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# Democratising Patients Involvement in Medical Education Using Digital Applications: A Scoping Review

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## ABSTRACT

The rapid development of technology in medicine for the past few years has established a solid connection between doctors and patients. Countless digital applications have been made especially since the outbreak of the coronavirus pandemic to reach and educate the patients whether in urban or rural areas. The problem here is that the majority of people were not even aware of the existence of this digital application, some places did not have access to this technology and in fact most patients were not able to reap the benefits of this application as they did not know how to fully use it. By using the scoping review as a research method, the main purpose of this study is to justify and evaluate the patient's involvement in using digital application as a medium for medical education all around the globe. The article and research study will be carefully selected and important data will be extracted to minimise the potential of bias and ensure that an objective comparison between the data can be conducted. The limitation is that only articles which were written in English language will be selected. It signifies the effectiveness of the digital application as one a platforms for medical education. It will directly encourage more patients to use this digital applications as an alternative. In short, this research study will quantify the patients that is involved in the medical education by using the digital application and whether it will be be beneficial for them based on the data obtained.

# Impact of COVID-19 Pandemic on Ophthalmology Services

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## ABSTRACT

The World Health Organization (WHO) has declared the pandemic status of COVID-19 on March 11, 2020, leading to nationwide lockdowns in all countries. Citizens were advised to avoid hospital visits unless necessary. All healthcare departments, including ophthalmology, took measures to combat the virus's spread. Understanding the impacts of the COVID-19 pandemic helps to implement necessary adjustments and ensure the safety of both healthcare providers and patients. Thus, this research aims to highlight the impact of the COVID-19 pandemic on ophthalmology services and the strategies implemented to improve them in the future. A review of 21 articles and 2 websites was conducted and retrieved for this research via PubMed, Scopus, Google Scholar and ResearchGate. Due to the implementation of lockdown in the early stages of the pandemic, many patients with vision-related problems reported that their conditions deteriorated because they were unable to attend follow-up. This leads to a backlog of schedules as the number of patients waiting for their appointment and surgery markedly rose to 112% in February 2021. The backlog is primarily driven by the accumulation of non-urgent cases and the cancellation of elective procedures. A significant depletion of manpower in the ophthalmology department was also noted as they were redeployed to COVID-19 units. Hence, teleophthalmology consultation awareness should be promoted to guarantee that no patient has delay in initial treatment due to the pandemic. If a similar cycle were to recur in the future, having a greater understanding of shifting tendencies would aid in getting better prepared.

Keywords: COVID-19; SARS-CoV-2; ophthalmology; impact; teleophthalmology

# A Scoping Review on the Imposter Syndrome among Medical Students: The Associated Factors

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## ABSTRACT

Imposter Syndrome (IS) is a condition where individuals cannot accept and own their success, although it involves their accomplishments and capabilities. IS is common among medical students, with a prevalence of 45.7% in Malaysia and 22% to 60% worldwide. Therefore, identifying the factors contributing to IS is crucial in providing better insight for prevention measures. However, the factors contributing to IS development are inconclusive and vary between studies. Thus, this study aims to identify and classify the factors contributing to IS among medical students and determine its effects. A scoping review was conducted via thorough searching in Medline, Google Scholar, ScienceDirect, and PUBMED databases. Keywords used for the search were (“imposter syndrome” OR “impostor syndrome” OR “imposter phenomenon” OR “impostor phenomenon” OR “impostorism”) AND (“medical students” OR “medical field”). From 187 studies retrieved, 24 studies were selected based on the inclusion and exclusion criteria. The factors contributing to IS were extracted from these 24 studies and classified into three categories: individual, social, and environmental. The main factors contributing to IS among medical students include gender, low self-esteem, ways of teaching by lecturers, pimping culture, and the transition system throughout medical school. Disturbingly, these factors contributed to IS showing a positive correlation with medical students' mental health. In conclusion, it is essential to categorize the factors contributing to IS in strategizing a holistic approach to prevent and overcome IS among medical students.

Keywords: Imposter syndrome; imposter phenomenon; impostorism; medical students; medical field

# Attitude and Factors Influencing Organ Donations in Malaysia: A Review

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## ABSTRACT

For many of the end-stage organ diseases, organ transplantation is the most preferred treatment. The shortage of organs in Malaysia has reached a critical point, where the need for the organ transplantation is higher than the availability. Awareness and positive attitude toward donating organs are crucial for successful transplantation programme. This study aims to explore the attitude toward organ donations among Malaysians, as well as its influencing factors for both pro-organ donation and anti-organ donation groups. A narrative review was conducted using the following electronic databases: PubMed, research gate and Semantic scholar. Despite being the largest ethnic group in Malaysia, ethnic Malays are the least likely to register or participate for an organ donation, as compared to Chinese and Indians. Among the factors for negative attitude towards organ donations are due to cultural and religious reasons, misconceptions, lack of knowledge and family opposition. On the other hand, the desire to help others, better awareness level and relation bonds are the positive attitude factors that motivate people to donate their organ. Therefore, it is critical to identify groups that oppose organ donation and the underlying reasons so that targeted measures could be executed. Interventions including effective educational campaign, cooperation between health professionals and religious authorities, family members education and presumed consent system could be implemented. It is hoped that this review could facilitate policymakers to effectively promote awareness and instill more positive attitude regarding organ donations among the communities.

Keywords: Attitude; willingness; factors; organ donation; Malaysia

## Child Abuse – Factors and Outcomes

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### ABSTRACT

Child abuse is defined as all types of physical or emotional ill-treatment, sexual abuse, neglect, negligence, which results in actual or potential harm to the child's health, survival, development or dignity in the context of a relationship of responsibility, trust or power. The Department of Social Welfare Malaysia has recorded increasing numbers of child abuse cases despite multiple interventions to stop these cases from occurring. This literature review aims to define the different types of child abuse, factors that predispose to child abuse and outcomes of children who experienced abuse. Literature search was conducted using the following keywords "child abuse types", "factors of child abuse" and "outcomes of child abuse" via several electronic databases. The highest number of abuses is sexual abuse and is commoner among girls. Majority of sexual assailants are incestuous. Physical abuse, however, is commoner among boys and results in physical injuries that may eventually cause death. Emotional abuse includes verbal abuse or belittling the child while neglect is a form of abuse where the child's basic physical, educational or medical needs are not met. Young children and children with disabilities are more prone to be abused due to higher dependency to their caregiver. Families with financial problem, marital separation, substance abuse and anger management issues are also associated with abuse. Abused children have a higher incidence of depression, anxiety and suicidal ideation. They perform poorly academically and are predisposed to substance abuse and sexual misconduct. Multidisciplinary approach is required to handle this problem.

Keywords: Child abuse; factors; outcomes

# Roles of Forensic Autopsy in Investigating Maternal Death in Malaysia

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## ABSTRACT

Maternal mortality remains a critical public health concern worldwide. The integrated multidisciplinary approach including forensic medicine plays a pivotal role in understanding the underlying factors and improving maternal healthcare outcomes in support of Millennium Development Goal 5 (MDG 5) target. This review aims to elucidate the indispensable contributions of forensic autopsy within the system of Confidential Enquiry into Maternal Deaths (CEMD) under the purview of the Family Health Development Division, MOH. In Malaysia, maternal deaths are investigated through the road-to-death approach. This paper is based on retrospective literature search on maternal death guidelines within the Malaysian context. Forensic autopsy reports provide a comprehensive overview of the various pathological changes and detect complications that may not have been apparent during clinical assessments besides the medicolegal aspects involved. Forensic autopsies pinpoint the accurate causes of maternal death, covering direct, indirect, and fortuitous factors. Additionally, forensic autopsies serve as official documentation for legal purposes, providing a detailed account of the maternal death investigation. These are presented in the CEMD meetings comprised of a team of experts in relevant specialties. CEMD helps to determine the classification of pregnancy-related deaths and contributes to the official maternal mortality data in the country. Overall, forensic autopsies are invaluable in ensuring accurate and comprehensive reporting of maternal deaths, which in turn reveal key factors and areas for improvement in maternal healthcare practices and policies. This leads to valuable recommendations on protocols and procedures for policymakers and healthcare providers, ultimately enhancing maternal healthcare quality in Malaysia.

Keywords: Maternal death; forensic medicine; autopsy; public health; reproductive health

# A Rare Case Report of Arachnoid Granulations Causing Spontaneous Cerebrospinal Fluid Middle Ear Effusion

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## ABSTRACT

Middle ear effusion (MEE) is a common ailment in children, but is less frequently observed in adults. When it does occur in adults, it necessitates a thorough assessment to ascertain the underlying cause. Notably, cerebrospinal fluid (CSF) effusion should be considered as a differential diagnosis, even in the absence of trauma, prior mastoid surgery, or meningitis, particularly in individuals aged over 50 with persistent unilateral MEE. Two theories have been proposed to elucidate non-traumatic bony defects in the tegmen of the temporal bone, which may lead to spontaneous CSF middle ear effusion: the congenital defect theory and the arachnoid granulation (AG) theory. We present a rare case of spontaneous CSF middle ear effusion attributed to arachnoid granulation. A 59-year-old woman who has no history of head trauma, mastoid surgery, presented with unilateral conductive hearing loss, and persistent post-nasal drip for two years. The patient was initially managed as otitis media with middle ear effusion, however her symptoms persisted despite treatment. Subsequently, a right myringotomy and grommet insertion were performed, resulting in the drainage of clear watery fluid that persisted for two weeks. Imaging revealed right middle ear effusion, brain herniation, and bony defect and irregularities of the right tegmen tympani. Histopathological examination confirms the presence of brain tissue in middle ear. The patient underwent cortical mastoidectomy, lateral skull base repair, and mastoid obliteration. Ten months post-operation, the patient remained asymptomatic, with a full return of hearing.

Keywords: Arachnoid granulations; tegmen tympani defect; spontaneous cerebrospinal fluid leak; middle ear effusion



# Association between COVID-19 Infection and Telogen Effluvium

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## ABSTRACT

COVID-19 has been proven to be a systemic disease affecting multisystem including dermatology. Telogen effluvium, or stress-related hair loss has been largely reported as one of the complications of COVID-19. It significantly affects the emotional wellbeing of the affected individuals. Several studies reported the rising incidence of alopecia among SARS-CoV-2 virus infection. This review aims to identify the pre-existing prevalence, pathophysiology, risk factors and management of COVID-19 associated with telogen effluvium. A Scoping Review was conducted following the PRISMA guidelines using PUBMED and GOOGLE SCHOLAR with relevant keywords which includes "Hair loss", "Alopecia", "Telogen Effluvium", "COVID-19" and "SARS-CoV-2". All studies showed significant association between COVID-19 and telogen effluvium with the prevalence of more than 50%. The mechanism of stress-related hair loss in COVID-19 include direct follicular injury, cytokine storm, antibody-dependent enhancement, microthrombi formation and psychological stress which manipulates the brain-follicular axis and neuroendocrine-immune pathway. We found that women, severe COVID-19, history of alopecia, high-grade fever, high CRP and platelets during COVID-19 are the risk factors for telogen effluvium post COVID-19. General measures such as patient education, stress-coping mechanism, dietary interventions and oral supplementations should be taken into consideration. Local treatments including topical minoxidil and scalp injection are indicated in selected patients. Acute telogen effluvium is reversible and the most acceptable mechanism is the role of cytokine storm caused by the SARS-CoV-2 virus. Further research is encouraged to reach the precise aetiopathogenesis of the condition and provide the best treatment options for the patient.

