloodstream infection. But it should be suspected in a patient with immunocompromised condition. Candidemia has increased in several years, leading to increased hospital stay and costs as well as high mortality. Patients with underlying conditions such as malignancy and used medical devices are at increased risk of developing *Candida* infection.

Case presentation

Forty-eight-year-old female was admitted to the hospital with complaints of bleeding from the vagina. The patient was diagnosed with cervical cancer and on chemotherapy. The patient has increased levels of urea and creatinine. Initial laboratory findings were remarkable for a white blood cell count of 30.990/dL, with polymorphonuclear leukocytes of 84.3%. Ceftazidime was given as empiric therapy. The medical devices used to the patient were intravenous catheters, parenteral nutritons, and urine catheters. *Pseudomonas aeruginosa* was successfully isolated during microbiological examination from urine, and the results of this isolation were shown to be sensitive to cephalosporin antibiotics. *Candida lipolytica* was identified from blood culture and was sensitive to voriconazole, amphotericin B and flucytosine. The patient died before receiving antifungal therapy, after three weeks of hospitalization.

Conclusion(s)

Clinical data, laboratory findings and rapid screening tools are needed as a strategy for the management of sepsis with bloodstream infections caused by *Candida*. By using appropriate antifungal therapy and catheter removal, *C. lipolytica* candidemia can be treated.

Keywords: *Candida lipolytica*, Candidemia, Sepsis



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Effects of Hepatitis B Immunization Completeness on Hepatitis B Incidence among Children in Indonesia

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Abstract

Indonesia is a country that is endemic for Hepatitis B with a prevalence of 7% to 10%. At least 3.9% of pregnant women in Indonesia are living with Hepatitis B with a risk of maternal transmission of approximately 45%. The low coverage of hepatitis B immunization in infants aged 0-7 days can have an impact on increasing the prevalence of hepatitis B virus. This study aims to determine the effect of immunization on the incidence of Hepatitis B among children in Indonesia. A cross-sectional study was conducted using the 2018 Basic Health Research (Riskesdas) data. Riskesdas is carried out by the Research and Development Agency of the Indonesian Ministry of Health. The population in the 2018 Riskesdas is all households from selected census blocks from 34 provinces spread across 514 districts/cities throughout Indonesia. The sample in this study was 7,434 children aged 6-12 months. A child's HB immunization status was categorized as complete if the child got HB0, HB1, HB2, and HB3 immunization based on HB immunization records and confessions. Based on the data in the health of both mother and child handbook and confessions, it showed that the complete immunization coverage (77.4%) given to children was still low. The results showed that there was no relationship between the complete administration of Hepatitis B immunization and the incidence of Hepatitis B in children ($p=0.351$). The limitations of the Riskesdas data were that there was missing information about the immunization status of children, thus affecting the results of statistical tests related to the effect of HB immunization on the incidence of hepatitis B in children. Complete hepatitis B immunization coverage needs to be increased by taking into account various factors such as family support, family history of hepatitis B, age, level of education, knowledge, number of children, and the role of health workers.

Keywords: Hepatitis B, Immunization, Child



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The Antiokxidant Activity, Antibacterial Assay and the Aplication of Turmeric (*Curcuma domestica*) Crude Extract with Various Solvents

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Abstract

The Turmeric (*Curcuma domestica*) was one of herbal resources in Indonesia commonly applied as spices, herbal medicines also cosmetics. The aim of this study was to extracting the chemicals from Turmeric using several solvents then characterizing each ectract. The physicochemical and Biochemical characterization against the each Turmeric extracts showed that the crude extracts has strong antibacterial effect against digestive bacteries, respiratory and skin bacteries. The antioksidant activity showed belongs to high levels also the Sun Protection Factor (SPF) ability of each extracts showed belongs to Ultra Protection levels. Based on those results than concluded that the Turmeric potentially applied as Herbal medicine and Cosmetics in Indonesia.

Key Words: Cosetics, Curcumin, Pharmaceutical, Turmeric





The Effect Katuk and Torbangun Leaf Extracts on Phenol Content as An Enhancer of Breastfeeding

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Abstract

Based on the 2018 Indonesia health research report, there was a decrease in the coverage rate of exclusive breastfeeding from 54.3% to 37.3%. One of the factors that contributed to this decreased rate was maternal dietary pattern which low consumption of fruits and vegetables among breastfeeding mothers in Indonesia. There are various vegetable and fruit sources of micronutrients that are traditionally believed could enhance breast milk production. Foodbar with katuk and torbangun leaf extracts could be an innovative solution to meet the adequacy of vegetables and galactagogue substances in nursing mothers which can be easily consumed orally as complementary snacks for mothers who do not have time to consume them in normal or disaster times. This study aims to examines the formulation of snack bars and the characteristics of food bar phenol content as a breastfeeding enhancer. The samples used were *Plectranthus amboinicus* (Lour.) leaves and *Sauropus androgynus* leaves. The total phenolic compound content was estimated by the Folin–Ciocalteu method with some modification. Data were processed using one-way ANOVA test. After that, further tests (post-hoc) were carried out using Duncans Multiple Range Test (DMRT) analysis. T test was conducted on F0 (control) and the best formulation. The proportion of katuk and torbangun extract had a significant impact on the ash content, carbohydrate, and total phenol content of the cookies ($p < 0.05$), and the T-test showed a significant difference in total phenol content between the control and treatment ($p < 0.05$). Further studies are needed to test the effectiveness of the cookies on postpartum mothers.

Keywords: Breastfeeding, foodbar, Katuk, Torbangun, Total Phenol



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Room 5 (Exploring Community Resilience and Seafarer's Health Hub : Understanding the social, cultural, mental health and psychological aspects, Occupational health, emergency, sports health and medicine in marine and maritime environment that contribute to the resilience and well-being of these communities)
7 Mins (Talks) + 3 Mins (QnA)
Moderator: dr. Samuel Maruanaya, Sp.OT Tech Admin: Sarinah Judge: dr. Sherly Yakobus, Sp.KJ
Cultural Literacy in Early Childhood: Implementation of Balinese Regional Language through Gending Rare.
Made Ayu Anggreni, S.Pd., M.Pd.
Study Unveils the Locals are Concerned about Pari Island's Coastal Area
Shahibah Yuliani
Social Capital For Disaster Management: A Scoping Review Study
Sri Novita Lubis
Social Accountability of Medical School, Is It Sufficient? A Regional Medical School Curriculum and Approaches to Equip Graduates for Rural and Remote Medical Services
Farah Noya
Application of Progressive Muscle Relaxation and Deep Breathing in Working Pregnant Women to Reduce Stress Levels During the Covid-19 Pandemic
Dini Sri Sundari
Hypnotherapy Helps Reduce Anxiety Score and Blood Glucose Levels in Type 2 Diabetes Mellitus Before Surgery
Vincentya Tiffany Trismaya
Exploring the Relationship Between Depression and Bullying Among Indonesian Adolescents
Latifa Fatkhiyah



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Cultural Literacy in Early Childhood: Implementation of Balinese Regional Language through Gending Rare.

Made Ayu Anggreni¹, Hafid Abbas², Nurbiana Dhieni³

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Abstract

The main problem discussed in this study is the low ability to use the Balinese regional language in early childhood, seeing that the gending rare tradition is rarely sung. One of the reasons for this condition is that the introduction to regional languages is less attractive, parents teach a lot of everyday Indonesian vocabulary at home. The purpose of this paper is to examine the cultural literacy of early childhood in the Buleleng area and the impact of the cultural literacy approach in improving Balinese language skills. Qualitative research uses an ethnographic approach, with methods and preliminary studies through observation, video document studies, interviews, questionnaires and reflective journals. Participants 2 children aged 5-8 years, parents, teachers, principals and school staff. The results of the use of regional languages can be seen in children's interactions and behavior with older people and peers, through songs, games, greetings. Children are more familiar with manners, polite behavior in speaking, collaborating, speaking the local language that follows local culture in everyday life. Love and preserve the local language or mother tongue.

Keywords: Cultural Literacy, Early Childhood, Balinese Regional Languages, Gending Rare.



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Study Unveils the Locals are Concerned about Pari Island's Coastal Area

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Abstract

Indonesia is an archipelagic as well as a maritime country. In the capital city of Jakarta, there are Islands Thousands of areas, which locations are scattered in the sea territory of the city. Pari Island, one of the beautiful islands that is part of Jakarta, is frequently visited by many local and international tourists. These conditions have implications for pollution and environmental sustainability. This study aims to review environmental concerns of the Pari Island people based on egoistic, humanistic, and biospheric indicators. Secondly, this article seeks to find out more details about the conditions in the island's coastal area as a source of community learning. The methods used in the study is qualitative research through a descriptive approach, which is supported by observation, questionnaires, and interviews. The subjects in this study are the locals who live in Pari Island. Results from this study found that the local people in Pari Island have great concerns for the sustainability of the coastal area where they live in and the coastal environment can be source of learning for community or students.

Keywords: Pari Island's, Coastal Area, Environmental Concern



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Social Capital For Disaster Management: A Scoping Review Study

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Abstract

Disasters have significant adverse effects that threaten the loss of life, injury, disease, and environmental damage. Social capital is a potential resource that can help communities overcome impacts and efforts to reduce the risk of disaster, but the functioning of social capital in all phases of disaster management has not been a concern yet. This article reports on a systematic scoping review that explored how social capital contributes to disaster management, using the bonding, bridging, and linking of the social capital framework of Szreter and Woolcock (2004). Data collection was done in electronic databases, including Google Scholar, Scopus, PubMed, EBSCOhost, and PLOS ONE for the last 13 years (2010-2023). The search keywords were social capital, disaster, natural disaster, and disaster management. Inclusion criteria included Bahasa or English language, and only scientific literature such as research, journal articles, and scientific publications. Articles not specifying and measuring social capital in a disaster context were excluded. The output of this method led to the finding of 25 related articles which were reviewed and analyzed. Fourteen studies used qualitative, nine used quantitative, and two used mixed methods. Based on the empirical evidence from the previous research shows that social capital contributes to improving disaster preparedness before a disaster occurs, enhancing a community's disaster response capacity, and improving post-disaster recovery. This scoping review recognizes recommendations for social capital as part of the public policy approach to effectively manage future disasters and strengthen the community's resiliency capacity to respond to disasters. For future research to get prospective evidence from analytic studies and explore the feasibility of interventions that build social capital as means of effective and efficient disaster management.

Keywords: Social capital, disaster, disaster management



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Social Accountability of Medical School, Is It Sufficient? A Regional Medical School Curriculum and Approaches to Equip Graduates for Rural and Remote Medical Services

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Abstract

Pattimura University Faculty of Medicine aims to provide skills and preparedness for RR medical workforce beyond the national curriculum. However, how the curriculum has influenced graduates' preparedness has yet to be evaluated in a real work setting. This study aimed to capture the perspective of medical graduates of PUFM regarding the rural focus of the curriculum based on the teaching and learning opportunities provided for them during medical school. The findings will be important for assessing regional medical schools accountability in providing quality service, especially in underserved areas. Semi-structured interviews were undertaken with nine PUFM graduates working in the RR areas of Maluku Province. A phenomenological qualitative analysis was utilised to explore their perspective of graduates. The PUFM curriculum, based on its social accountability, has prepared graduates to some extent for work in Maluku RR conditions. However, the participants felt that their skills and preparedness are often inadequate for the substandard working environments they encounter. With its social responsibility, the regional medical school has assisted the government in preparing medical workforce to work in the RR areas. However, the social accountability demonstrated and the benefit of the rural-focused curriculum for medical graduates RR preparedness cannot sufficiently address community health needs when low standard conditions for practise overshadows their efforts. Addressing the RR working situations requires political action to invest in standard medical/healthcare facilities and equipment. In doing so, medical graduates could work more effectively and better serve their RR communities to improve their health status.

Keywords: sustainable rural medical workforce; medical school initiatives, social accountability, medical workforce shortage, rural and remote medicine, phenomenology



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Application of Progressive Muscle Relaxation and Deep Breathing in Working Pregnant Women to Reduce Stress Levels During the Covid-19 Pandemic

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Abstract

The Covid-19 pandemic has a considerable impact on the stress level of pregnant women, especially working pregnant women who are at risk of causing premature birth, hypertension in pregnant women, to maternal and fetal death. The purpose of this study was to determine the effect of using progressive muscle relaxation combined with deep breath relaxation on pregnant women working during a pandemic. This study used a *one group pretest and posttest design* approach with a total of 5 participants, working pregnant women who conducted pregnancy checks at Puskesmas Kagok, Semarang City. Samples were selected through *purposive sampling* method and data analysis using *Paired T-Test test*. The results showed that there was a very significant effect on the use of progressive muscle relaxation and deep breath relaxation on the stress levels of working pregnant women. The implication of this study is to prove that the use of progressive muscle relaxation and deep breath relaxation has an effect on reducing the stress levels of pregnant women working during a pandemic. The limitation of this study is the lack of supporting data such as relationship with husband, workload and difficulties experienced during pregnancy. For future research it is recommended to consider husband and family support as findings in the study. Other impacts of the application of progressive muscle relaxation and deep breath relaxation need to be further researched using appropriate measurement instruments to measure their effectiveness.

Keywords: *Progressive Muscle Relaxation, Deep Breath Relaxation, Stress, Pregnancy*



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Hypnotherapy Helps Reduce Anxiety Score and Blood Glucose Levels in Type 2 Diabetes Mellitus Before Surgery

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Abstract

Background: T2DM patient anxiety is often discovered before patient surgery. This condition has an impact on increasing blood glucose levels and causes delays in the operation program. Although still very limited, hypnotherapy has the potential complementary therapy to reduce anxiety and control blood glucose levels, it has not been used as part of the therapy protocol. **Objective:** This study aims to investigate the impact of hypnotherapy on anxiety scores and blood glucose levels in T2DM patients before surgery. **Research Method:** Using a pre-experimental with a one-group pretest post-test design, the study involved 15 respondents selected through accidental sampling. Data collection instruments using HRS-A questionnaires that have been tested for validity and reliability, likewise audio hypnotherapy and glucometers. **Results and conclusions:** The majority of respondents were females (60%) aged > 65 years (46.7%). The results showed a *decrease in* mean anxiety score of 7.8 and a *mean decrease* in fasting blood glucose levels of 54.2 mg/dl. The results of statistical tests with the Wilcoxon *test* and *paired t-test* obtained a significant effect of hypnotherapy on reducing the mean anxiety score ($p = 0.001$) and *decreasing the mean fasting blood glucose levels* ($p = 0.012$). **Implications:** Supports integrating hypnotherapy into the pre-surgery preparation protocol for T2DM patients to minimize surgery delay. **Recommendation:** Further research with a sample size exceeding 30 and including a randomly selected control group is necessary. Additionally, health professionals should receive training in hypnotherapy. Hypnotherapy can be recommended as a complementary therapy for T2DM patients before surgery to manage anxiety and blood glucose levels.

Keywords: T2DM, hypnotherapy, anxiety, blood glucose levels



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Exploring the Relationship Between Depression and Bullying Among Indonesian Adolescents

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Abstract

Bullying has been identified as a serious problem around the world and has been linked with mental health problems such as depression. This study examined the relationship between bullying and depression among adolescents from three different schools and provinces in Indonesia. A total of 521 participants completed the Beck Depression Inventory-II (BDI-II) and answered two survey questions about bullying: whether they had witnessed bullying and whether they had ever experienced bullying. We found that most of the participants had a minimum level of depression (42%), while the majority of them reported having witnessed bullying (92%) and experienced bullying (61%). Among those who experienced bullying, the distribution of depression severity was as follows: severe (20.18%), moderate (19.87%), mild (21.76%), and minimum (38.17%). Interestingly, the relationship between depression severity and bullying involvement was not found to be statistically significant according to the Mann-Whitney test. These results indicate a high prevalence of bullying despite the relatively low prevalence of depression among the participant. The study's impact is limited due to the absence of information on other important factors that might affect the connection between bullying and depression such as family environment, social support, cultural influences, etc. Our findings give insight into how bullying and depression are related among Indonesian adolescents. However, the lack of a statistically significant relationship indicates that a careful interpretation is needed. We recommend future investigations to explore confounding factors to gain a comprehensive understanding of bullying's impact on depression.

Keywords: depression, bullying, adolescents, Indonesia



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Poster Abstracts





Effects of Ethanol Extract of Nutmeg Seeds (*Myristica Fragrans* Houtt) on Brain Mass of Mice (*Mus Musculus*) Induced by Stress

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Abstract

Stress is a condition caused by a discrepancy between the desired situation and the biological, psychological or social system of the individual. One of the plants that can act as an antidepressant is nutmeg. One of the ingredients that has an antidepressant effect on nutmeg is myristicin. Myristicin has a mechanism of action by inhibiting the Mono Amine Oxidase (MAO) enzyme. This study aims to determine the effect of nutmeg seed ethanol extract on stress-induced rat brain weight. This research is an experimental research with a post test only control group design. The subjects of the study were 30 mice taken by simple random sampling and divided into normal control (KN), negative control (K-), positive control (K+), nutmeg seed ethanol extract concentration of 4% (P1), and 16% (P2). K-, K+, P1, and P2 were given stress treatment using the FST method for 6 minutes within 7 days. Then the K+ group was given alprazolam at a dose of 0.065 mg/kg BW. The treatment was carried out for 7 days. Observational data were analyzed using the ANOVA test. The ANOVA results showed p 0.826 which means that there was no significant effect between the administration of ethanol extract of nutmeg seeds and post-acute stress brain weight. Although not statistically significant, the average brain weight in the K- group of mice was lower when compared to the average brain weight in the KN, K+, P1 and P2 group of mice.

Keywords: Stress, Nutmeg, Brain Weight, Mice.





Epidemiological Description of Chikungunya cases in Sukowinangun Village, Magetan District in 2022

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Abstract

Chikungunya, a vector-borne disease transmitted by *Aedes aegypti* mosquitoes, caused an outbreak in Magetan Regency in 2003. On June 12, 2022, five suspected cases were reported in Sukowinangun Village under Candirejo Primary Health Center. This study aims to describe and identify Chikungunya risk factors in Sukowinangun Village. The method of this study is quantitative with an observational case-control design (1:1) in June 2022, with the case group comprising cases recorded at Candirejo Primary Health Center and individuals with symptom joint pain, nausea, headache, and rash. The control group consisted of individuals from the same area without any symptoms. Findings revealed 18 suspected cases, predominantly affecting females (58%) aged 36-45 and >65 years. The suspected cases was located in Sukowinangun Villages RT04/RW03 and RT05/RW03. The peak occurred on June 6, 2022, the incubation period of the cases is 2-12 days, with the shortest is 2 days and the longest is 12 days . Risk factors included lack of mosquito nets (p-value 0.03) and inadequate mosquito eradication (p-value 0.0006). Breeding sites were found in patients' homes, especially in bathing containers and containers for making crackers. Inadequate implementation of Public Health Sanitation measures contributed to make increased cases. Limited diagnostic tools made a difficult cases confirmation. To prevent future outbreaks, facilities must improve capabilities, and community awareness for early detection and and arly awareness among the community.