Keywords: Hair loss; alopecia; acute tolegen effluvium; COVID-19; SARS-Cov-2 infection

# Differential Metabolic and Endocrine Gene Expression and Protein-Protein Interaction (PPI) in Idiopathic Simple and Complex Fistula-in-Ano

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## ABSTRACT

Fistula-in-ano (FIA) is one of the most common forms of perineal sepsis. Vast literatures have described the role of bacteria, epithelisation and inflammation in forming idiopathic FIA, however, the possible involvement of metabolic and endocrine gene are scarcely investigated. Thus, we aim to investigate the differentially expressed genes related to metabolism and endocrine in simple and complex FIA. Twenty-two patients were recruited: 9 simple and 13 complex fistulas. RNA was extracted and microarray profiling was conducted. Differentially expressed gene [fold change >1.5, p<0.05] were determined using the Agilent Genespring Analysis Software Version 14.9.1. PPI network of all DEGs were identified from PPI functional-enrichment analysis via STRING software. Then, the gene ontology of all interacted proteins were discovered using the Database for Annotation, Visualization, and Integrated Discovery (DAVID). Finally, the Kyoto Encyclopedia of Genes and Genomes (KEGG) pathway was used to identify the proteins involvement in the pathway related to endocrine and metabolism. Differentially expressed genes revealed 132 transcripts between idiopathic simple and complex FIA samples. Eleven related genes were found to be differentially expressed; LTA, ABCG1, KITLG, ERBB3, MUC4, B3GNT2, AANAT, HOXA5, GLI2, LCLAT1 and ETNK1. The protein-protein interaction showed the metabolic pathways that are involved; tryptophan metabolism, glycerolipid metabolism and glycerophospholipid metabolism. As for the endocrine pathways, there are few significant pathways involved for example NF-kappa B signalling pathway, TNF signalling pathway and type I diabetes mellitus. Further study is needed to establish the differences and highlighting the potential alternative treatment options for this condition.

# The Barriers of Treatment Seeking Attitude in Mental Health Problems in Malaysia

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## ABSTRACT

Mental health disorder is one of the global health morbidities in this decade. In 2015, the prevalence of mental health problems is 29.2% among 16 years and older. 1 in 3 Malaysians have mental health problems, with highest prevalence among those aged 16-19 years and those from low economic levels. Prevalence of people with mental health issues is increasing day by day either due to increasing stressors in this era or increased awareness of mental health crises. The psychiatry department becomes more known to society. However, there are still people who do not seek help with their mental issues due to particular reasons. The aim of this review is to identify the barriers of treatment seeking attitude in mental health problems in Malaysia and to determine the major barriers in mental health seeking attitude to maximize the treatment of mental health problems. This paper is written in literature review method to summarize about the barriers that prevent Malaysians from seeking mental health treatment. Electronic databases such as PubMed and Google scholar were used to find the articles related. There were 6 papers and 5 academic websites related to the topic included in this literature review. The barriers to mental health treatment seeking In Malaysia are reported to be having high self-stigmatization on seeking help, lack of knowledge regarding mental health and its utilities, beliefs on mental illness, general and mental health seeking attitude and technical issues such as financial problems. Self-stigma on seeking help with significant p value of  $<0.01$  is the major factors of help seeking attitude in mental health issues in Malaysia therefore to increase mental health help-seeking attitude, it is suggestive to upgrade the mental health literacy in Malaysians. It is proven that the depression literacy is associated with mental health treatment seeking attitude.

Keywords: Mental health; treatment seeking attitude; mental health help-seeking attitude

# Rasch Model Analysis for Construct Validation of a Critical Thinking Transfer Practice Instrument for Medical Students

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## ABSTRACT

There is a growing interest in medical undergraduate students' ability to transfer the learned critical thinking competencies. For that reason, there is a great need to develop an instrument that can assess the student's ability to transfer critical thinking. However, most established critical thinking instruments were focused on the assessment of the student's competencies, such as critical thinking skills and dispositions. An evaluation of the medical students' critical thinking transfer practice seems to be lacking. Thus, an instrument was created to fill the lacking. Two constructs were created: critical thinking learning acquisition practice and critical thinking learning transfer practice. The study aims to assess one out of six psychometric properties of the developed instrument using Rasch Model analysis, the item polarity. The item polarity helped to establish an instrument's construct validity. A 2-phase pilot study was conducted in a medical school in Malaysia. The study included 178 students, where 40 students were involved in the 1<sup>st</sup> phase of the study, while 116 students were involved in the subsequent phase. The students were selected using a targeted cluster sampling method. All items had positive polarity values (PTMEA CORR > 0.4), with 148 items (Construct 1) and 79 items (Construct 2) were remained. The findings have revealed the instrument is valid to be used for assessing the medical student's critical thinking transfer practice. However, the study suggested that the instrument needs to meet other psychometric properties before it can be considered a good psychometric tool for evaluating the constructs of the study.

Keywords: Critical thinking transfer; learning transfer; medical student; Rasch model; construct validity

# A Review on Geometric Morphometric Approach for Sex Identification of Bones in Malaysia

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## ABSTRACT

Utilization of geometric morphometrics for bone sex identification is a relatively recent approach in forensic anthropology. Scarcity of dry bone collections in Malaysia have led to virtual anthropology studies using 2D and 3D radiographs to study population-specific sexual dimorphism of bones. The aim of this study was to systematically review the use of geometric morphometrics for bone sex identification in the Malaysian population. A comprehensive literature search was conducted using PubMed, Scopus, and Science Direct. Research terms used included sex determination, sex identification, sexual dimorphism, geometric morphometrics and Malaysia population. Studies used the same geometric morphometric approach which involves bony landmark application on radiographical images followed by generalized Procrustes analysis (GPA), principal component analysis (PCA), and discriminant function analysis (DFA). Cross-validated DFA represented accuracy of sex identification. A total of five original articles published between 2021 and 2023 investigated the sexual dimorphism of bones of Malaysian population using geometric morphometrics approach, with a total of 1789 subjects (997 male, 792 female). Bones investigated include the mandible, frontal bone, hip bone, C3 vertebra, and L1 vertebra. Total shape variability contributed by the first three principal components (PC) ranged between 27.59% and 83%. All studies demonstrated significant differences between centroid size and shape of male and female bones. Accuracy of sex identification was highest in hip bone (93.42%), followed by mandible (81.7%), frontal bone (80.6%), L1 vertebra (77.35%) and C3 vertebra (70.3%). Geometric morphometrics is a valid and reliable method for sex identification of bones in Malaysian population.

Keywords: Forensic anthropology; sex dimorphism; Malaysia

# Exploring The Feasibility of Developing Diagnosis-Related Groups (DRGs) for Emergency Services at Public Hospitals: Insights from Dataset of 10,247 Patients in Malaysia

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## ABSTRACT

A nationwide Malaysian Diagnosis Groups (Malaysian DRG) system that generates data on the quality and cost of healthcare services was launched in the public healthcare system of Malaysia in 2010. However, the lack of a distinct DRG for emergency care services creates a sizable gap in our knowledge of balancing the quality and cost of emergency healthcare. This study aimed to explore the feasibility of developing DRGs specifically for emergency services. The study used secondary data, which includes variables such as age group, gender, nationality, hospital type, triage, mode of arrival, source of referral, type of visit, episode end status, referral status, admission to observation ward, comorbidities, and ICD-10 diagnosis. Descriptive analysis, clustering technique and expert consultations were employed to explore the feasibility of developing the emergency DRGs. The findings indicated that there are a total of 946 ICD-10 codes being used in this dataset. The two commonest ICD-10 Codes found in the dataset are (i) Acute upper respiratory infection, unspecified (J06.9) and (ii) COVID-19, virus identified (U07.1). This dataset's top 20 ICD-10 codes represent 41.6% of the whole data. A comparative comparison was made with the Australian Emergency Department ICD-10-AM (Eleventh Edition) Principal Diagnosis Short List that consists of 1174 codes with 55.2% similarity with the dataset. However, several challenges were identified, including data quality, patient characteristics heterogeneity, and capturing emergency care's dynamic nature. This study highlights the potential benefits of developing DRGs for emergency services. Further research and collaboration are warranted to refine the grouping criteria to successfully develop and implement DRGs in emergency services.

Keywords: DRG; case-mix; Emergency Department; Malaysia

# The Effects of Aromatherapy on Insomnia in Autism Spectrum Disorder: A Scoping Review

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## ABSTRACT

Background: Autism spectrum disorder (ASD) population has been frequently reported to have sleep disorders mostly insomnia due to mutations in the genes that control the sleep-wake cycle. Aromatherapy is believed to be helpful however, there is lack of reports on the effects in treating insomnia. Purpose: This scoping review was conducted to report current literature on the effects of aromatherapy on insomnia and to determine the efficacy of aromatherapy on insomnia in ASD based on the six-stage scoping review process of Arksey and O'Malley. Methods: The search terms were running on 6 search engines including PubMed, ScienceDirect, ClinicalKey, Springer Link, EBSCOHOST, Google Scholar. Articles were eligible for inclusion if it is published and reported on 2000 to 2023, cross sectional study, study review, full article and in English language. Aside from that, relevancy toward research questions should also be prioritised. Results: A total of 344 studies were identified of which 40 articles were potentially relevant based on title and/or abstract screening and a total 15 articles were finally included and assessed. The majority of included studies (n=11) were observational which described aromatherapy as effective on insomnia specifically in young and adult individuals. The remaining article (n=3) suggests aromatherapy does not increase sleep quality in ASD with insomnia while another one article shows neutral results. Conclusion: Aromatherapy was described as effective on insomnia although there is a need for further evaluation of aromatherapy effect on insomnia among autistics individuals as well as associated behavioural concerns such social anxiety and depression, withdrawal, aggression and difficulty with attention and brain processing.

Keyword: Aromatherapy; autism spectrum disorder; insomnia; sleep initiation and maintenance disorders

# Does Children's With Excessive Exposure To Electronic Devices Influence The Children's Development

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## ABSTRACT

Children of all ages can benefit from technology thanks to its capabilities for learning in enjoyable and engaging ways, expressing their creativity, and maintaining connections with others. However, watch out for the warning symptoms of unhealthy technology use, like using devices excessively. The aim of this review is to discuss how children's excessive exposure to electronic devices affects their development. Using a scoping review as an exploratory approach, articles were searched using databases like Google Scholar and PubMed. The contributing factors can be due to the family and environment. Family factors were family income, availability of gadgets at home, parents attitudes, and ethnicity. For the environments, studies reported that the availability of physical equipment at home, access to parks and recreational activities, crime rate, and traffic were among the contributing factors. The consequences of excessive screen time for children can lead to delays in speech and language, fine motor skills, social, emotional, intellectual and cognitive development that may have a long-term unfavorable impact on their education. So that, increasing parental awareness and launching campaigns with appropriate compositions are among the actions that should be taken to reduce screen time in children.

Keywords: Electronic devices; children's development; screen time; addiction



# Disorder of Sexual Differentiation: The Significance of Laboratories and Islamic Viewpoint in Understanding “Asl al-Khilqah”

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## ABSTRACT

Introduction: “Asl al-khilqah” signifies “the fundamental essence of creation” and acknowledges intersex individuals as a natural part of Allah SWT’s original creation. Management of gender-ambiguous patients is challenging. Laboratory testing plays a pivotal role in achieving accurate medical diagnosis and gender determination in such cases. Case report: We report the laboratory findings in two newborns presented with ambiguous genitalia. Patient A had an enlarged labioscrotal fold. Synacthen stimulation test revealed high basal and stimulated serum 17-hydroxyprogesterone (17-OHP) with normal cortisol level, leading to the diagnosis of heterozygous 21-hydroxylase deficiency. She was confirmed female by 46, XX karyotype, and absence of SRY gene. Patient B had both ovarian and testicular tissues. The serum anti-mullerian hormone was elevated and both basal and stimulated testosterone were raised following the human chorionic gonadotropin stimulation test. The karyotype confirmed female (46, XX) with the absence of the SRY gene. She was diagnosed to have ovotesticular disorder with gonadal dysgenesis. Discussion: Males and females have distinct responsibilities in Islam. Ascertaining gender at an early age is crucial. Through these cases, we highlighted the role of laboratory tests in the diagnosis and gender assignment. Both patients are female by karyotyping. However, elevated cortisol precursor, 17-OHP in patient A suggested the diagnosis of CAH. Meanwhile, patient B had the possibility of growing up with functioning gonads of both genders, classifying her as a true hermaphrodite. Conclusion: While Islamic jurisprudence provides established methods for gender determination, utilizing a laboratory-based approach to ascertain gender is deemed justified.

Keywords: Ambiguous; hormone; karyotype

# Enhancing Cognitive Behaviour Therapy with Dzikir Integration-A Neural Perspective on Anxiety

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## ABSTRACT

This study provides a concise overview of the study that explores the integration of Dzikir, a form of Islamic mindfulness, with conventional cognitive behavioural therapy (CBT) as a novel approach for alleviating anxiety symptoms in a clinical population, as well as its influences on brain activities. Articles were sourced from PubMed, Science Direct, PsychInfo, and Google Scholar. Anxiety disorders are prevalent mental health issues that may impair the quality of life of an individual. While CBT is a known structured therapy used for treating anxiety and mood disorders. Assimilating dzikir, a type of repetitive Islamic prayer and mindfulness, into the conventional CBT framework resulted in significantly greater decreases in anxiety symptoms than the group receiving conventional cognitive behavioural therapy alone. Despite that, electroencephalography (EEG) is used to monitor patients' brain activity while they are on Dzikir-integrated CBT. It showed a significant reduction in anxiety responses on the EEG and, hence, improved overall wellbeing. As a result, integrating Dzikir with CBT has the potential to enhance anxiety treatment outcomes and highlights the significance of addressing cultural and spiritual diversity in the field of mental health.

Keywords: Cognitive behavioural therapy; Islamic psychology; dzikir; anxiety

# Benefits of Sunnah Food During Pregnancy and Lactation

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## ABSTRACT

Mother's health and fetal development are both impacted by the mother's diet. Sunnah food is one of the healthier options for pregnant and lactating women. Sunnah foods are defined as those that have been extolled in both prophetic traditions (hadith) and Quranic verses and have been shown to have numerous advantages. Sunnah cuisine is renowned for being highly nutritious and mineral rich. Foods like dates, pomegranates, barley, honey and goat's milk are examples of halal and healthy foods. These foods have been referenced in the Qur'an and hadith and have been proven to be beneficial for health. The objective of this paper is to review the various effects of sunnah food consumption for mothers during pregnancy and lactation. Searches were done using PUBMED, Science Direct, Google scholar and Ezprozy databases. The keywords used were 'Sunnah food', 'pregnant mother', and 'breastfeeding mother'. Full-article journals in English published between January 2011 and December 2022 were screened. In total, 25 journal articles were selected. Results showed that eating sunnah food during pregnancy provide the mother with extra energy. Its effects on oxytocin receptors increase prostaglandin synthesis which make labour easier. It also helps prevents complications during labour such as postpartum haemorrhage, meconium aspiration syndrome and foetal cardiac variability, For lactating mothers, advantages include the ability to produce more milk, more energy during lactation and high nutritious content for the baby that support baby's growth. In conclusion, sunnah food have proven benefits and should be recommended for the best interest of the mother and baby.

Keywords: Sunnah food; pregnancy; breastfeeding

# Atypical Guillain-Barre Syndrome with Lyme Disease: A Case Report

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## ABSTRACT

Guillain-Barré syndrome (GBS) is an acute, progressive, monophasic paralytic neuropathy resulting from autoimmunity, typically in response to antecedent infection like respiratory illness or gastroenteritis. It is a life-threatening condition in which a patient may present in respiratory distress which could be futile. Through this case we wish to highlight three uncommon themes in the presentation of GBS: firstly its presentation as a unilateral facial palsy, secondly delayed presentation of bulbar palsy and lastly its association with Lyme disease. Here we report on a case of a 32-years-old lady with an atypical presentation of GBS with unilateral facial weakness and tingling sensations of both her hands and feet. In the ward, she developed bilateral limb weakness with areflexia later had bulbar involvement with absent cough reflex and dysarthria. Her condition continued to decline with poor respiratory effort and autonomic dysfunction. She had showed improvement after a course of intravenous Immunoglobulin administration. A positive serology test for *Borrelia burgdorferi* raised the possibility of a link to Lyme disease as the rare instigating factor. Needless to say, dealing with an atypical presentation of GBS is challenging to diagnose and manage.

Keywords: Guillain-Barre Syndrome; Lyme disease; muscle weakness; progressive bulbar palsy; Bell palsy; *Borrelia burgdorferi*

# Patient-Reported Outcome Measures (PROM) in Chronic Knee Osteoarthritis: A Community-Based Study among the Population in Negeri Sembilan, Malaysia

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## ABSTRACT

The prevalence of knee OA is increasing due to the ageing population, unhealthy lifestyles and obesity. This condition resulted in poor quality of life and affects routine religious practices. This study aims to investigate the patient-reported outcome measures related to knee OA. A cross-sectional study was conducted at Kampung Pondo among 222 residents of the village. Face-to-face interviews with a validated questionnaire were used. Among the respondents interviewed, 46.4% were male and 53.6% were female and almost 40% of them were elderly. Most of the respondents denied any family history related to knee pain however, 20% of them revealed that they have previous knee injuries due to trauma, sports and recreational activities. The KOOS patient-relevant dimensions which are pain, symptoms, activity daily living functions, quality of life, and sport and recreation functions are scored separately. The reported mean [SD, minimum, maximum] for the subdomains were 91.2 [17.77, 5.6, 100], 92.2 [13.69, 28.6, 100], 90.9 [19.02, 1.5, 100], 84.9 [24.69, 6.3, 100] and 84.2 [26.37, 5, 100] respectively. Based on the interviews, 10% of the respondents claimed that they were unable to stand, bow, prostrate or sit in the prayer due to knee pain. Older age, history of knee injury and presence of comorbidities are factors that have a significant association with KOOS domains. The scores of KOOS pain and sport and recreation dimensions showed negative significant correlations with the quality of Muslim prayer in all different positions. This study found that the PROMs reported were good however future studies should assess the level of awareness and knowledge regarding OA among people at risk to minimise its impacts.

Keywords: Knee osteoarthritis; KOOS; quality of ibadah

# Interreligious Perspective on Gender Affirmation Hysterectomy

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## ABSTRACT

The world has experienced a surge in medical advancement over the past century, drastically changing the face of healthcare and spurring the development of bioethics as a religious and secular concern regarding gender affirmative surgery including hysterectomy. Many theological scholars believe that religious perspectives on bioethics should be included in the greater public discussion of medicine and biotechnology to create sense and meaning of life and its value. Therefore, it is important to outline the interreligious perspective on gender affirmation hysterectomy as to preserved human values of life. We aim to review and identify the interreligious perspective on gender affirmation hysterectomy. Articles and papers were reviewed by utilizing the search engines on Springer Link, Scopus, Wiley, Google Scholars and Science Direct databases using specific keywords. The inclusion criteria were primary studies among the world major religion's perspective, in English language. Full text publications dated from the year 2000 to date were searched. Only three papers were found. Most of the religion discuss their perspective on gender affirmation surgery based on their respective theological point of view in which not to defy God creation on gender assigned at birth and justification of procreation, yet few believed that creation is ongoing process. It is permissible for intersex groups if it means to cure and prohibited if harms outweighed benefits. However, different perspectives and different ethical evaluation seen among most religion upon hysterectomy indication for transgender. Despite the different perspective raised by every religion on gender affirmation hysterectomy, the theological grounds on which they use for their arguments are a valuable resource for medical professionals and transgender patients in decision making

Keywords: Gender affirmation; hysterectomy; religious

## ***BMP2* Variants in Primary Ovarian Insufficiency Women: A Scoping Review**

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### **ABSTRACT**

Primary Ovarian Insufficiency (POI) is a condition characterized by the premature depletion of ovarian follicles and cessation of ovarian function before the age of 40. Genetics is an important factor that contributes to the pathogenesis of POI. However, there are lack of studies being reported on genetics variants, especially on *BMP2* genes, that are known to influence the communication between the oocyte and cumulus cells during oocyte maturation. *BMP2* gene has more than 600 pathogenic variants in various diseases. Thus, a comprehensive literature search was conducted to identify *BMP2* variants among POI patients across populations. The literature search was done using PubMed, Scopus, EBSCOhost, and Science Direct applying (Variant OR mutation OR polymorphism) AND (BMP2 OR "bone morphogenetic protein receptor type 2") AND ("primary ovarian insufficiency" OR "Premature Ovarian Failure" OR "Resistant Ovary Syndrome" OR POI) as keywords. From 43 retrieved studies, three original articles investigating the variants in POI patients, that met the inclusion and exclusion criteria were included in this review. Four potentially pathogenic mutations (L656S, R597Q, V453M and S987F) from five different patients were detected in the *BMP2* gene of 437 patients from various populations. In conclusion, the *BMP2* variants were identified across populations of POI women. However, further functional studies are needed to identify the effects of these variants in the pathogenesis of POI.

Keywords: Bone morphogenetic protein receptor type 2; mutation; polymorphism; primary ovarian insufficiency

# Shedding Light on Fertility: Vitamin D Supplementation's Impact on Reproductive Hormones - A Systematic Review

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## ABSTRACT

Vitamin D, a crucial fat-soluble hormone renowned for its multifaceted roles in regulating calcium levels and immune function, has recently garnered attention for its potential influence on reproductive hormones in both men and women. This review aims to consolidate the current evidence regarding the impact of vitamin D supplementation on reproductive hormones in individuals with various reproductive health conditions, including polycystic ovary syndrome (PCOS), infertility, and Leydig cell dysfunction. A comprehensive search from PUBMED and MEDLINE identified 24 studies published between 2019 and 2023, including randomized controlled trials, observational studies, and experimental models. The synthesis of evidence reveals promising outcomes, particularly in women with PCOS, where vitamin D supplementation is associated with improved ovulation rates, enhanced progesterone levels, and regulated menstrual cycles. Additionally, potential benefits in improving ovarian reserve were observed in cases of infertility. Moreover, men with impaired Leydig cell function demonstrate a positive correlation between vitamin D levels and testosterone production following supplementation. Notably, vitamin D receptors are present in various reproductive tissues, underlining its direct impact on hormonal regulation. This review underscores the potential benefits of vitamin D supplementation for individuals with hormonal imbalances, while also highlighting the need for further research to uncover underlying mechanisms and establish clinical guidelines. Given the widespread prevalence of vitamin D deficiency, additional investigations are essential to define specific recommendations for optimizing reproductive health through vitamin D supplementation.

Keywords: Vitamin D; reproductive hormones; polycystic ovary syndrome; infertility



# Septorhinoplasty's Effects on Nasal Function and Quality of Life

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## ABSTRACT

Septorhinoplasty is a surgical procedure that improves nasal blockage and the nose appearance by combining septoplasty and rhinoplasty. This narrative review was done to assess the outcomes of septorhinoplasty on nasal function and its effect on Quality of Life (QOL). We conducted a comprehensive database search using PubMed, ScienceDirect, PROQUEST, and ezproxy to identify and evaluate relevant articles with the help of keywords 'Septorhinoplasty', 'nasal blockage' and 'outcomes'. Several journals and articles were retrieved and included based on qualitative and quantitative scientific articles, papers published in English language, and observational study design from January 2018 to May 2023. About 121 studies were related with the topics and 31 were selected for full reading. A total of 14 articles were selected to be included in this review. A few pre and post operative assessments were done to measure the outcomes. Our review finding indicates that there is a significant decrease in Nasal Obstruction Symptom Evaluation score from pre- to post-operative in the patients that underwent septorhinoplasty with  $p$ -value  $< 0.001$  and its improved their QOL. Almost all patients healed optimally from the procedure by following all post operative instructions. To conclude, it is evident that septorhinoplasty is an effective surgical procedure for patients with nasal blockage to address both nasal function and enhances the quality of life.

Keyword: Septorhinoplasty; nasal blockage; outcomes

# Protocol of Qualitative Study: Exploring Public Perception Faced by Family Members of Methadone Client

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## ABSTRACT

People who use drugs or who are undergoing treatment and rehabilitation are subjected to negative perceptions from the public. Moreover, the negative perception also felt by those who support them, especially their family members, subsequently led to a negative impact on families' dynamic, mental and physical health, as well as their overall quality of life. This study aims to explore perceptions from the community faced by the family members of the Methadone Maintenance Therapy (MMT) clients. This qualitative study will be conducted at Masjid Tanah Health Clinic, Melaka, and Batu 9 Health Clinic, Selangor using a phenomenological approach. Family members of registered MMT clients from both clinics, who agree to participate will be screened by researchers using inclusion and exclusion criteria. Twenty (20) participants will be recruited in this study. An in-depth interview using a semi-structured questionnaire will be conducted by the researcher and will be audio recorded. The audio recording will be transcribed and organized into emerging themes. The findings of this research will contribute to a better understanding of public perceptions faced by family members of MMT clients and subsequently will identify the gaps in assisting the rehabilitation process of MMT clients as well as their family members. Following that, specific intervention programmes to improve the MMT programme can be planned and implemented, resulting in a reduction in drug addiction cases. This is in line with the National Drug Policy and Sustainable Development Goals (SDGs) which emphasizes the prevention, treatment, and rehabilitation programme of drug addiction.