Keyword : Chikungunya, epidemiology, mosquito nets, risk factor





Diphtheria Outbreak in Bulugunung Village, Magetan District, in July 2022

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Abstract

Background: On July 21 2022, Magetan District Health Office received a report from dr. Sayidiman Magetan Hospital about a suspected Diphtheria. Investigation were conducted to confirm the outbreak and prevent the spread of cases in an area. **Method:** A prospective cohort study was conducted in July-August 2022 periode. The reported symptoms included fever, runny nose, tonsillitis, laryngitis, and pseudomembrane or have positive culture results. Swab the back of the throat or nose is done to look bacteria. Data were analyzed descriptively. **Results:** The laboratory examination stated that Mrs. S was a positive Diphtheria. The case is classified into Pharyngeal Diphtheria. Prophylaxis has been administered to the patient and those who have established close contact with the patient. Antidiphtheria Serum has been given two times, 20,000 units each. Outbreak Response Immunization (ORI) 1, 2, and 3 were implemented in September, October 2022 and February 2023. **Conclusion:** The diphtheria outbreak in Bulugunung Village has been confirmed by the laboratory test. The suggestions being considered are monitoring disease trends, especially re-emerging disease, monitoring population health and estimating the burden disease in population, evaluating coverage program and effectiveness health such as routine immunization outreach to targets whose immunization status is incomplete.

Keywords: Diphtheria, Oubreak, Outbreak Response Immunization (ORI).



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Fishermen Health Prediction Model in West Seram District, Indonesia

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Abstract

The prevalence of traditional divers in Maluku Province experiencing health problems is 82%. The aim of the study was to develop a prediction model for fisherman health in West Seram District, Indonesia. Methods: A cross-sectional design was used to construct fisherman's health prediction models. Data was collected by means of a survey using a questionnaire that had been tested for validity and reliability. The research sample is 114 respondents. Data were analyzed using multiple logistic regression. Results: Smoking habits affect fishermen's health with a p-value of 0.016. Sports habits affect the health of fishermen with a p-value of 0.005. Diving habits affect the health of fishermen p-value 0.001. The health history of parents affects the health of fishers with a p-value of 0.021. The health history of parents is a factor that is predicted to have a dominant influence on the health of fishers, the value of $\text{Exp}(B) = 6.7$ means that fishermen whose parents have a history of health problems are at risk of 6 times experiencing health problems compared to fishermen whose parents do not have health problems. Conclusion: Fishermen's health is influenced by various factors such as smoking habits, exercise habits, diving habits, and fishermen's medical history. It is suggested to fishermen in West Seram Regency to maintain their health by stopping smoking, doing sports activities, and doing health regularly at first-level health facilities for fishermen's health detection.

Keywords: fishermen's health prediction model, smoking habits, exercise habits, diving habits, parents/ health history





The Relationship between Hardiness Personality and Husband's Social Support with Mother's Parenting Stress in Dealing with Children Disruptive Behavior

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Abstract

Maternal parenting stress can occur because mothers are the main caregivers who will face daily problems, especially those who have children with disruptive behavior. The purpose of this study was to determine the relationship between hardiness personality and husband's social support with mother's parenting stress in dealing with children disruptive behavior simultaneously or partially. Using a quantitative approach with the number of participants as many as 61 mothers who have preschool-age children (3-5 years old), have gone to PAUD (KB or TK) in Semarang City, and the child has disruptive behavior. Participants were selected through accidental sampling method and data analysis using multiple regression analysis. The results showed that there was a very significant simultaneous relationship between hardiness personality and husband's social support with mothers' parenting stress in dealing with children disruptive behavior, with an effect of 32.0%. There is a negative and very significant relationship between hardiness personality and parenting stress of mothers in dealing with children disruptive behavior with an effect of 19.4%. There is a positive and significant relationship between husband's social support and mothers' parenting stress in dealing with children disruptive behavior, with an effect of 12.6. The implication of the study is to prove that the hardiness personality of a mother is an important factor in reducing or suppressing maternal parenting stress in dealing with children disruptive behavior. The limitation of this study is that in spreading the scale using google form so that researchers cannot see the reactions of participants when providing information to fill in the scale on google form. Suggestions for future researchers are to conduct research on maternal parenting stress with different cases, for example in relation to the use of gadgets or devices in children with a wider area coverage.

Keywords: hardiness personality, husband's social support, child disruptive behavior, and mother's parenting stress.





Hyperbaric Oxygen Therapy in Patients After ACL, LCL, and Meniscus Reconstruction Surgery: A Case Report

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Abstract

ACL reconstruction with ligament grafting is the standard of care. Although there have been studies on hyperbaric oxygen therapy (HBOT) in animals after ligament grafting, studies in humans have not been widely reported. This paper aims to assess clinical improvement in cases of patients with ACL, LCL (lateral cruciate ligament) and meniscus injuries who received HBOT. This case report describes a 42-year-old male patient after combined arthroscopic and open reconstruction surgery. HBOT was conducted from day 6 to day 24 postoperatively with 2 US Navy Table 5 sessions, and 11 Kindwall Table sessions. A total of 21 physiotherapy series were performed. The outcomes assessed were pain, edema, and joint range of movement (ROM) until the 28th postoperative day. Evaluation of motion pain reduced from 7 to 3 (VAS scale). ROM of the knee joint in sagittal plane in full extension, normal, flexion (consecutively) changed from 4°, 2°, 28° to -2°, 0°, 128°. Evaluation of patellar circumference showed reduced edema of 3.6 - 4.7 cm. The success of reconstruction is determined, among others, by age, severity, other comorbid diseases, pre and postoperative physiotherapy, type of surgery performed, etc. In these patients, HBOT was added as adjunctive therapy to increase the success rate of reconstructive therapy. This study must be strengthened by another objective outcome measurement in the form of MRI. There needs to be another case report as a comparison or a quasi-experimental study to be able to assess the effect of HBOT on knee joint reconstruction.

Keywords: hyperbaric oxygen therapy, ACL reconstruction, ligament grafting



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The Analysis of Traditional Birth Attendants' Knowledge Level in Assisting Delivery According to Health Standards and Its Influencing Factors, in Gorom Island East Seram, Maluku May 2023

Patresia J Maiseka, MD

Abstract

Background: In 2022, Maluku Province has the highest coverage of birth attendants by non-health workers (22,6%), known as the traditional birth attendant (TBA) in Indonesia. Difficult access to health facilities, the limited number of health workers, and the beliefs of the community on the skills and emotional security provided by TBAs are the causes. TBAs require a good level of knowledge and skills to not increase maternal and neonatal mortality rates.

Objective: to determine the level of knowledge of TBAs in assisting deliveries according to health standards, and its correlation to personal factors such as age, education, family history, and history of training in Gorom Island, East Seram, Maluku.

Methods: in May 2023, 25 TBAs in Gorom Island agreed to participate in a survey by filling out questionnaires concerning their personal data and knowledge of delivery assistance according to health standards. The questions include the stages of labor management, the sterility of techniques and tools used, and the emergency responses. The data were then examined by analytical descriptive study with a cross-sectional approach.

Results: Only 20% of TBAs had a good level of knowledge to assist delivery according to health standards. The history of training is correlated with the level of knowledge.

Discussion: Approximately 80% of TBAs with good knowledge had attended delivery training by health workers. They understood the management, limits, and responses to emergencies in labor. In contrast, most TBAs with moderate (44%) and poor (36%) knowledge with no training history, still had a traditional understanding of labor equipment and methods used.

Conclusion: The skills and knowledge of TBAs in assisting deliveries according to health standards are highly dependent on education and guidance from health workers.

Keywords: Traditional birth attendant, TBA training, TBAs skill and knowledge, Gorom island



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The Effectiveness of Health Promotion Using Leaflets and Lectures in Changing Knowledge and Attitudes of Breastfeeding Mothers About Exclusive Breastfeeding in Dusun Talaga Ratu, Kairatu

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Abstract

Optimal infant growth and development are influenced by exclusive breastfeeding. Exclusive breastfeeding means the infants are only given breast milk without additional fluids or other foods. WHO and UNICEF have recommended an exclusive breastfeeding program for infants aged 0 to 6 months. UNICEF stated that from 2015-2021, the percentage of exclusive breastfeeding was only 47% globally. Exclusive breastfeeding coverage in Maluku is still below the national standard of 80%, and in Kairatu village, it only reached 53%, the lowest in Dusun Talaga Ratu, reaching only 11%. This issue was influenced by a lack of knowledge that will impact the attitudes and actions of the mothers and a lack of education from health workers. This study aimed to determine the effectiveness of health promotion on the knowledge and attitudes of breastfeeding mothers using leaflets and lectures on exclusive breastfeeding in Dusun Talaga Ratu. This study was quasi-experimental; the sample size was the entire population, which consisted of 15 people. The data were analyzed using the Wilcoxon test. The results showed the effectiveness of health promotion with leaflets and lecture media in changing the knowledge and attitudes of breastfeeding mothers about exclusive breastfeeding in Dusun Talaga Ratu, with a p-value of knowledge ($p = 0.001$) and attitude ($p = 0.001$). Health promotion using leaflets and lectures effectively changed breastfeeding mothers' knowledge and attitudes about exclusive breastfeeding in Dusun Talaga Ratu. We recommend that health workers improve the provision of exclusive breastfeeding using leaflets and lectures.