Keywords: Methadone Maintenance Therapy; public perception; family members; drug addiction

# In the Best Interest of the Child: Analysing Paediatric Discharge Against Medical Advice in relation to Malaysian Legal Framework

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## ABSTRACT

Discharge against medical advice (DAMA) is when a patient leaves a healthcare facility before completing treatment, against physicians' recommendations. This case report aims to examine ethical and legal aspects of paediatric DAMA in Malaysia. It will emphasize the underscoring of comprehending and effectively applying ethical principles and Malaysian legal framework to protect children's well-being. A 14-month-old girl was referred to the Emergency Department for failure to thrive and generalized skin rashes. She is not in any life-threatening state, subsequently was planned for admission. Her parents, having other social and family commitments are under the impression that child was well. They insisted on taking the child home. Parental decisions are ethically justified to be overruled when their decisions cross a threshold level of harm. For their decisions to be respected, it needs to be such that it would not result in potential harm to the child. However, there are more factors would take into consideration for example, social norms, legal, personal and professional reasons. The practical implementation of Child Act 2001 remains a concern, as there is a common misconception that parents have absolute decision-making authority over their children. The Act primarily aims to safeguard children when parents make choices that could be detrimental. Unfortunately, this protective role often faces challenges stemming from a lack of information and misinterpretation. In conclusion, physicians can draw upon the Child Act of 2001 as a dedicated legal framework aimed at safeguarding the well-being of children in Malaysia.

**Keywords:** Patient discharge; child advocacy; relational autonomy; clinical decision-making; clinical ethics

## Is My Baby's Umbilical Stump Normal, Doctor? – A Case Report

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### ABSTRACT

Umbilical stump is a short piece of umbilical cord cut and attached to newborn's belly button. It is normally plump, yellow pale in colour before it dries up and falls off. We reported a case of a newborn who received retrospective diagnosis of spontaneous umbilical cord hematoma during jaundice monitoring at a health clinic. A 34-hour-of-life baby girl, born term via spontaneous vertex delivery at 40 weeks was brought by mother, with complained of blackish umbilical stump, noticed at the hospital prior to discharge. It was non-foul-smelling nor had discharge. Antenatally, mother was a 29-year-old, gravida 2 para 1, with iron deficiency anaemia. Her antenatal follow up and labour were uneventful. Baby was born with a good Apgar score and received intramuscular vitamin K. There were no risk factors for development of umbilical cord hematoma, like family history of bleeding disorder, instrumental delivery, traumatic artificial rupture of membrane or infection. Examination of the baby revealed she was afebrile and jaundice. The abdomen was soft and non-distended. The umbilical stump was blackish and large measuring 2cm x 2cm. There were no signs of infection. Full blood count showed haemoglobin of 18.2 g/dL, total white cells of  $15.8 \times 10^9/L$  and platelet of  $256 \times 10^9/L$ . The umbilical stump was observed with daily dressing with 70% alcohol solution at health clinic. It dried up and fell off spontaneously on day 7 of life. In conclusion, spontaneous umbilical cord hematoma typically runs a benign course. Signs such as enlarging stump and infection warrant a referral to tertiary centre.

Keyword: Umbilical hematoma; umbilical cord; umbilical stump

## Kelab Matahari Sinanjung Suria Lifestyle: Is it Evidence-Based?

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### ABSTRACT

Kelab Matahari Sinanjung Suria (KMSS), previously known as Kultus Matahari in Malaysia, is a lifestyle that includes proper sun exposure, blue-light diet, grounding, and a healthy KMSS diet (more DHA from seafood, less sugar and ultra-processed food). The main principles of their lifestyle are caring for mitochondrial health and resetting hormone fluctuation. The objective of this study is to summarize the available evidence on the effects of KMSS lifestyle. A literature search was conducted using PUBMED, Medline, Science Direct, Google Scholars, and relevant websites. A total of 59 articles from 2009 to 2022 were selected and reviewed. The result showed evidence of benefits of KMSS lifestyles that include cardiovascular, metabolic, immunology, oncologic (breast carcinoma), and cognitive effects without denying the risks of sun exposure (skin cancer) and grounding (infection). In conclusion, all of the basic KMSS practices must be implemented together as a lifestyle, as the practices complement each other.

Keywords: Mitochondrial health; sun exposure; blue-light; grounding

# Knowledge of Menstrual Disorders and Health Seeking Behaviour Among Female Medical Students in UNIMAS

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## ABSTRACT

Menstrual disorders are any issues with a woman's regular menstrual cycle that are accompanied by distressing physical and/or emotional symptoms. It is the most common gynaecologic condition among females, with a 30% to 70% global occurrence. If left untreated, menstrual disorders can affect academic performance, physical as well as mental health. Due to the stigma, taboo, and sociocultural constraints connected with menstruation, this topic is not frequently discussed. In order to manage menstruation issues, it is crucial to have a clear understanding of menstrual disorders and good health-seeking behaviour. Therefore, this study aimed to determine the knowledge, prevalence of menstrual disorders and health seeking behaviour among female medical students. A descriptive cross-sectional study was conducted among 225 female medical students in UNIMAS. A pre-tested online questionnaire was used for data collection. Data collected were analyzed using IBM SPSS version 28. Majority of the respondents (75.5%) had a good level of knowledge of menstrual disorders. The prevalence of menstrual disorders among respondents was 79.6% and only 26.7% seek medical treatment. Premenstrual syndrome (PMS) was the most prevalent menstrual disorder reported by 42.5% of respondents. Despite a satisfactory level of knowledge and a high prevalence of menstrual disorders, only a small percentage seeks medical advice. Therefore, barriers and factors affecting health-seeking behaviour should be further explored.

Keywords: Menstrual disorders; health seeking behaviour; medical students

## Suicide among Singers Reported on the Internet from 2015 to 2022

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### ABSTRACT

Public awareness of the suicide rates among musicians has grown significantly following the tragic deaths of several artists such as Jong-Hyun, Sulli, and Chester. Despite enjoying immense popularity and wealth that many aspire to, these individuals end up taking their own lives. Aiming to understand the underlying reason of their suicide, we collected information from popular media on the internet including online newspaper, magazine, and entertainment website as well as through research engine such as PubMed. We found that suicide is more common in younger singers and male singers. 2 out of 19 singers listed identified themselves as LGBTQ. The popular method of choice was hanging, and other methods include drug overdose, gunshot and fall from height. The decision to commit suicide might be due to factors such as fierce competition, the stress of being in the public eye, cyberbullying, and chronic illness. Additionally, we discovered that many singers face mental health issues and often made worse by using drugs. Considering these findings, we strongly advocate for the music industry to step up its support for singers. They need tailored help, mental health care, and awareness programs to protect not only their lives but also the music they bring to the world. Since this study are looking at data published on popular media, the number of suicides among singers are likely under-reported and the information on the underlying mental illness were not medically confirmed. Suicide registry, medical record review and psychological autopsy would be the ideal source of such data.

Keywords: Suicide; mental health; music industry

# **“Paper vs. Pixels”: Protocol of a Quasi-Experimental Study Evaluating the Impact of PEWS-SaveKids as an Electronic Pediatric Early Warning Sign Score**

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## **ABSTRACT**

The Pediatric Early Warning Signs (PEWS) scoring system is a valuable tool for early detection of clinical deterioration in children. The PEWS-SaveKids mobile application is a novel method for integrating PEWS scores in resource-limited settings without integrated electronic systems. We describe the protocol of a study investigating the impact of PEWS-SaveKids in simulated clinical settings. The aims of the experiment are to evaluate the impact of PEWS-SaveKids on the clinical judgment of pediatric healthcare workers in managing acute pediatric emergencies, compare paper-based and electronic versions of the PEWS score in doing so, and assess the usability of the PEWS-SaveKids mobile application. The participants of our study will include medical doctors and registered nurses currently working in the pediatric department of Hospital Ampang, Malaysia. This study consists of three distinct phases, a training workshop, followed by a simulation exercise comparing the application to paper-based PEWS scores and lastly, mock codes using simulator mannikins in general pediatric wards throughout a period of six months. A Diagnostic Test Accuracy (DTA) research design will be used, whereby repeated measures will be carried out followed by a quasi-experimental study design. Ethical approval for this study will be obtained beforehand. The outcomes measured are time taken to calculate the PEWS score, the accuracy of the obtained score, and usability of the application. In summary, our research will address the urgent need to improve pediatric healthcare by transitioning from paper-based to electronic PEWS scoring.

**Keywords:** Paediatrics; paediatric intensive care; paediatric emergency; paediatric early warning signs score



# Revisiting Sexual and Reproductive Health Experiences of Refugee, Migrant and Displaced Girls and Young Women in Asia: A Scoping Review

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## ABSTRACT

Access to sexual and reproductive health services is a fundamental human right. Adolescents and young women are particularly vulnerable to victimization such as sexual violence, stalking, intimate partner violence. Furthermore, the lack of contraceptive awareness and good reproductive health results in far-reaching consequences to this population. This scoping review examines existing literature on the topic, with the aim to highlight key concerns, identify areas of research concentrations and gaps to educate future studies and policies. Currently, there are limited reviews published on this topic examining specific communities. The present review endeavors to scrutinize this subject matter within the geographic confines of the Asian region. We performed a literature search on Pubmed, Web of Science, Scopus and GoogleScholar databases to explore the sexual and reproductive health experiences of this disadvantaged population in Asia. Sources of evidence included were quantitative and qualitative research and policy documents. Critical appraisal of the results was performed using the mixed methods appraisal tool. We found that implementation of sexual and reproductive health services in marginalized communities is possible, but effectiveness depends on quality of the programs. Furthermore, very few programs targeted adolescents and there is a dearth of evidence in program evaluations and cultural competencies in the design and implementation of these services.

Keywords: Sexual health; reproductive health; refugee health; global health

## Age-related Changes of Fifth (C5) Cervical Vertebrae Shape: A Geometric Morphometrics Analysis

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### ABSTRACT

Degenerative cervical spine disease is a complex clinical condition often found in the elderly, marked by evolving structural changes and potential neurological effects due to age-related biomechanical shifts. Employing the Geometric Morphometric Method (GMM), which involves both qualitative and quantitative analysis of biological structures based on geometric definitions of their form, offers a valuable avenue to capture the commonly observed changes in the shape of vertebra. The aim of this study was to investigate variations in the morphology of the Fifth Cervical Vertebra (C5) as visualized in lateral cervical radiographs, utilizing the Geometric Morphometric Method (GMM). This was a cross-sectional study design that encompassed a sample size of 235 individuals of the same gender, comprising 112 subjects classified as early adults (21-30 years old) and 123 subjects classified as late adults (51-60 years old). Eleven 2-dimensional (2D) landmarks were applied on the digitalized radiographs by TPSDig2 (Version 2.31) software and subsequent GMM analysis was performed by MorphoJ software. Procrustes ANOVA showed that size and shape are significantly different between different age groups. Discriminant function analysis (DFA) revealed a correct classification rate for 84.5% of cases, yielding identification accuracies of 85.3% for the early adults and 83.7% for the late adults. There were significant differences among early and late adult age groups in the height of the vertebra body with  $p < 0.05$  via independent t-test. In conclusion, there was a significant age-structural shape differences of C5 vertebra between early and late adults by GMM analysis.

Keywords: Geometric morphometrics; C5; shape

# Guardians of Safety: Investigating First Aid and Basic Life-Saving Skills Knowledge and Attitudes in Teachers and Parents - A Scoping Review

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## ABSTRACT

The proficiency in first aid and basic life-saving skills stands as a matter of paramount importance for parents and teachers, given that they often find themselves thrust into situations where immediate action can make the crucial difference between life and death. As caregivers and educators, their readiness to respond to medical emergencies can significantly impact the safety and well-being of those under their care. This scoping review aims to explore the literature on the knowledge and attitudes of teachers and parents regarding first aid and life-saving skills. We conducted a comprehensive search in PubMed, Medline, ScienceDirect, and Cochrane databases, identifying relevant studies published between September 2018 and August 2023. The review revealed a diverse body of literature addressing the knowledge and attitudes of teachers and parents concerning first aid and basic life-saving skills. These studies examined a broad spectrum of factors influencing knowledge, including education and training, personal experiences, cultural norms, socioeconomic status, access to information, and more. Attitudes were shaped by various factors such as confidence, fear, legal considerations, time constraints, and societal awareness. The findings highlight the multifaceted nature of this topic, emphasizing the imperative for further research and targeted interventions to enhance knowledge and cultivate positive attitudes among these crucial stakeholders. Ultimately, this review forms the basis for future studies and educational initiatives designed to enhance preparedness and response in emergency situations among teachers and parents.

Keywords: First aid; basic life saving skill; knowledge; attitude; parents; teachers

# Maladaptive Daydreaming Disorder: Risk Factors and Effects

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## ABSTRACT

Daydreaming is a common, everyday mental activity that accounts for somewhere between 3% and 70% of everyone's daily experiences. Maladaptive daydreaming, on the other hand, refers to excessive daydreaming in some individuals as a negative attempt to deal with a situation. Its symptoms are frequently overlooked or disregarded. The majority of their daydreams were centered on their relationships, having supportive family lives to make up for their lack of real support, an idealized version of themselves, and sexual stimulation. The purpose of this study is to understand the risk factors associated with maladaptive daydreaming, the detrimental effects of maladaptive daydreaming, as well as the methods to deal with maladaptive daydreaming. For this writing, a thorough literature review was done and it involved about 30 journals using databases which are Pubmed and Science Direct by using the keywords Maladaptive Daydreaming, Fantasy, Imagination, psychological phenomena, risk factors, effect, and methods. Recent research has revealed that maladaptive daydreaming was related to COVID-19 breakdown, childhood trauma, and celebrity worship. If this maladaptive daydreaming is not being managed properly, it can develop the risk of an addiction, and social impairment as it is positively related. However, it can be prevented by having psychiatric treatment as it shares many characteristics with other psychiatric disorders such as Cognitive behavioral therapy, mindfulness training, and Motivational interviewing

Keywords: Fantasy; imagination; psychological phenomena

## Access to Healthcare among Trans Women in Negeri Sembilan: Preliminary Qualitative Findings

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### ABSTRACT

Trans women (TW) or Mak Nyah, face several barriers to accessing healthcare, including discrimination, unmet needs and lack of providers who are knowledgeable about transgender healthcare. This study aimed to explore barriers to accessing healthcare among trans women in Negeri Sembilan, Malaysia. In this qualitative study, TW were invited through snowball sampling for semi-structured in-depth interview. Coding and thematic analysis were performed from verbatim transcript of the interviews. In this preliminary analysis from five TW, four early emerging themes were identified: Negative experience with healthcare provider (All participants have experienced stigma, discrimination, misgendering and microaggressions in their healthcare encounters); Healthcare avoidance due to anticipated discrimination (Many TW were reluctant to get healthcare treatment, even for emergency care, due to anticipated discrimination and stigmatization); Unmet transgender healthcare need (Many of the TW trans specific health needs are not readily available in the local healthcare settings); Transgender representative in healthcare settings reduces barrier to treatment (Having TW delegates in healthcare settings minimizes the stress of getting medical treatment including HIV services). In conclusion, local TW face multiple barriers to accessing healthcare in Negeri Sembilan. They encounter negative experiences within the healthcare delivery settings which include mistreatment, refusal of care, stigmatization and discrimination. Healthcare providers should consider multi-faceted approach to improve accessibility of services to transgender communities.

Keywords: Trans women; transgender; healthcare

# Olive Oil and its Derivatives Confer Protective Effects on Reproductive Physiology

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## ABSTRACT

Reproductive health is important to overall human well-being. Olive was cited in the Quran for six times and its health benefit had been propounded by Prophetic medicine. We studied olive oil's protective effects on reproductive health and other diseases using electronic databases such as CENTRAL, PUBMED and Google Scholar. Consumption of olive oil had been shown to improve egg and sperm quality, increasing the chance of successful implantation, protecting tissues and organs against oxidative damage and have shown promising results in animal and human studies, especially in breast cancer, ovarian cancer, postmenopausal osteoporosis, and other disorders. Its active ingredients include, tocopherol (vitamin E), oleuropein, hydroxytyrosol, and tyrosol. Women who consumed olive oil possessed higher levels of progesterone compared to control, possibly helping to regulate the hormone imbalance, menstrual cycle as well as ovulation, which benefits fertility. In this review we summarised the current evidence of the role, benefit and mechanisms of action of olive and its derivatives in reproductive physiology and their potential implications in the treatment and prevention that effect human reproductive health.

Keywords: Olive oil; olive; reproductive health; reproductive physiology; fertility

## Parental Awareness of the Risk of COVID-19 Infection in Nilai District

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### ABSTRACT

Children are highly susceptible to upper respiratory tract infections (URTI). During the COVID-19 pandemic, the mortality rate of children was high worldwide. To date, there is no study assessing parents' awareness of the risk of COVID-19 infection on children's health. This study aimed to explore parents' awareness of COVID-19 risk towards children during the endemic. This qualitative study was done in a private clinic in the Nilai district, using phenomenological approach. Twenty-five parents of children under five years old who attended a primary care clinic for URTI were recruited for in-depth interviews using a semi-structured questionnaire. The audio recordings and verbatim transcriptions were thematically analyzed. Three main themes were identified. (1) Increased parents' vigilance of URTI symptoms post-COVID-19 infection, (2) Increased parents' efforts for COVID-19 prevention, (3) Improved parents' health-seeking behaviour for their children. The increased vigilance was due to parents' past experience of handling their children with COVID-19 infection, which increased their awareness. Using face masks, practising social distancing, and opting for optional vaccinations such as the influenza vaccine were the efforts parents made to prevent COVID-19 infection. Parents sought COVID-19 test kits with some difficulty obtaining

children-friendly tests and facing refusal from children. Parents of children under five seemed to have high level awareness of COVID-19 infection risk during this endemic phase. This is more apparent among those with experience of COVID-19 infection. However, general practitioners should explore these concerns among parents with child presenting with URTI.

Keywords: Awareness; pediatrics; infection; URTI; COVID-19



## Onsite Thoracotomy in an Unstable and Tension Pleuropulmonary Blastoma: A Case Report

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### ABSTRACT

Pleuropulmonary blastoma (PPB) is an aggressive pulmonary tumor commonly encountered in early childhood. There are three pathologic types: type I (cystic), type II (mixed), and type III (solid). This case illustrates a type II PPB in an unstable patient requiring urgent onsite thoracotomy. A 2 year-old girl with no known medical illness, presented with acute respiratory distress for 2 days associated with reduced oral intake, lethargy and weight loss. On examination, she had laboured breathing and deep recession. Respiratory examination revealed reduced air entry over the left lung with coarse crepitations. She was intubated for impending respiratory collapse. Chest radiograph showed complete opacification of left hemithorax with mediastinal shift. A large amount of hemoserous fluid was drained out post chest tube insertion. Repeated Chest radiograph showed left upper and midzone mass with tension pneumothorax. CECT Thorax revealed large solid mass in the left upper lobe with lung bullae and left pneumothorax. Onsite emergency thoracotomy and left upper lobectomy was performed in view of impending cardiorespiratory collapse. Intraoperative findings revealed a huge solid-cystic mass arising from left upper lobe. HPE confirmed pleuropulmonary blastoma Type II. Patient was monitored under intensive care unit for 30 days and showed good recovery. She was discharged well after 35 days. Thoracotomy and surgical removal of the mass is the primary method of treatment. In this case, the patient was unstable and on high-frequency oscillation (HFO) ventilation due to mass effect and tension pneumothorax. This called for the first onsite thoracotomy in such case and patient showed positive outcome post operatively.

Keywords: Pleuropulmonary blastoma; CT scan; thoracotomy

## Pure Red Cell Aplasia turned T-cell Lymphoma: How are they Connected? A Case Report

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### ABSTRACT

Pure red cell aplasia is a rare and complex disorder due to defects in the erythroid precursors characterized by normochromic normocytic anaemia, reticulocytopenia with normal platelets and white cell count. Acquired pure red cell aplasia can be associated with other autoimmune disorders like systemic lupus erythematosus, lymphoproliferative disorder like lymphoma, and solid tumours like thymoma. The pure red cell aplasia may precede lymphoma, appear simultaneously, or occur during its remission. We aim to highlight the diagnostic dilemma when facing a case of PRCA with lymphoma due to the rarity of this association and the pathologic apprehension behind this. This is a case of a 40-year-old gentleman who was diagnosed with pure red cell aplasia in 2019. His initial bone marrow aspirate showed no obvious cluster of blasts or abnormal lymphoid cells. He has been on tapering dose of steroids since then but defaulted follow-up since 2020. His last haemoglobin level during follow-up was 15 g/dL (normal). He presented to us in late 2022 with severe sepsis and was provisionally treated for Melioidosis given a CT Abdomen suspicious of splenomegaly with multiple microabscesses. Blood investigations showed neutropenia with dropping haemoglobin and platelets in the ward. Bone marrow trephine biopsy later confirmed the diagnosis of T-cell lymphoma. The co-existence of pure red cell aplasia and lymphoma is extremely rare. While there is no direct causal relationship, their association is found to be autoimmune-mediated. A high index of suspicion is crucial when encountering such cases for a timely diagnosis and comprehensive management.

Keywords: Red-cell aplasia; lymphoma; lymphoproliferative disorder

## Prevalence of Post-traumatic Stress Symptoms and Psychological Morbidities among Malaysian Firefighters in Penang

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### ABSTRACT

Firefighting is a high-stress profession characterised by unpredictable and life-threatening situations. Repeated exposure to trauma can contribute to the development or exacerbation of post-traumatic stress symptoms (PTSS) over time. Stress, anxiety, and depression could be comorbid with PTSS. Thus, this study aimed to determine the prevalence of PTSS, stress, anxiety, and depression, as well as their psychological comorbidities, among Malaysian firefighters. A simple random sampling method was used in a cross-sectional study of firefighters in Penang. Study tools included self-administered sociodemographic data as well as the Post-traumatic Checklist-5 (PCL-5) to measure the severity of PTSS; and the Depression, Anxiety, and Stress Scale (DASS-21) to assess psychological distress in the domains of depression, anxiety, and stress. Descriptive and Pearson's correlation coefficient analyses were used for data analysis. 562 firefighters participated in this study. The majority of them were men (97.3%) between the ages of 22 and 60. The prevalence of PTSS among the firefighters was 5.0%. The prevalences of stress, anxiety, and depression were 2.1%, 13.0%, and 8.5%, respectively. Among those with PTSS, it was found that 28.6%, 78.6%, and 67.9% suffered from stress, anxiety, and depression, respectively. The results of Pearson's correlation showed that stress ( $r=0.655$ ,  $p<0.001$ ), anxiety ( $r=0.698$ ,  $p<0.001$ ), and depression ( $r=0.699$ ,  $p<0.001$ ) had a significant positive correlation with PTSS. The study showed that PTSS was positively associated with stress, anxiety, and depression. Even though the prevalence of PTSS is still low, relevant authorities should be mindful of this problem and improve the mental health of firefighters.