Keywords: Health Promotion, Leaflet, Exclusive Breastfeeding



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The Relationship Between Mask Usage And The Occurrence of Acne Vulgaris Among Healthcare Workers At DR. M. Haulussy Hospital Ambon During The COVID-19 Pandemic

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Abstract

The use of masks can prevent the inhalation of respiratory pathogens and reduce hand-to-face contact, thereby lowering the transmission of COVID-19. However, the use of masks has also been associated with a skin condition called Acne Vulgaris (AV) or maskne, which occurs in areas covered by the mask. The objective of this study is to examine the relationship between mask usage and the occurrence of acne vulgaris among healthcare workers at RSUD M. Haulussy Ambon in 2022. This research employs a quantitative analytic design with a cross-sectional approach. The sampling technique used is stratified and consecutive sampling. The sample size for this study is 178 individuals, consisting of doctors (15.7%) and nurses (84.3%). The results indicate that a higher proportion of respondents use surgical masks (75.3%) compared to N95 masks (24.7%). Regarding mask usage duration, it was found that usage was less than 4 hours per day (21.9%), between 4-8 hours per day (33.1%), and more than 8 hours per day (44.9%). The frequency of mask replacement shows that some individuals replace their masks less than once a day or not at all (21.3%), while others replace their masks more than twice a day (39.9%), and some replace their masks only once a day (38.8%). Among the respondents, 47.8% of healthcare workers experienced maskne. The locations where acne vulgaris occurred varied, with the U-zone (21.9%), O-zone (24.7%), T-zone (1.1%), and no occurrence of acne vulgaris (52.5%). Chi-square analysis of the data revealed significant associations between mask usage duration ($p=0.011$), frequency of mask replacement ($p=0.038$), and mask type ($p=0.997$) with the occurrence of acne vulgaris. Therefore, it can be concluded that healthcare workers at RSUD Dr. M. Haulussy Ambon who use masks for more than 8 hours may experience maskne. Additionally, healthcare workers who do not change their masks or change their masks only once a day are potentially prone to experiencing maskne.

Keywords: COVID-19, Mask, Acne Vulgaris





The Use of Traditional Health Services and Their Determinants in The Coastal Area of Laha Village of Ambon City, Indonesia

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Abstract

Traditional health services are one of the alternative treatments used by the Indonesian people. In its utilization, the community often uses traditional health services as the primary treatment compared to treatment from medical professionals. The study analyzed factors associated with using traditional health services in the Laha Village community. Data were derived from a coastal area household health survey conducted in November 2022 in Laha Village, Ambon City. The dependent variable in this study was traditional health services utilization. Independent variables included demographic status and lifestyle, and health problems underlying traditional health utilization. This analysis uses a multivariate logistic regression method. The results of the analysis showed that there was a significant association between utilization of traditional health services and demographic status of age >60 years (aOR=4.13; 95%CI: 1.47-11.55; p=0.007), having a family medicine garden (aOR=25.18; 95%CI: 12.41-51.07 p<0.001), and cigarette smoking (aOR=3.45; 95%CI: 1.31-9.05; p=0.012). This study also examined the relationship between disease type and utilization of traditional health services. There was a significant association between joint diseases (aOR=2.34; 95%CI: 1.37-4.02; p=0.002), injury (aOR=0.30; 95%CI: 0.16-0.56; p<0.001), and utilization of traditional health services. This study shows the need for health promotion efforts on the utilization of traditional health services in the community to increase knowledge and correct understanding regarding the utilization of traditional health services.

Keywords: Coastal Areas, Traditional Health Services, Family Medicinal Plants.





Expression of Natural Resistance–Associated Macrophage Protein 1 Gene (NRAMP1) and Vitamin D Receptor Gene in a family with various type leprosy

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Abstract

Leprosy is a chronic infectious disease caused by the *Mycobacterium leprae*. The course of leprosy is complicatedly with host factors such as heredity and immunity. As a key part of innate immunity and the major host of leprosy pathogens, macrophage have long been the focus of leprosy research. Several macrophage activation pathway including Toll-like receptors 2 and 1 (TLR 2/1), tumor growth factor- α (TNF- α), vitamin D receptor (VDR) and NRAMP 1. Human NRAMP1 may be an important determinant of innate or developmental susceptibility in leprosy. Vitamin D acts as an immunomodulator through a VDR-mediated antibacterial pathway that affects the innate immune system. This research is a qualitative observational study involving a family of four people with various types of leprosy. Quantitation of NRAMP 1 and VDR expression from quantitative real time PCR. The highest expression of the NRAMP 1 AND VDR genes was found in the mother, followed by father and their two children. High expression indicate high macrophage response associated with mild clinical manifestations and non-leprosy reaction, whereas lower gene expression indicates a lower macrophage response associated with severe clinical manifestation and severe leprosy reaction (ENL necroticans). The expression of the NRAMP1 and VDR genes of father and the two children has no significant differences compared to mother's sample. There are possibilities that same genetic susceptibility like in father and children sample can influence macrophage response which then influence clinical status. Candidate gene approaches have helped to identify key genes in this early phase of host-pathogen interaction.

Keywords: Leprosy, Nramp 1, VDR



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ETHNOPHARMACOLOGICAL STUDY OF MEDICAL PLANTS IN TRADITIONAL MEDICINE IN THE COASTAL AREA OF SEVEN ISLAND, NORTH WEST SERAM DISTRICT, CENTRAL MALUKU REGENCY: A QUALITATIVE STUDY

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Abstract

Indonesia as a country with high biodiversity has the potential to use plants as medicine. Thus, ethnopharmacology studies or studies of medicinal plants need to be carried out in order to increase knowledge and increase the use of plants as medicine. The purpose of this study was to find out information about the types, parts, processing methods, how to use medicinal plants used in the treatment of the Island 7 Coastal Region Community, North West Seram District, so that medicinal plants that have not been widely studied and known will be obtained. This research uses qualitative descriptive research with an exploratory observational design. Data collection was carried out using in-depth interviews with 20 informants and a Head of Public Health Center in December 2021. The data obtained were analyzed qualitatively, the results showed that in the North West Seram District, 69 types of medicinal plants were documented. The most use of medicinal plants is the leaves, most of the plant processing is boiled(58%) and then used by drinking (58%).

Keywords: Ethnopharmacology, Medicinal Plants, Central Maluku District, North West Seram.





Level of education and source of information were associated with community's optimal preventive measures against Dengue Hemorrhagic Fever in the coastal area of Suli Village, Maluku

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Abstract

Dengue hemorrhagic fever (DHF) is a major cause of morbidity and mortality in Southeast Asia and is commonly found in Indonesia. Appropriate preventive measures against DHF are therefore essential to prevent the occurrence of DHF in the community. This study aimed to determine the relationship between socio-demographic factors and sources of information about DHF with appropriate preventive measures in the coastal community of Suli Village, Central Maluku District. Data were derived from a rapid survey conducted in December 2022 involving 217 respondents living in Suli Village. The dependent variable was appropriate preventive measures, and the independent variables included respondents' age, sex, occupation, level of education, household income, and source of information about DHF. Our study shows that only 31% of respondents had optimal preventive measures against DHF. Factors associated with reduced odds of optimal preventive measures were low education level and the source of information from which respondents received messages about DHS. The odds of optimal preventive measures were 77% lower in respondents who graduated from senior high school than those who graduated from an academy/university (aOR= 0.23. 95%CI: 0.09-0.57, $p=0.002$). The odds was also 78% lower in respondents receiving information about DHF from family/friends/neighbors than health workers (aOR= 0.22. 95%CI: 0.07-0.71, $p=0.011$). Our findings show the importance of increasing awareness amongst the general community, particularly with low educational backgrounds, regarding appropriate preventive measures to control DHF.

Keywords: DHF Control, Health Information, Maluku



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Anemia and Compliance of Iron-Folic Acid (IFA) Tablets Consumption in Adolescent Women in Poka/Rumah Tiga Area, One of The Stunting Locus in Ambon City

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Abstract

Adolescent girls with anemia are also at risk of developing anemia during pregnancy, which will have an adverse effect on fetus growth and development as well as pregnancy outcome. One of the specific interventions to prevent anemia is the provision of iron-folic acid (IFA) supplements. This study aimed to determine factors associated with anemia and compliance with IFA supplementation in adolescent women in the catchment area of the Poka-Rumah Tiga Ambon Health Center, one of the stunting locus in Ambon City. Data was collected in August 2022 using a cross-sectional design with a total sampling method. Respondents were 522 female students from three high schools/equivalents in the Poka-Rumah Tiga area (SMKN 5 Ambon, SMAN 3 Ambon, and MAN Al-Mabrur). Logistic regression analysis was employed to identify factors related to the incidence of anemia and the consumption of iron tablets. The results showed a high prevalence of anemia (49.23%) and low compliance with the consumption of IFA tablets (14.75%) in high school students involved in our study. The odds of anemia low in female students with no history of helminthiasis (aOR=0.30, 95%CI: 0.09-0.99, $p=0.050$). The odds of compliance to taking IFA supplements increased in those who did not have the habit of consuming green vegetables (aOR=1.94, 95% CI: 1.10-3.41, $p=0.021$). The odds of compliance also increased significantly in those who knew at least one benefit of taking IFA supplement (aOR=3.41, 95% CI: 1.75-6.65, $p<0.001$) and at least two of the benefits of consuming IFA supplements (aOR=6.05, 95%CI: 2.28-16.08, $p<0.001$). The results showed the importance of continuous health promotion efforts to improve student adherence to IFA supplements to prevent anemia.