Keywords: PTSS; firefighters; stress; anxiety; depression

# Psychosocial Impacts of Women with Mayer-Rokitansky-Küster-Hauser (MRKH) Syndrome

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## ABSTRACT

Mayer-Rokitansky-Küster-Hauser (MRKH) syndrome, also referred to as Mullerian aplasia or Mullerian agenesis, is defined as congenital abnormality that is characterized by absence of uterus, cervix, and the upper part of vagina in females with otherwise normal secondary sexual characteristics and female karyotype (46, XX). The estimated prevalence of the syndrome is approximately 1 in 4,500-5,000 new-born females worldwide. A search of databases by using PubMed, Google Scholar, and UpToDate had been done to conduct this study. The objectives of this study are to discuss the psychosocial impacts of women with MRKH syndrome, to review the interventions provided to improve the psychosocial impacts, and to explore the Islamic perspectives to certain interventions that are currently available. The result revealed that the psychosocial impacts of patients with MRKH syndrome are significant. In general, women with MRKH syndrome exhibited depressive symptoms, anxiety, and lower self-esteem. Those symptoms can be improved by nonsurgical and surgical interventions including cognitive behavioural therapy, vaginal dilation and vaginoplasty. It is permissible in Islam for women with MRKH syndrome to undergo procedures that alter their genital components to avoid humiliation. Thus, gynaecologists, paediatricians, and other medical professionals who treat patients with MRKH syndrome are advised to acknowledge the challenges faced by the patients and to look into the community's various treatment needs more thoroughly. In this vulnerable demographic, it is critical to do a depressive symptom and mood disorder screening.

**Keywords:** Mayer-Rokitansky-Küster-Hauser syndrome; MRKH syndrome; vaginal agenesis; vaginal aplasia; psychological outcomes; social outcomes; treatment; cognitive behavioural therapy; vaginoplasty; uterus implant

## Recurrent Inguinal Abscess in an Immunocompetent Patient Caused by *Mycobacterium tuberculosis*

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### ABSTRACT

Tuberculosis (TB) is a chronic granulomatous infection caused by acid-fast bacilli *Mycobacterium tuberculosis*. Tubercular infection of the inguinal group of lymph nodes rarely occurs and is usually associated with the cutaneous type (scrofuloderma or lupus vulgaris) of TB. Primary or isolated inguinal lymphadenopathy without any other focus of TB is even a rarer presentation. We report a case of isolated inguinal tuberculous abscess, a relatively rare disease in adults. A 30-year-old immunocompetent Malay gentleman with no risk factors presented with recurrent right inguinal swelling which was increasing in size and later ruptured followed by pus discharge. Subsequently, it became ulcerated and formed sinus with cutaneous opening/wound. Despite fistulectomy and multiple courses of antibiotics, the abscess recurred. Erythrocyte sedimentation rate (ESR) was raised. Histopathological examination (HPE) of the inguinal tissue showed chronic granulomatous infection. Mycobacterial culture grew *Mycobacterium tuberculosis* which was sensitive to all the first line anti-TB drugs. He was started on anti-TB drugs and responded well. In view of no lymph nodes involvement and the progression of the abscess which gradually increased in size from the initial presentation forming ulcer and sinus tract which drained pus, this is most likely to be considered as extrapulmonary tuberculosis (EPTB) of cutaneous involvement (scrofuloderma). EPTB refers to tuberculosis outside of the lungs and EPTB among non-HIV patients represented around 10% among all patients with TB. Cutaneous tuberculosis only forms a small proportion of extrapulmonary tuberculosis. Thus, it is important to consider EPTB in one of the differential diagnoses in such cases as above.

Keywords: Extrapulmonary tuberculosis; recurrent inguinal abscess; immunocompetent

# Sociodemographic of Stroke Patients in a University Hospital

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## ABSTRACT

Stroke or cerebral infarction is a global health concern that has significant economic implications. The burden of stroke continues to increase both globally and in Malaysia, posing major challenges to public health systems and society at large. Globally, stroke remains a leading cause of death and disability, with profound economic, social and health consequences. One of the ways to combat this is by determining the factors that are associated with stroke. Some of the common factors that are associated with stroke are the patients' sociodemographic. ICD 10 is a system of codes used by healthcare providers to classify and code all diagnoses, symptoms, and procedures recorded which is maintained by the World Health Organization (WHO). In the context of the study, ICD-10 codes specific to stroke diagnoses have been applied to each patient's record at UMMC in 2020. These codes provide a standardized way to document and analyze the prevalence of stroke within different sociodemographic groups. The sociodemographic collected contains the race, age, and gender of the patients. The mean, percentage and frequency of the data was calculated using SPSS and Excell. The study shows that majority of the patients are Male (60.8%), Chinese (42.7%) and Older Adult (51.9%) while Ischemic stroke is highest type of stroke (ICD-10 code: I63 0-9). The result indicated that Male, Chinese and older adults are most likely to be affected by stroke. Due to this, intervention towards the targeted groups regarding stroke may improve care and prevention.

Keywords: Stroke; demography; sociodemographic factor

# The Application of Robot-Assisted Therapy Intervention for Stroke Rehabilitation in Asia: A Scoping Review

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## ABSTRACT

Stroke causes significant disabilities and economic burden among the post-stroke survivors and their care takers. Despite the acute stroke treatments in hospitals, rehabilitation is a vital component of stroke care. There is an increased interest in robotic-assisted devices alongside standard conventional physiotherapy for post-stroke survivors. However, its efficacy and applicability to the patients remain unrecognized. There is a need to assess the efficacy of these new interventions for handling a growing number of stroke patients. This review aims to determine the effectiveness of robotic-assisted devices and their efficacy in the management of stroke patients in Asia. We searched electronic databases from Google Scholar, PUBMED, and The Cochrane Library for the keywords of “stroke rehabilitation”, “exoskeleton”, “robotic device”, “post-stroke”, “stroke rehabilitation care” among the Asian countries. Based on the inclusion criteria, eight studies were included in this scoping review. Each study was held in different settings towards different stages of stroke and different interventions. The results show a significant improvement in post-stroke rehabilitation towards subjects that used combined robotic instruments and conventional rehabilitation stroke care. The existing evidence surrounding the efficacy of robotic devices following stroke remains limited. A robotic device may be an adjunct therapy for the standard therapy given to stroke patients in rehabilitation units.

Keywords: Stroke rehabilitation; exoskeleton; robotic device; stroke; post-stroke; stroke rehabilitation care

# The Impact of Exercise Interventions on the Quality of Life of Patient Undergoing Dialysis

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## ABSTRACT

A proportion of chronic renal disease (CKD) sufferers would succumb to end stage renal disease (ESRD) that eventually requiring dialysis. It is reported that the quality of life (QOL) of dialysis patients are poor as a consequence of various complications. Many studies have embarked on methods to improve their QOL. Hence, this narrative review aimed at elucidating the impact of exercise interventions on QoL in the aspects of physical, social and psychosocial health among patients undergoing dialysis. Literature review and the analysis were carried out for one month duration from 1<sup>st</sup> January 2023. The articles published from January 2010 to December 2022 were included and retrieved from electronic databases; PubMed, Science Direct and Google Scholar. A total of 356 articles were initially identified and screened for study eligibility. Those mentioned and discussed on exercise intervention among dialysis patients were selected, whereas articles of non-English language were excluded. After further evaluation, the final full-text of 16 articles were evaluated. Our review suggested, that regardless the type, intensity or frequency, exercise intervention improves physical performance, alleviates fatigue and leg symptoms, while reducing risks of cardio- or cerebrovascular mortality. Specifically, among the elderly, low intensity strength training exercise improves the 6-minute walk test. Furthermore, it improves social health indirectly through connections made during the exercise as well as able to reduce depression and improve mental health-related QoL. In conclusion, exercise intervention among dialysis patients has the capability of improving the three main domains of QoL which are physical, social, and psychological health.

**Keywords:** Exercise intervention; quality of life; chronic kidney disease; end stage renal disease; dialysis



# Transgender Inclusion in Sports: A Review of Eligibility Criteria

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## ABSTRACT

The 2021 International Olympic Committee (IOC) Framework on Fairness, Inclusion and Acknowledge ensures participation of transgender athletes in sport. However, criteria for their eligibility in various sports are still debatable and unclear especially in the female category. To explore and summarize the eligibility criteria from various world sports organizations for both transgender male and female. Policy of official governing bodies, international federations, and world sports organizations for each sport on transgender were examined through various channel including guidelines, consensus, website, and media release. Summary of eligibility were compiled and compared for transgender male and female. 11 official governing bodies policies were included in this review. Strict eligibility criteria enforced by four governing bodies (weightlifting, athletic, swimming and cycling) require the transgender female athlete must not have attained or experienced any male puberty beyond Tanner Stage 2 or after age 12. Even though all the governing bodies decision for eligibility are made on case-by-case basis, the basic criteria that must be fulfilled for transgender female is the testosterone level while transgender male only require declaration and affirmation of gender.: Different eligibility criteria applied for each sports showed lack of consensus between various sport governing bodies. Further research needs to be done to look for the effect of testosterone after puberty on physical performance and maintenance of testosterone level in transgender female throughout the sports participation to ensures fairness in the competition.

Keywords: Transgender; athlete; eligibility; sport participation; policie

# 'Ulam' and its Effectiveness in Patients with Diabetes Mellitus Type 2

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## ABSTRACT

'Ulam' is well-known to be consumed raw or boiled with rice-based meals among Malay community. They offer an infinite variety of purposes in addition to their distinctive flavours including being extensively used as alternative medicine due to their presumed antidiabetic properties. The scantiness of published medical literature discussing the efficacy of 'ulam' in diabetic patients, however, underscores the need to verify the evidence about their effectiveness. The purpose of this literature review is to discover the mechanism of the constituents of 'ulam', the benefits of 'ulam' in patients with diabetes mellitus type 2, and other relevant medical parameters related to 'ulam'. A thorough literature review was done and it involved about 40 journals using electronic databases which are Google Scholar and PubMed by using the keywords "ulam" and "diabetes mellitus". The literature review reported that 'ulam' contains a variety of phytoconstituents displaying antidiabetic properties in vivo and in vitro. The phytoconstituents give a gradual inhibitory effect on  $\alpha$ -glucosidase and  $\alpha$ -amylase enzymes to control hyperglycemia and contain high concentration of antioxidants. Some 'ulam' significantly associated with incidence of hypoglycemic episodes. In addition, 'ulam' also showed some significant activities such as anti-inflammatory and antihypertensive responses. Similar to Ayurvedic tradition, it might provide alternative treatment for diabetic patients. 'Ulam' is a natural diet that is recommended for type 2 diabetes patients since it reduces blood glucose level, inflammation and blood pressure stress. Since diabetes mellitus has no known permanent cure, thus, an in-depth understanding about the properties of 'ulam' is hoped to create new opportunities for future medical research.

Keywords: Ulam; diabetes mellitus; blood glucose; antioxidant; anti-inflammatory

# Ultra-processed Food and its Association with Colorectal Cancer: A Scoping Review

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## ABSTRACT

Growing evidence shows that Ultra-processed food consumption has been linked to adverse effects such as obesity, cardiovascular disease, and cancer. However, few studies concentrate on the association between Ultra-processed food (UPF) and colorectal cancer (CRC). Furthermore, rather than focusing on all of the food subgroups in UPF at once, most research simply covers a single food subgroup. Therefore, this review aims to find studies correlating UPF intake with the development of colorectal cancer. This study adopts a scoping review protocol. Evidences from published articles were reviewed from a few databases such as PubMed, Science Direct, British Medical Journal, Cochrane Library, Springer Link, SAGE, and Scopus. From a total of 44 articles that met the theme, only 18 met the inclusion criteria, but only three articles were eligible for the study's objective that studies directly examine the relationship between UPF intake and its food group and the risk of colorectal cancer. Two studies used the prospective cohort method, and another used a multi-centric case-control study. The risk of CRC and UPF were positively correlated in 2 studies. However, both studies found different associations between UPF and each gender. The common food groupings of UPF intake varied throughout the studies. In conclusion, the number of studies regarding UPF consumption with CRC needs to be emphasized more to find out the relation of UPF consumption with CRC worldwide.

Keywords: Ultra-processed food (UPF); colorectal carcinoma; scoping review

# Unmasking the Silent Heart Infection

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## ABSTRACT

Infective endocarditis may present insidiously and can be missed if suspicion of the disease is low. Patients can present with vague symptoms, having sought multiple opinions before a diagnosis is finally established. We present a case of a 72-year-old gentleman with underlying mixed valvular heart disease and hypertension complaining of back pain, fever, anorexia and a weight loss of 10kg over 4 months. Initially, he sought treatment from an orthopaedic surgeon who concluded it as a degenerative spine disease. Due to complaint of frothy urine, a urine biochemistry was sent revealing microscopic haematuria and gross proteinuria thus he was then referred to urology and internal medicine. However, a month later he was admitted to the ward due to reduced urine output and bilateral lower limbs petechial rash. He also had pitting pedal oedema and pansystolic murmur in the mitral region, attributed to his mixed valvular heart disease. After a battery of tests, he was finally diagnosed as culture-negative Infective endocarditis with confirmed vegetation at his anterior and posterior mitral valve leaflet on the echocardiogram. He subsequently developed a neurological deficit with evidence of intraparenchymal bleed possibly due to an embolic stroke complicated with nephrotic range proteinuria kidney injury. Infective endocarditis is a great mimicker. Seemingly unrelated symptoms like back pain and frothy urine are in fact related to the disease – indicating septic emboli and glomerulonephritis respectively. This case highlights the need to be on high alert for infective endocarditis, especially in those with risks such as underlying valvular heart disease.

Keywords: Infective endocarditis; prolonged fever; valvular heart disease

## Viral URTI Infection Risk in Children during COVID-19 Endemic

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### ABSTRACT

Viral upper respiratory tract infection (URTI) is common among children. COVID-19 virus is an example of an upper respiratory tract infection. It spreads via droplets particularly during cough or sneeze. However, there is no study exploring the parents' perceptions of children's infection risk of acquiring viral URTI during COVID-19 endemic. This study aimed to explore parents' perceptions of COVID-19 infection risk towards children in Nilai district. Twenty-five participants comprising parents of children under five years old who attended a primary care clinic for URTI were recruited for in-depth interviews using a semi-structured interview protocol. This is to identify parents' perceived risks of COVID-19 infection by applying a phenomenological approach. The audio recordings and verbatim transcriptions of the interviews were thematically analyzed. Two main themes were identified. Half of the participants perceived their child to be at high risk of acquiring COVID-19. The key themes were (i) the high risk, are those with COVID-19 exposure risk in the nursery, kindergarten, playschool, parents' workplace, and public places. High-risk children were also classified as those with underlying medical conditions or with current illness, children are considered lower immunity in comparison to adults in acquiring the infection and the highly infectious nature of COVID-19 increases risk; (ii) low risk, are those who have completed the vaccination

courses. Parents' perceptions of their child's acquiring viral URTI like COVID-19 should be addressed to identify the parents behaviour on their child health care. More study should be done particularly in rural area.

Keywords: Respiratory infection; pediatric; clinic; endemic; COVID-19

# Weaning Challenges for Severe Pneumonia in Severe Kyphoscoliosis

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## ABSTRACT

Severe kyphoscoliosis presents a complex challenge when managing respiratory complications such as severe pneumonia. The decision to pursue tracheostomy or attempt weaning from mechanical ventilation in these cases requires a thorough assessment of the patient's clinical condition, pulmonary function, and potential risks. We present a 37-year-old Malay lady with clinically down syndrome and underlying kyphoscoliosis, as well as obstructive sleep apnea (OSA). She came with symptoms of fever, cough, and shortness of breath. Radiographic imaging confirmed severe pneumonia involving multiple lung lobes. The patient's baseline pulmonary function was significantly compromised due to the structural deformity of his spine, resulting in limited chest expansion and decreased lung capacity. Initial management included non-invasive ventilation, antibiotics, and supportive care. However, the patient's condition deteriorated rapidly, necessitating intubation and mechanical ventilation. The primary dilemma was whether to pursue tracheostomy or attempt ventilator weaning. The decision was reached through a multidisciplinary approach involving physicians, intensivists, and otolaryngologist. Given the patient's chronic kyphoscoliosis, the potential benefits and risks of tracheostomy were carefully evaluated. After an extended period of mechanical ventilation, the patient demonstrated gradual improvements in pulmonary function. She successfully extubated to a non-invasive ventilator and to a facemask subsequently. She was further discharged from the intensive care unit and sent home. In conclusion, this case report underscores the importance of a collaborative and patient-centered approach in management. Careful evaluation of the benefits and risks associated with tracheostomy versus ventilator weaning is crucial to optimize patient outcomes and ensuring long-term respiratory health.

Keywords: Weaning; pneumonia; kyphoscoliosis; tracheostomy

## Does Knowledge and Preventive Behaviours on Colorectal Cancer Promote Willingness for Screening Practice? Findings from the Rural Community

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### ABSTRACT

The uptake of colorectal cancer (CRC) screening among Malaysian population is still lower than expected despite provision of free opportunistic screening. This study aimed to determine relationship between knowledge and preventive behaviours on CRC with willingness to go for screening among adults in Tampin, Negeri Sembilan. Using universal sampling, a total of 349 respondents were interviewed in February 2023. Questions for knowledge and preventive behaviours were adapted from previous research and reliability of the questionnaire was 0.61 for knowledge and 0.71 for preventive behaviours respectively. Self-reported willingness to go for CRC screening was the outcome of this study. Data were analysed using IBM SPSS version 28. Of 349 respondents, majority were Malay (80.5%), female (57.6%), median (IQR) age of 44 (34), married (64.8%), working (51.3%) with household income status of B40 (73.1%). Respondents' knowledge towards CRC was moderate with mean (SD) score of 25.05 (5.28) and mean (SD) score of preventive behaviours was 27.94 (3.79). Collectively, only half of the respondents knew about the symptoms, risk factors and screening modalities for CRC. More than 80% of the respondents have good preventive behaviours towards CRC and 70.5% of them willing to go for CRC screening. There was no significant relationship between knowledge of CRC, preventive behaviours with willingness to go for screening. However, there was a significant positive correlation between knowledge of CRC and preventive behaviours towards CRC ( $p < 0.001$ ). Improving populations' knowledge of CRC is crucial as it will influence positive preventive behaviours and promote the understanding on the importance of early CRC screening.

Keywords: Colorectal cancer screening; knowledge; preventive behaviours



# Review on Transgender and Primary Health Care: What Does a Primary Care Doctor Need to Recognize?

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## ABSTRACT

Primary care doctors (PCD) manage diverse cases in daily practice and may overlook issues related to transgender individuals. Many transgenders experienced unsatisfactory primary healthcare services. This review aimed to identify the important issues related to transgenders and healthcare that PCD should recognize. A narrative review was conducted using PubMed and Medline databases with the keywords; 'Transgender', 'LGBT', 'LGBTQ', 'Mak Nyah', 'Health Care', 'Healthcare', 'Primary Care', and 'Clinic'. Nine important findings were identified. (1) Transgenders are afraid of stigmatization, therefore welcoming PCD and trained staffs are vital. (2) They and their partners' sexual orientation can be varied with multiple partners. (3) HIV and STI infection screening is a priority. (4) Four barriers to seeking help include (i) perceived discomfort with the physical examinations (40%), (ii) lack of money or insurance (13%), (iii) lack of a medical provider they were comfortable with (13%) and (iv) refused for "pelvic examination" (7%). (5) Transgenders have a high risk of socioeconomic marginalization, physical and sexual abuse, and involvement in commercial or survival sexual activities. (6) They have poor health knowledge due to poor accessibility. (7) They need preventive health screenings including mental health, prostate and cardiovascular screening. (8) They commonly suffer from mental health issues and, therefore need screening. (9) Some may seek de-transition and spiritual health. Conclusion: PCD as the 'gatekeeper' should be knowledgeable and provide a delicate approach in managing transgender individuals. Multiple consultations, with a patient-centered approach and a respectable doctor-patient relationship, are essential for the holistic care of this unique group.

Keywords: Mak Nyah; trans women; primary care physicians; clinics; LGBTQ

## Pre-marital Thalassaemia Screening: Knowledge, Acceptance and Practice among Malaysians

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### ABSTRACT

Thalassaemia is one of the most common inherited blood disorders. The carriers are usually asymptomatic; thus many are not aware of their status. The carrier rate for Thalassaemia in Malaysia is at 3-5%. The thalassaemia screening in Malaysia is currently on voluntary basis. The study aimed to evaluate the knowledge, acceptance, and practice of Malaysian Muslims couples on the pre-marital thalassaemia screening. A set of questionnaires on knowledge, acceptance and practice on pre-marital thalassaemia screening was distributed at pre-marital courses centres in Klang Valley. Data was analysed using student t-test and Pearson correlation studies. A total of 290 respondents participated in the study. Majority of the respondents have some knowledge of thalassaemia and pre-marital thalassaemia screening. They are aware that thalassaemia is an inherited disease (62.76%). Majority of them have heard about thalassaemia from electronic media (48.6%) and family members (33.8%). Females are more willing for pre-marital thalassaemia screening ( $p < 0.05$ ). Those with tertiary education have higher score on knowledge of thalassaemia screening ( $p < 0.05$ ) and are willing to go for pre-marital thalassaemia screening ( $p < 0.05$ ). A total of 84.13% are willing to go for pre-marital thalassaemia screening and agreed (76.90%) if it is made compulsory as a national policy. However, only (50.69%) are willing to pay for the screening cost. There is positive relationship between knowledge on thalassaemia and willingness to go for premarital thalassaemia screening ( $r = 0.20$ ); between knowledge on thalassaemia screening and willingness to go for premarital screening ( $r = 0.35$ ) as well as between availability of diagnostic facilities and willingness to go for premarital screening ( $r = 0.36$ ) (Table 3). An aggressive approach to create awareness on thalassaemia and its screening program is required as there is positive correlation between knowledge level and their willingness. Electronic media should be considered as the main media of awareness campaign. The government should consider a national policy on thalassaemia screening, and it should be fully funded to avoid rejection by the community.

Keywords: Thalassaemia; pre-marital screening; knowledge; acceptance; practice

# Mental Health of Parents with Autistic Children

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## ABSTRACT

Having autistic children significantly impairs the functioning of the family, including the wellbeing of the parents. Compared to parenting children with typical development, raising a child with autism spectrum disorder (ASD) can be more stressful and difficult. Recent research on parents of autistic children has revealed these parents, particularly mother, are at high risk of developing mental health issues. A key element that might involve in this process is stress. Therefore, some interventions are required to address the issues that parents of ASD children are experiencing so they can have a better quality of life. The purpose of this study is to understand the factors associated with parenting stress, quality of life of parents with ASD children as well as the coping strategies that target the improvement of parent's mental health. For this writing, thorough literature review was done and it involved about 30 journals using databases which are Pubmed and Science Direct where by using keywords Autism Spectrum Disorder (ASD) in children, parental stress, parental mental health, coping strategy, quality of life to filter out research papers that are out of context. A rise in parental stress was linked to child's autism symptoms severity, social isolation and community stigma. If the stress among parents with ASD children was not being properly managed, this can progress to the risk of developing depression as parental stress are positively linked with depression. However, the risk can be reduced by the presence of strong parental coping skills such as positive reappraisal, social support to cope with the higher level of parental stress.

Keywords: Autism spectrum disorder (ASD); parental stress; quality of life; coping strategy

# Obstructive Sleep Apnea: The Outcome of the Different Types of Surgical Treatments

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## ABSTRACT

Obstructive Sleep Apnea (OSA) is characterized by obstructive apnea, hypopnea, and/or sleep arousals caused by repetitive collapse of the upper airway. If left untreated, OSA may cause other comorbidities and can lead to death. The effectiveness of the treatment is very important to avoid complications and to improve the patient's quality of life. This article review aims to identify the outcomes of different types of surgical treatments in OSA patients. We found that the prevalence of OSA is increasing as obesity rates increase. The prevalence of OSA ranged from 7.8% to as high as 77.2% for mild OSA and from 4.8% to 36.6% for moderate to severe OSA. Most of the studies reported that the most common surgery of the oropharynx is uvulopalatopharyngoplasty (UUUP), with a successful rate of 59% combined with tonsillectomy in mild to moderate OSA. Modified CAPSO with tonsillectomy had a 61.7% success rate, while modified CAPSO alone had a 41% success rate. Maxillomandibular advancement is one of the craniofacial surgeries in OSA, with a surgical success rate of 86–90%. Nasal surgery alone is rarely successful in treating OSA. However, it was done as an adjunct and also helped to improve continuous positive airway pressure (CPAP) adherence and compliance. As a conclusion, the outcome of surgical treatment for OSA varies depending on the severity and level of surgery.