Keywords: Compliance, high school students, low hemoglobin level



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Breath Hold Diving Behavior of Traditional Fisherman in Lombok Utara Distric West Nusa Tenggara

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Abstract

The breath hold dive technique is still used by traditional fishermen to find fish. This diving technique has health risks. This writing aims to provide an overview of the behavior of breathhold diving in traditional fishermen. This case report provides an overview of a 38-year-old man who has been a traditional fisherman for about 7 years. Diving speed (descent) is about 1 meter/second to reach an average depth of 20 meters. The speed of rising to the surface is ± 1.25 meters/second. This activity is carried out at night, approximately 8 hours per day, and 6 days a week. Overnight, descent-ascent activities are carried out $\pm 50-70$ times with a long time on the surface each time the ascent (surface interval) is around 10-15 minutes. Diving fishermen have also applied equalization techniques during descent to prevent ear barotrauma. The equipment used is a rope to determine the depth; lead weight weighing 1 kg to speed up the descent; diving goggles as eye protection and fins to improve movement efficiency. On general physical examination, no abnormalities were found, nor was there any splenomegaly. There is no history of previous diving accidents. Diving is done in groups with different breath holding times. The fishermen get diving knowledge from generation to generation. The duration of breath holding is longer, along with the longer history of dives. With a high diving intensity, fishermen can pose risks such as fatigue, muscle cramps, barotrauma which can be dangerous. Education is required for safe breath hold dives.

Keywords: traditional fisherman, breath hold dive technique, education



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Analysis Of The Distribution Of The Number Of Suspected Measles Cases With The Number Of Measles Immunization Coverage (MR) In Indonesia In 2019 – 2021

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Abstract

Background: measles is an infectious disease caused by Paroxymyavirus virus which generally affects children. Disease mapping resulting from spatial analysis is used in epidemiological investigations using geographic information systems to improve understanding and assist in decision-making.

Objective: This study aims to map the distribution of suspected measles cases in each province in Indonesia in 2019-2021.

Methods: this study is a descriptive study with spatial analysis. The population of this study was all suspected measles-rubella cases during 2019-2022. **Results:** the results showed that of the 33 provinces, there was 1 intervention Province, North Maluku. Based on the population density of North Maluku province tends not to follow the population density because it occurs in less dense areas. This province is a priority because it has an increase in cases in the last 2 years (2020-2021).

Conclusion: the researchers hope that this study can provide useful information about areas where suspected measles cases are always found and become a reference for local health offices to make intervention decisions against the disease.

Keywords: Spatial, Measles, Immunization Coverage



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Description About Implementation Of Integrated Health Service Center (Posbindu) In The Prevention And Control Of Diabetes Mellitus Type 2 In Sumenep District During Pandemic Covid-19 In 2020

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Abstract

Diabetes mellitus Type 2 is one of comorbidities found in patients with COVID-19. Posbindu is one of national programs created by government in prevention and control of DM through early detection where diabetes detection coverage has not yet target of glycemic control. This study used descriptive with observational approach. This research was conducted at Sumenep District Health Office in February-March 2021. This study used primary data by interviewing the head of P2PTM and secondary data with data on distribution of diabetes mellitus incidence in Sumenep District during and before pandemic COVID-19. Data collection technique is documentation. Data processing techniques are Editing with data presentation is tables and text. The results showed that Input aspect for human resources consists of 5 members of PTM section who have multiple roles. Allocation comes from BOK and availability of facilities and infrastructure. There are five tables and media used are back and forth sheets when counseling and poster media. Overview of process aspect is carried out based on report data of diabetes mellitus type 2. Activity planning follows existing guidelines. Organization is based on duties and functions of each officer. Program managers ensure that activities are recorded and reported. Activities of Posbindu are carried out by trained cadres and targets has monitor book. Monitoring is done through data analysis of routine reports, field visits, and monitoring and evaluation. Examination coverage and service didn't reach the 100% SPM but 80%. Standard of examination services DM during pandemic COVID-19 is 339%, so it has national target.

Keywords: Covid-19, Diabetes Mellitus Type 2, Integrated Health Service Center (Posbindu)



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Prevalence and Factors Associated with Hypertension in the Coastal Community of Laha Village: A Cross-Sectional Study

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Abstract

Hypertension, or high blood pressure, is a global health problem associated with an increased risk of cardiovascular diseases. Understanding the prevalence and factors associated with hypertension in specific populations will help inform targeted interventions in preventing and managing hypertension. This study aimed to determine the prevalence and identify factors associated with hypertension in the coastal community of Laha Village, Ambon City. Data were obtained from a health survey conducted in households along the coastal region of Laha Village in 2022. We used information collected from 757 respondents. The dependent variable in this study was hypertension, while the independent variables consisted of demographic status, lifestyle, and coexisting diseases. Data analysis was performed using the multivariate logistic regression method. We found that the prevalence of hypertension among the coastal community in Laha Village was 6.4%. There was a significant association between demographic factors and hypertension, specifically in the age groups of 41-60 years (aOR=10.09; 95% CI:1.20-84.47; $p=0.033$) and over 60 years (aOR=28.18; 95% CI:3.27-242.97; $p=0.002$). Interestingly, there was a significant association between occasional smoking (aOR=13.95; 95%CI: 1.42-136.35; $p=0.023$) and non-smoking (aOR=12.50; 95%CI: 1.54-101.13; $p=0.018$) and hypertension. We also found a significant association between coexisting joint diseases and hypertension (aOR=3.03; 95% CI: 1.60-5.70; $p < 0.001$). Our findings imply the need for promoting a healthy lifestyle to reduce the risk of hypertension, particularly among coastal communities. This includes encouraging the adoption of a healthy diet and increased physical activity. Additionally, our research highlights the importance of developing and implementing community-wide awareness campaigns in Laha Village. These campaigns should educate the coastal community about hypertension, emphasizing the significance of early detection, regular blood pressure monitoring, and making lifestyle modifications for both prevention and management.

Keywords: Hypertension, Prevalence, Factors, Coastal Community, Laha Village, Cross-Sectional Study



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PETER: Psychological First Aid Model for Military Cadets in Indonesia

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Abstract

Military personnel have an essential role in maintaining national security and resilience. Before serving their duty, military personnel must participate in special education to prepare themselves as cadets. In carrying out military education, cadets are faced with various triggers for stress reactions and various pressing situations, especially in advanced military education (pendidikan militer golongan), which is often carried out in coastal and island areas. Untreated stress reactions can develop into prolonged psychological disorders. In order to stop the further development of the disorder, we developed a peer-to-peer Psychological First Aid (PFA) model called "PETER" (Pendidikan Militer), an early intervention guide to help control cadets' stress reactions in military education. The objectives of this study are to develop and modify existing psychological first aid (PFA) guides so they would be appropriate to use by military cadets in Indonesia. Two Special Forces Command (Kopassus) members who had completed their military education were recruited using a purposive sampling technique. Semi-structured interviews were conducted face-to-face, and the results of the interviews were analyzed using Interpretative Phenomenological Analysis (IPA). The analysis results complement the model in showing action forms and sentence examples to deal with stress reactions. The study's results discuss seven steps that colleagues can take when they see members experiencing stress reactions, including 1) Initiating contact and attachment, 2) Securing the member, 3) Calming and growing a sense of comfort, 4) Increasing self-confidence, 5) Providing social support, 6) Giving hope, and 7) Dealing with external support. PETER PFA starts with physical assistance and then focuses on verbal actions that could be performed with a peer-to-peer system.

Keywords: Stress Reaction, Military Psychology, Psychological First Aid



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IDENTIFICATION OF ANTICANCER COMPOUNDS EXTRACT FRUIT PETALS *Rhizophora mucronata* HULALIU VILLAGE, HARUKU ISLAND DISTRICT, CENTRAL MOLUCCAS REGENCY

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Abstract

Background: Cancer is one of the main causes of death worldwide. The highest cancer death rate in the world is lung cancer, followed by deaths from colon, stomach, liver, and breast cancer. Alternative treatment can be done using traditional plants with anticancer potential, including *Rhizophora mucronata*. *Rhizophora mucronata* contains secondary metabolites such as tannins, flavonoids, saponins, phenols, and hydroquinones which act as antioxidants. Based on the potential of the *Rhizophora mucronata* plant, researchers are interested in conducting this research for a preliminary test of *Rhizophora mucronata* calyx from Hulaliu village regarding its potential as an anticancer.

Methods: This type of research is descriptive qualitative, and quantitative with a laboratory experiment approach. This research was carried out through the extraction process using n-hexane, ethyl acetate, and methanol from *Rhizophora mucronata* fruit petals, the process of identifying anticancer compounds through quantitative phytochemical testing and the process of analyzing anticancer compounds through quantitative Liquid Chromatography Tandem-Mass Spectrometry (LC-MS) testing.

Results: The results showed that *Rhizophora mucronata*, with phytochemical tests, found secondary metabolites, namely terpenoids, steroids, flavonoids, saponins, and tannins. LC-MS test found quercetin compounds belonging to the flavonol class of flavonoids, which act as anticancer potential.

Conclusion: There are secondary metabolites, terpenoids, steroids, flavonoids, saponins, and tannins. There is a quercetin compound that has the potential as an anticancer.

Keywords: Cancer, Anticancer, Secondary metabolites, *Rhizophora mucronata*





Detecting Adolescent Students' Mental Health Problems at a School in Ambon City, Indonesia

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Abstract

Globally, the primary disease burden for adolescents today is mental health conditions, which are still often not taken seriously. Many adolescents spend time at school, making it an ideal place to promote and prevent mental health problems. Thus, this research was conducted to detect early adolescent mental health problems at a school in Ambon City. This mixed method study detected mental health problems of adolescent students using the Pediatric Symptom Checklist-17 (PSC-17) questionnaire on 300 respondents. In addition, in-depth interviews were conducted with four informants from the education and health sectors. Forty-one per cent (95 girls and 28 boys) of the respondents had a total PSC-17 score ≥ 15 , 57.7% (135 girls and 38 boys) had an internal score ≥ 5 , 21.3% (49 girls and 15 boys) had an attention score ≥ 7 , and 9.7% (13 girls and 16 boys) had an externalization score ≥ 7 . This indicates a risk of problems with overall psychosocial functioning with difficulties associated with mostly the internalization subscale and more problems in adolescent girls except for the externalization subscale. With $p < 0.05$, it shows a significant relationship between almost all scores, except internalization scores, with age and grade level. In-depth interviews have shown different opinions about mental health problems in adolescents at school. The adolescent students in this study were shown to be at risk for emotional and behaviour problems, which require further examination as part of preventive efforts.

Keywords: Mental health, Problem, Pediatric Symptom Checklist-17, Adolescent, School



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Adolescent Pregnancy Is Associated With Increased Likelihood of Mental Disorders in The Coastal Community of Ambon City, Indonesia

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Abstract

Mental health is an integral part of health and is strongly related to physical and behavioral health. The coastal area, as a transition from sea and land areas, could affect the quality of health of coastal communities. Demanding access to health facilities due to geographical conditions could lead to difficulties in maintaining health, especially mental health. This study aimed to analyze factors associated with mental health disorders in the community living in the coastal area of Laha Village, Ambon City. Data were derived from a coastal area household health survey conducted in November 2022 in Laha. The dependent variable in this study was mental health disorders based on the Self-Rating Questionnaire (SRQ-20). Independent variables included demographic status and risk factors affecting mental health and health problems associated with mental health disorders. This analysis used a multivariate logistic regression method. The results of the analysis obtained from a total of 653 respondents, 29 respondents experienced mental disorders. This study showed a significant association between mental health disorders and demographic status of age <25 years (aOR=5.20; 95%CI: 1.34-20.06; p=0.017), age >60 years (aOR=6.45; 95%CI: 1.66-24.99; p=0.007), and first pregnancy age <20 years (aOR=4.9; 95%CI: 1.11-21.53 p<0.035). The study also found an association between mental health disorders with diarrhea (aOR=7.05; 95%CI: 2.76-17.98; p<0.001). This study shows the need for mental health promotion in the community to increase knowledge and awareness of the importance of mental health and the risk factors that are expected to prevent or reduce mental health disorders.

Keywords: Self-Rating Questionnaire (SRQ-20), Mental health, Ambon, Adolescent pregnancy, Coastal Community



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The Relationship Between Workload And Burnout With Work Motivation In Stone Miners In Hatu Village, West Leihitu District In 2022

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Abstract

Work motivation is a driving force as well as the best tool in creating joy at work generating and directing towards achieving goals. Motivation is needed by everyone at work to produce good performance. Stone mining is a job that is still done manually with a large workload, as well as a work processes that can cause burnout which is a factor that affecting work motivation. This study aims to examine the relationship between workload, and burnout with work motivation on stone miners in Hatu Village, West Leihitu District. The method used is observational analytic with a cross-sectional design, and total sampling technique. Data collection using questionnaires and observation of the respondent's work. In the analysis of data by using the chi-square test found no significant relationship between weight of workload, work period and burnout with the work motivation with the p value of weight of workload ($p = 0.301$), the work period ($p = 0.307$), and burnout ($p = 0.289$), meanwhile the duration of work has a significant relationship with work motivation with p value ($p = 0.001$).

Keywords : Workload, *Weight of workload*, *Working period*, *Duration of work*, *Burnout*, *Stone miner*



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Convalesces Rash in 2 Years Old Girl Dengue with Warning Signs: A Case Report

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Abstract

Dengue is a disease caused by the dengue virus. Dengue virus is estimated to cause over 100 million infections throughout the world annually. Indonesia, a transcontinental unitary sovereign state located in Southeast Asia, is a tropical country where both main mosquito vector species of dengue virus, *Aedes aegypti* and *Ae. albopictus*, are endemic almost in all regions. Clinical manifestations of dengue can range from asymptomatic infection to severe infection with multi-organ failure. Dengue virus infection involves three phases of illness; the febrile phase, the critical phase (plasma leakage) and the convalescent (reabsorption) phase. We present case, a 2 years old girl cold hands and feet since 12 hours before come to the hospital. History of fever 2 days ago. Complaints accompanied by vomiting and shortness of breath. The patient also complained constipation, have not urinating since the morning, and appeared petechiae on the skin. Physical examination found moderate sick in general condition, apathetic, blood pressure was 70/50 mmHg, heart rate 128 time/min, regular, weak strain and volume, breathing 36 times/min, temperature 36,3°C. Generalize status obtained dry lips, thoracic with retraction, diffuse rales on both lungs, no hepatomegaly, cold extremities and convalesces rash with positive rumpleed test. Laboratory examination found 22% increasing hematocrit, platelet count of 97,000/ml. Radiography thorax examination by using right lateral decubitus found pleural effusion. Patients diagnosed with severe dengue. Patient receive intravenous fluid drip RL 10 ml/kgBW twice, continue 7 ml/kgBW in an hour and 5ml/kgBW 2 hours, paracetamol injection in emergency department.

Keywords: children, dengue haemorrhagic fever, shock, convalesces rash



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The Efficacy and Safety of Mesenchymal Stem Cells in Rheumatoid Arthritis: A Systematic Review and Metanalysis

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Abstract

Background: Rheumatoid arthritis (RA) is a systemic autoimmune disease that causes damage to the joints. Stem cells perform regenerative processes in repairing tissues and organs through differentiation and immunomodulation. This paper aims to review mesenchymal stem cells (MSCs) in RA. **Methods:** We systematically searched PubMed for peer-reviewed studies examining the effects of MSCs in RA. The research included in this review was a study from 2013 to 2023, a randomized control trial using intervention MSCs, the full text of the article can be obtained, and the patient's age is over 18 years. Three reviewers independently extracted clinical data, trial characteristics, and patient characteristics and used the Cochrane Risk of Bias Assessment Tool. The certainty of the evidence was assessed using the Grading of Recommendations Assessment, Development, and Evaluation. **Results:** MSCs have a mechanism of anti-inflammation, regenerative, and immunomodulating in RA. Various immune cells, including macrophages, DCs, NKs, B cells, and T cells with multiple subtypes, induce a complex immune response in RA. **Conclusions:** MSCs can be viewed as a viable alternative strategy with the potential to offer potent immunomodulatory capabilities for treating RA.

Keywords: immunomodulation, mesenchymal stem cell, rheumatoid arthritis.



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Factors Associated with Joint Diseases in The Coastal Community of Laha Village in Ambon, Indonesia

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Abstract

Joint diseases have remained a public health problem in Indonesia, even the world, for decades. These conditions are not only experienced by the elderly yet can also occur at a relatively young age. The research objective was to analyze the factors associated with joint disease in the Laha Village in Ambon City. Data were derived from a household health survey in the Laha Village, Ambon City coastal area, in 2022. The dependent variable in this study is the occurrence of joint disease, with the independent variables consisting of demographic status, lifestyle, and dietary patterns. Data analysis used the multivariate logistic regression method. In this study, the prevalence of joint disease in coastal communities in Laha Village was 14.8%. The results of data analysis showed that demographic factors that were significantly related to joint disease were: age >31 years (aOR=2.8; 95 CI%: 1.25-1.92; $p<0.001$) and the respondents who did not work or were housewives (aOR=2.00; 95 CI%: 1.02-3.94; $p=0.041$). In addition, a significant association was found between joint disease and not smoking habits (aOR=3.85; 95% CI: 1.65-8.98; $p=0.002$). The occurrence of joint disease was also associated with dietary patterns, namely the habit of not consuming salty foods (aOR=0.35; 95% CI: 0.13-0.94; $p=0.038$), rarely consuming meat (aOR=2.77; 95 CI%: 1.26-6.10; $p=0.011$) and did not consume soft drinks (aOR=2.86; 95 CI%: 1.19-6.86; $p=0.012$). The results of this study indicate that it is necessary to improve a healthy lifestyle and balanced dietary behavior to reduce the incidence of joint disease.

Keywords: Joint Disease, Coastal Area, Healthy Lifestyles



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An overview of the level of community knowledge on the initial handling of jellyfish stings in Luhu Village, Huamual sub-district, Western Seram Regency in 2022

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Abstract

Jellyfish is a dangerous marine animal that often attacks humans through its sting. Jellyfish contain toxins such as cardiotoxin, neurotoxin, and myotoxin which when exposed to humans can cause shock and even death. The purpose of this study was to determine the level of knowledge of the community in Luhu Village regarding the initial handling of jellyfish stings. This study is a descriptive quantitative study using a cross sectional design with a community sample of 110 samples. Data were collected using questionnaire. The data from the questionnaire was then processed and analyzed using the SPSS program. The results of the study based on the characteristics of the respondents, the most respondents found in this study were female as many as 56 respondents (50.9%), the age of the respondents was adult age as many as 85 respondents (7.3%), many respondents' jobs were farmers, namely 36 respondents (32.7%), while the level of education found was high school, namely 47 respondents (42.7%). Of the 110 respondents, 25 respondents (22.7%) had poor knowledge, 57 respondents (51.8%) had sufficient knowledge, and 28 respondents (25.5%) had good knowledge. Knowledge is very influential on how to handle the initial jellyfish sting. Therefore, there is a need for socialization and counseling efforts as well as training by health workers to the community in order to increase the level of knowledge.

Keywords: Jellyfish, Jellyfish Venom, Level Of Knowledge



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Sensitivity Test Of Bacteria Isolate Causes Of Urinary Tract Infection To Antibiotics

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Abstract

Urinary tract infection is an infection caused by the growth of microorganisms in the human urinary tract which involves the kidneys, ureters, bladder or urethra. Urinary tract infections are caused by various types of bacteria including *E. coli*, *Klebsiella* sp, *Proteus* sp, *P. aeruginosa*, *Acinobacter*, and *Enterococcus faecalis*, but 90% are caused by *E. coli*. Urinary tract infections in Indonesia are still relatively high, and according to data from the Ministry of Health, the number of UTI cases is approximately 180,000 new cases per year, which is a serious health problem because it can cause complications in other organs of the body. Antibiotics are still the main choice for the treatment of tract infections. This study aimed to determine the sensitivity of pathogenic bacteria causing tract infections to several types of antibiotics. This research is a true experimental laboratory research with a post-test controlled group design. In this study, the paper disc diffusion method was used. and using isolates of pathogenic bacteria isolated from urine samples of UTI patients, namely *Escherichia coli*, *Staphylococcus warneri*, *Staphylococcus haemolyticus*, *Enterobacter aerogenes*, *Enterococcus faecium*, and *Enterococcus faecalis*, were tested for their sensitivity to the antibiotics Amoxicillin, Gentamicin, Sulfamethoxazole, Ampicillin Sulbactam, Nitrofurantoin, Cefixime, Ciprofloxacin and Meropenem. The results of this study showed that all the bacteria tested were resistant to the antibiotic cefixime, and that all the bacteria tested were sensitive to the antibiotics Meropenem and Nitrofurantoin. Bacteria that are sensitive to Ciprofloxacin and Gentamicin are *Escherichia coli*, *Staphylococcus warneri*, *Enterobacter aerogenes*, *Enterococcus faecium*, and *Enterococcus faecalis*, while those that are resistant are *Staphylococcus haemolyticus*. Bacteria that are sensitive to amoxicillin antibiotics are *Staphylococcus warneri*, *Staphylococcus haemolyticus*, *Enterobacter aerogenes*, *Enterococcus faecium*, *Enterococcus faecalis*, and *Escherichia coli*, which are among the main causes of UTIs and have become resistant. *Enterobacter aerogenes* is sensitive to the antibiotic ampicillin sulbactam, whereas *Escherichia coli*, *Staphylococcus warneri*, *Staphylococcus haemolyticus*, *Enterococcus faecium*, and *Enterococcus faecalis* are resistant.

Keywords: antibiotic, resistance, urinary tract infection





An Overview of Early Detection of Community Mental Health Status in Laha Village, Ambon City in 2022

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Abstract

A person is said to be healthy if he is also mentally healthy not just physically. Coastal areas, which are transitional areas of land and sea, can affect the health of coastal communities due to pressures from these two areas. The harsh character of coastal communities, difficult access to health facilities due to geographical conditions can cause difficulties in regulating emotions and maintaining mental health. The purpose of this study was to determine the description of early detection of community mental health status in the community of Laha Village, Ambon city. Data were sourced from a coastal area household health survey conducted in November 2022 in Laha Village. The instrument used in this study is based on the Self-Rating Questionnaire (SRQ-20). This study describes the mental health of the community in Laha village. The results of the analysis obtained early detection of mental health amounted to 653 respondents, of which 4.4% indicated mental health problems, normal / no indication of mental health problems by 95.6%; somatic symptoms 89.6%; symptoms of decreased energy 41.3%; symptoms of anxiety 55.1%; symptoms of depression 27.5% and cognitive symptoms 34.4%. This study shows that the importance of early detection and promotion of mental health for the community is expected to increase public awareness of mental health which in turn can prevent mental health disorders and prevent delays in treatment in the early phase. As a follow-up action to this research, mental health socialization will be conducted to the Laha village community.

Keywords: Mental Health, Self-Rating Questionnaire, Laha Village, Early Detection



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Predation Speed of The Male Betta Fish (*Betta splendens*) of The Halfmoon Variety and Multi-Colored Plakat Variety Against *Aedes aegypti* Pupae

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Abstract

Research problem The *Aedes aegypti* mosquito is the primary vector of arboviral diseases. The Ministry of Health of the Republic of Indonesia has established vector control as the main program to reduce arbovirus infections. Vector control using biological methods involves using predatory fish. Betta fish have many varieties, but information about their predation ability according to those varieties is not yet complete. **Objectives** The aim of this study was to compare the predation speed of the male betta fish (*Betta splendens*) of the halfmoon variety and multi-colored plakat variety against *Aedes aegypti* pupae. **Methods** This study is laboratory experiment research. The fish used in this study were male betta fish (*Betta splendens*) of the halfmoon variety and multi-colored plakat variety. One aquarium with three liters of water containing one fish was given 25 *Ae. aegypti* pupae. Testing for each variety of fish was carried out in five replications. Predation was tested during the day (12.00 WIB). The time of fish predation was observed until all the pupae had been eaten. The data were analyzed descriptively. **Results** The results obtained showed that all varieties of fish tested were able to eat the *Ae. aegypti* pupae. The halfmoon variety had an average predation time of 6.4 minutes, while the multi-colored plakat variety had an average predation time of 2.6 minutes. **Conclusion** Betta fish of the multi-colored plakat variety are faster and have the potential to become predatory fish compared to the halfmoon variety. **The significance of the findings** The research results will help the government use Betta fish varieties that are more targeted and effectively implemented in society.

Keywords: *Betta splendens*, multi-colored plakat variety, halfmoon variety, *Aedes aegypti*, pupae



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Characteristics of divers' peak expiratory flow (PEF) values in the coastal communities of the Nusa Laut Island, Maluku

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Abstract

Maluku is one of the archipelago provinces in Indonesia. The livelihoods of the people, most of whom are traditional fishermen and divers, are interesting things that have never been studied before. Diving of more than 20 meters carries a significant risk of decompression sickness and reduced lung vital capacity. The peak expiratory flow meter (APE) is a tool that is easy to use and its use is very simple to be able to assess lung function compared to other examination tools. The aim of this study was to determine the average APE value characteristics of divers in coastal communities on the island of Nusa Laut. The research method used is descriptive analytic research with a cross-sectional method with a total sample of 70 divers. The data taken are primary data using questionnaires and APE examination. The research was conducted on Nusa Laut Island, Central Maluku Regency in September 2022. There are 5 villages on Nusa Laut Island (Titawai Village, Sila Village, Abubu Village, Akoon Village, Ameth Village). All divers were male with the highest number in Akoon village as many as 22 divers (30.55%). The average age of the divers was 46.3 years ($p=0.016$). The average body weight of the divers was 62.2 kg ($p=0.2$), and the average body height was 166.16 cm ($p=0.2$). Body Mass Index (BMI) of most divers was normal as many as 44 divers (62.9%), obese 3 divers (4.2%), overweight 14 divers (20%) and underweight 9 divers (12.9 %). The most types of divers are traditional divers 68 (97.1%). The diving depth is mostly ≤ 10 meters as many as 58 divers (82.9%). The duration of diving is mostly ≥ 12 hours in one month as many as 62 divers (88.6%). For smoking status, 5 divers (7.1%) had never smoked, while 65 divers (92.9%) were smokers. The average diver's peak expiratory current (APE) value is 531.43 cc with the lowest APE value being 220 cc and the highest being 800 cc ($p=0.052$). The category of normal diver's peak expiratory flow was 58 divers (82.9%) and obstruction 12 divers (17.1%).

Keywords: Peak Expiratory Flow (PEF), Divers, Coastal Community



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Modeling Posture Related Factor for Work-Related Musculoskeletal Disorders among Workers of Traditional Manufacture Industries

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Abstract

Work-related musculoskeletal disorders (WMSDs) are most prevalent occupational health issues that could affect employees physically and socially. Ponorogo regency has several traditional manufacturing industries that support regional economic growth. The issues in this sector include the low adoption of current technology and the predominance of manual handling techniques, which raises the risk of WMSDs among employees.

Based on SNI no. 9011:2021, the National Standardization Agency (BSN) establishes standards to evaluate possible ergonomic risks in the workplace. However, not every industry, particularly small ones, has a procedure for auditing these risks. This study aims to develop a model to evaluate WMSDs risks based on specific work posture among traditional manufacture industries.

Using cross-sectional data collecting method, 250 workers participated in this observational study as respondents who were randomly selected using a stratified random sampling. Strata were determined by company scale. The model were designed by WMSDs as dependent variable and ergonomics hazard risks as determinants consisting of 10 indicators (arm movement, hand effort, awkward posture, direct pressure, vibration, environment, control of work rhythm, pushing/pulling, keyboard usage, and manual handling). Neural networks algorithm is used to determine the relationships path among variables.

The result finds that arm motions (2.5), uncomfortable postures (2.4), and rhythm control (2.3) had the largest risk weight for WMSDs. Neck (8.2), right shoulder (6.6) and calf (6.1) are the body parts that most exposed to the WMSDs risk due to work factor. The data modelling show that complaints on each body part are caused by specific work postures.

Keywords: Posture risk, Work-related musculoskeletal disorders, Manufacture industries





The Effect Of Alcoholic Beverage "Sopi Mayang" On Cytochrome Cyp2e1 Protein Levels In Male White Rats (*Rattus Norvegicus*)

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Abstract

One of the cultures inherent in the daily life of the people of Maluku Province is consuming an alcoholic beverage called "Sopi". The most widely consumed Sopi beverage by the public is "Sopi Mayang" with an alcohol content of 4-5%. Alcoholic beverages can contain Cytochrome CYP2E1 protein. Cytochrome P4502E1 (CYP2E1) has an important role in the generation of ROS and CYP2E1 is also present in alcohol itself. This study aims to analyze the difference in the administration of alcoholic Sopi Mayang with an oral dose of 2.7 ml/200g BW/day; 4.05 ml/200g BW/day; 5.4 ml/200g BW/day; and control with aquadest orally 2 ml/200g BW/day; on CYP2E1 protein levels in sperm mitochondria, for 60 days in male white rats (*Rattus norvegicus*). This research is a laboratory experimental study using the Randomized Post-test Only Control Group Design. The number of samples used in this study were 40 male white rats of the Wistar Strain (*Rattus norvegicus*) with a large sample taking techniques using the Steel and Torrie formula. Examination of protein levels using the Elisa method. Data was analyzed using the One Way Anova test with a confidence level of 95% or $\alpha = 0.05$. The results of the research data analysis found that the higher the dose of Sopi Mayang given had an effect on increasing the amount of CYP2E1 protein levels, where the administration of Sopi Mayang at a dose of 2.7 ml increased the CYP2E1 protein level from 6.59 without giving Sopi Mayang to 23.8 ($p = 0.0001$). Sopi Mayang 4.05 ml increased CYP2E1 protein levels from 27.44 to 44.03 ($p=0.0001$). Sopi Mayang's dose of 5.4 ml increased CYP2E1 from 47.05 to 60.27 ($p=0.0001$). The conclusion of this study is that there is an increase in the crude amount of CYP2E1 protein in the administration of Sopi Mayang.

Keywords: Cytochrome CYP2E1, Sopi Mayang





Analysis Of The Distribution Of The Number Of Suspected Measles Cases With The Number Of Measles Immunization Coverage (MR) In Indonesia In 2019 – 2021

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Abstract

Background: measles is an infectious disease caused by Paroxymyavirus virus which generally affects children. Disease mapping resulting from spatial analysis is used in epidemiological investigations using geographic information systems to improve understanding and assist in decision-making.

Objective: This study aims to map the distribution of suspected measles cases in each province in Indonesia in 2019-2021.

Methods: this study is a descriptive study with spatial analysis. The population of this study was all suspected measles-rubella cases during 2019-2022. Results: the results showed that of the 33 provinces, there was 1 intervention Province, North Maluku. Based on the population density of North Maluku province tends not to follow the population density because it occurs in less dense areas. This province is a priority because it has an increase in cases in the last 2 years (2020-2021).

Conclusion: the researchers hope that this study can provide useful information about areas where suspected measles cases are always found and become a reference for local health offices to make intervention decisions against the disease.

Keywords: Spatial, Measles, Immunization Coverage



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The Effectiveness of Health Promotion Using Leaflets and Lectures in Changing Knowledge and Attitudes of Breastfeeding Mothers About Exclusive Breastfeeding in Dusun Talaga Ratu, Kairatu

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Abstract

Optimal infant growth and development are influenced by exclusive breastfeeding. Exclusive breastfeeding means the infants are only given breast milk without additional fluids or other foods. WHO and UNICEF have recommended an exclusive breastfeeding program for infants aged 0 to 6 months. UNICEF stated that from 2015-2021, the percentage of exclusive breastfeeding was only 47% globally. Exclusive breastfeeding coverage in Maluku is still below the national standard of 80%, and in Kairatu village, it only reached 53%, the lowest in Dusun Talaga Ratu, reaching only 11%. This issue was influenced by a lack of knowledge that will impact the attitudes and actions of the mothers and a lack of education from health workers. This study aimed to determine the effectiveness of health promotion on the knowledge and attitudes of breastfeeding mothers using leaflets and lectures on exclusive breastfeeding in Dusun Talaga Ratu. This study was quasi-experimental; the sample size was the entire population, which consisted of 15 people. The data were analyzed using the Wilcoxon test. The results showed the effectiveness of health promotion with leaflets and lecture media in changing the knowledge and attitudes of breastfeeding mothers about exclusive breastfeeding in Dusun Talaga Ratu, with a p-value of knowledge ($p = 0.001$) and attitude ($p = 0.001$). Health promotion using leaflets and lectures effectively changed breastfeeding mothers' knowledge and attitudes about exclusive breastfeeding in Dusun Talaga Ratu. We recommend that health workers improve the provision of exclusive breastfeeding using leaflets and lectures.

Keywords: Health Promotion, Leaflet, Exclusive Breastfeeding



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Stress Coping Strategies for Health Workers on Duty in Nusalaut District, Central Maluku Regency in 2023

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Abstract

Nusalaut is a sub-district located in Central Maluku Regency. Nusalaut, from a health perspective, has 1 health center which is classified as a very remote health center according to the 2020 Central Maluku Regency regent regulation. Many problems contribute to stressors for health workers in carrying out work assignments in Nusalaut. The application of an adaptive stress coping mechanism is expected to help health workers in archipelago areas such as Nusalaut, with all the difficulties and demands they face, be able to carry out their duties properly so that stress events do not affect the performance of health worker services. The purpose of this study was to find out the strategy of health workers in coping with stress, especially for health workers who work in Nusalaut District, Central Maluku Regency. The research method used is descriptive qualitative, with a field research design and research methods in the form of observation, interviews, and documentation. The results showed that 4 out of 7 health workers who were the sample used stress coping strategies that focused on Emotional Focused Coping and the remaining 3 used Problem Focused Coping. The community and community leaders in each country said they were satisfied and happy with the services provided by the health workers, but for Nalahia and Sila there were complaints related to the vacancy in the presence of health workers in their country. Each stress coping strategy used by each health worker should not reduce performance and become an obstacle in providing health services.

Keywords: stressor, coping stress, health workers, island area



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Erythrocyte Profile and Platelet Count description based on severity scale of COVID-19 on Pregnant Women at RSUD DR.M. HAULUSSY AMBON in 2020

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Abstract

Coronavirus disease 19, better known as COVID-19 is a disease caused by the SARS-CoV-2. Pregnant women are susceptible to infection, because during pregnancy there are physiological changes and body mechanism that have an effect on immunity. This study aims to describe the erythrocytes profile and platelet counts on the severity of COVID-19 in pregnant women at RSUD Dr. M Haulussy Ambon in 2020. This is an analytical study with cross sectional design and using total sampling method with total 31 sample. The result of the study shows from 31 sample, there are 30 people (96,8%) have mild severity, 1 person (3,2%) have moderate severity and severe severity is not found. The erythrocyte level based on the mild, moderate and severe is dominated by decreased erythrocyte (anemia) with 19 cases (63,3%). The hemoglobin level is dominated by normal hemoglobin with 15 cases (50%). The MCV level is dominated by decreased MCV with 17 cases (56,7%). The MCH level is dominated by normal MCH with 25 cases (83,3%). The platelets level is dominated by normal platelets with 29 cases (96,7%).

Keywords: COVID-19, Erythrocytes Indices, Pregnant Women, SARS-CoV-2, Thrombocytes



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The Increased Likelihood of Diarrhea in Older Population: Result of A Household Health Survey in Laha Village, Ambon City

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Abstract

Diarrhea is defined as three or more liquid bowel movements in one day. Apart from being a cause of high morbidity and mortality in infants and toddlers, diarrhea is also a health problem in the elderly, especially in developing countries like Indonesia. This study aimed to analyze factors related to diarrheal disease in the people of Laha Village, one of the coastal villages in Ambon City. The data were derived from a household health survey in the coastal area of Laha Village conducted in November 2022. The dependent variable in this study was diarrhea, while the independent variables consisted of demographic status, sanitation, dietary patterns, and other diarrhea-related problems. Data analysis used a multivariate logistic regression method. The results of this study showed that the prevalence of diarrhea in Laha Village was 9.5%. Diarrhea is found in infants and toddlers, young adults, and the elderly. The results of data analysis showed a significant relationship between diarrhea and demographic status aged >60 years (aOR=3.6; 95CI%: 1.04-12.8; p=0.043). Although not significant, the percentage of diarrhea cases was higher in people who did not use latrines for defecation, which was 11.8%, compared to people who used latrines, which was 9.1%. The results of this study indicate that it is essential to carry out regular diarrhea prevention programs to increase understanding of diarrhea transmission, especially in the elderly.

Keywords: Diarrhea, Coastal Areas, Elderly





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