**Keywords:** Obstructive sleep apnea; surgical procedure; continuous positive airway pressure

## Obstructive Sleep Apnea: Common Risk Factors and Complications among Adults in Malaysia

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### ABSTRACT

Obstructive sleep apnea (OSA) is a common otorhinolaryngology disorder as a result of an absence of breathing and movement of air at the level of upper airway due to obstruction. It is associated with significant morbidity. The aimed of this narrative review was to determine the common risk factors and common medical complications of OSA among adults in Malaysia. Literature review was carried out using the following electronic databases: SCOPUS, PUBMED and Google Scholar. Based on selected keywords, 2013 articles were retrieved and screened, after which, 17 articles were eligible for this review. The Malaysian adults includes aged from 18 years old to 60 years old and exclusion of case report article. It was estimated nearly one billion adults aged 30-69 years worldwide could have OSA. This review reveals the prevalence and severity of obstructive sleep apnea (OSA) among adults in Malaysia was varies across diverse populations. Older age (mean age; 44.3, every increase 1 year of age reduced odds of high risk for OSA by 5%), male gender ( 42.3%- 69.5) and higher BMI (mean BMI; 29.44) were the commonest risk factors of OSA. Hypertension was the commonest medical complication followed by diabetes mellitus type 2 and psychological dysfunction such as depression and reduced cognitive function. In conclusion, further study should explore modifiable OSA risk factors and understand ethnicity-based disparities in OSA mechanisms by addressing overweight, lifestyle changes, and other modifiable OSA risk factors. These actions are vital for OSA prevention and management, thus mitigating the risk of additional complications.

Keywords: Sleep apnea; obstructive complication; obstructive epidemiology; adults; Malaysia

## Missed Diagnosis: Bilateral Os Vesalianum Pedis

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### ABSTRACT

Os vesalianum pedis (OVP) is a rare asymptomatic accessory bone located in the peroneus brevis tendon. The prevalence is less than 1% worldwide. Most common cause of presentation is an accidental finding during radiographic examination or a wrong diagnosis of fracture. Lateral foot pain is not common and if patient presenting with this, usually it coexists with trivial trauma with soft tissue injury or ankle sprain. We reported a case of bilateral OVP with pain for referral at our clinic. A middle aged gentleman patient was referred to us for a mistakenly left fifth metatarsal fracture. He presented with ankle sprain while playing football a week before coming to our clinic. There was no bony prominence on lateral aspect of both feet. Tenderness was more at base of fifth metatarsal. All joints of the foot are stable and he was able to walk normally. Radiographs showed an obvious accessory bone at the base of bilateral fifth metatarsal. A diagnosis of symptomatic OVP was made. Conservative treatments were commenced and during subsequent follow up, patient remained painless. Conservative treatment ranges from shoe modification, stretching exercises and NSAIDs. Surgical treatments are reserved for chronic symptomatic condition.

Keywords: Os vesalianum pedis; lateral foot pain; accessory ossicle

## Colorectal Cancer: Am I at risk? Will I go for screening?

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### ABSTRACT

Colorectal Cancer (CRC) is the second most common cancer in Malaysia. Good insights on its risk and screening are essential for early detection. This study aimed to determine the perception towards CRC susceptibility and screening, and their relationship with preventive practice in a rural community. In a cross-sectional study, 349 adults in Tampin Tengah Subdistrict were included through universal sampling in February 2023. Respondents were interviewed on their perceived CRC susceptibility and screening using a validated scale. Data were analyzed using IBMSPSS version 28 and categorized based on the Bloom's criteria. Respondents' median (IQR) age was 44 IQR 34. Majority of them were female (57.6%), married (64.8%), Malay (80.5%), non-smoker (68.8%), employed (51.3%), with household income status of B40 (73.1%). Respondents' perception on screening was moderate with mean (SD) score of 17.31 + 2.29 out of 25. Majority (89.4%) felt that they do not have enough information on CRC screening, 44.6% would not agree to pay for it, and 30.1% felt too embarrassed to undergo a colonoscopy. The perceived susceptibility was poor with mean (SD) score of 13.90 + 3.97 out of 30. Majority (78.5%) do not think they have high risk of CRC in the future, 84.8% feel their risk is lower than everybody else. Perceived screening was significantly associated with preventive practice ( $p=0.001$ ,  $r=0.23$ ). Lacking good perception on the CRC screening will affect the preventive practice. More knowledge and information distribution on CRC risk and screening is required to enhance better perception, and hence improving the CRC preventive practice in the community.

Keywords: Colorectal cancer; perception; screening; susceptibility

## Review on the Association of Post-Kidney Transplant with Obesity and Diabetes

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### ABSTRACT

Kidney transplantation (KT) is one of the best but limited treatment offered for End Stage Kidney Disease (ESKD) patients. Despite that, the emergence of obesity and diabetes post-KT has become a known issue that negatively impact clinical outcomes as it decreases the survival rate. However, limited information is available regarding the best management of post-KT care associated with obesity and diabetes. The purposes of this literature review are to determine the factors associated with obesity and diabetes in post-KT, the pathogenesis underlying obesity and diabetes in post-KT, and the early prevention of this problem. A literature search was done using the keywords "post-kidney transplant diabetes mellitus", "obesity post-kidney transplant" and "post-kidney transplant care" via electronic databases such as Google Scholar, UpToDate, and PubMed. The literature review reported that immunosuppressive medication, nutritional behavior, and lack of physical activity were the important factors for developing diabetes and obesity post-KT. The mechanism that is related to insulin resistance increase the risk of hyperglycemia and dyslipidemia. Thus, early prevention like regular screening, promotion of exercise and weight loss programme, and even more individually tailored immunosuppressive therapy were suggested to improve the outcome of KT. KT is known as the best treatment of choice for ESKD patients. Since diabetes and obesity post-KT may reduce their survival rate faster, thus, an in-depth understanding of post-KT care among the recipients with obesity and diabetes is hoped to achieve the real success of the treatment.

Keywords: Kidney transplant; diabetes mellitus; obesity; transplant care



# The Clinical Spectrum of Oropharyngeal Squamous Cell Carcinoma in Klang Valley Malaysia: A Retrospective Study

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## ABSTRACT

The disease profile of OPSCC is still scarce in Malaysia; instead, the number of cases keeps rising worldwide. This study aimed to look at the clinical spectrum of OPSCC cases in Klang Valley, Malaysia. We conducted a retrospective study among patients with confirmed OPSCC from 2009 to 2019. The available patients' data were retrieved from the medical records of five tertiary hospital in Klang Valley. About 101 OPSCC cases were identified in this study. The number of cases has been inconsistent for the last 10 years. Our patient's age ranged from 23 to 87 years old, with a mean (SD) of 59.4 (12.0). The majority of cases were male (69.3%), of Chinese ethnicity (43.6%), and from low socio-economic groups. The risk factors and clinical presentation were almost identical to those of HPV-related OPSCC, which involved non-smokers and non-alcoholics, presented with advanced neck nodes, and had a common primary tumor arising from the tonsil and base of the tongue. We also found that our OPSCC patient was less associated with the second primary tumor (SPT) and had a good response to treatment. Recurrent cases had a significant correlation with Chinese ethnicity. The clinical spectrum of OPSCC cases in this study appears to be almost similar to HPV-related OPSCC. However, during this study period, no routine HPV detection was done to support the findings. Therefore, prospective studies involving multiple hospital across Malaysia can be done in the future to look for HPV identification and its clinical correlations for better understanding.

Keywords: Oropharyngeal carcinoma; squamous cell carcinoma; human papillomavirus; head and neck carcinoma

# Acute Otitis Externa: A Review on Current Trend and Management

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## ABSTRACT

Acute Otitis Externa (AOE) is one of the most common presenting ear infection in the primary care setting. It also known as Swimmer's ear which define as an inflammation of external auditory canal caused by infectious process. It is common in tropical climate area. AOE annual incidence is 1% in UK with 10% lifetime prevalence worldwide. A review was done on AOE focusing to its prevalence, current trends of management and its issues. In western country, its incidence ranging from 2 to 14 person per 1000 people annually. The most common causative organism are *Pseudomonas aeruginosa* and *Staphylococcus aureus*. *Staphylococcus aureus* has the highest level of quinolone resistance. National Institute for Health and Care Excellence (NICE) guidelines recommended the usage of topical antibiotic ear drops as first line treatment in which 65% to 90% of cases will resolve with antibiotic ear drops. Oral antibiotics only be given in severe cases. Combination of topical antibiotic and topical corticosteroids are often prescribed. The most common topical agent used in the practice was ciprofloxacin with dexamethasone drops. However, in a Cochrane meta-analysis found that there was no significant difference of the outcomes when compared to different topical antibiotics with or without corticosteroids. Nowadays, AOE is primarily treated in primary care setting. Lack of knowledge and adherence to the guideline will lead to poor management of AOE, increase risk of antibiotic resistance and referral to tertiary care setting.

Keywords: Externa; otitis; external otitis; ear inflammation; ear infections

# Barriers to Adolescents Health Service Utilisation Among Malaysian Adolescents: A Qualitative Study

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## ABSTRACT

Adolescents often perceived as robust and health. Shockingly, the global toll of preventable adolescent deaths reached 1.1 million in 2016. In Malaysia, a range of health issues afflicts adolescents, exacerbated by their risky behaviors. Despite the introduction of the Adolescent Health Service two decades ago, it remains dishearteningly underutilized. This study aimed to understand Malaysian adolescents' health-seeking behavior and the barriers to seek professional help from Adolescent Health Service. A qualitative study was conducted using convenience sampling, involving 17 adolescents aged 15-19 years old. In-depth semi-structured interviews were utilized to gather insights into their experiences and perspectives. The data were analyzed using thematic analysis to identify prevailing themes. The study revealed a significant recognition among adolescents regarding the importance of seeking help for their health issues. Primary sources of support were identified as peers, parents, and social media. However, notable barriers to the utilization of adolescent health services were identified and categorized into two main groups: *demand-side* (limited awareness of the service, self-reliance, trust issues, reliance on parents for healthcare access and the misconception that adolescent health services exclusively catered to physical health) and *supply-side* (negative healthcare worker attitudes, privacy concerns, extended wait times, and brief consultations). Incorporating the voices of adolescents as end-users, this study illuminates crucial barriers in accessing healthcare services. These findings provide a pivotal foundation for targeted interventions, and ultimately, fill the critical gap in adolescents' well-being support in Malaysia.

Keywords: Adolescent health; health-seeking behavior; barriers; Adolescent Health Service

## Can You Say That Again?: A Rare Case of Kratom Use Leading to the Dead Ear

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### ABSTRACT

Kratom (*mitragyna speciosa*), is a tropical tree native to Southeast Asia. It has gained popularity as a natural remedy for various conditions and is deemed to be useful in pain relief and opioid withdrawals. Increasing concerns regarding the potential adverse effects have also been highlighted globally. A 32-year-old male presented with bilateral reduced hearing associated with dizziness, however, there is no other ear symptoms such as otalgia or otorrhea. A tympanometry showed bilateral severe sensorineural hearing loss. Diagnosis of sudden sensorineural hearing loss was made, and the patient was started on steroids and viral screening was performed to identify any underlying cause. Despite treatment, negative viral screening, and normal radiological findings, the patient's hearing did not improve. Further history revealed patient has been using kratom for recreational use regularly. Upon completion of treatment, the patient's hearing remained unchanged. Adverse side effects of kratom have been well documented across the literature such as gastrointestinal side effects including nausea, vomiting, and constipation. A link between kratom use and cardiovascular events which includes arrhythmias and myocardial infection has been reported, and also rarely, liver injury where cases of hepatotoxicity are seen. Higher doses of kratom have been linked to respiratory depression and psychiatric symptoms. Neurological effects that are also observed include seizures and confusion. However, there is currently no scientific research or published studies specifically linking kratom use to hearing loss. In conclusion, a history of kratom usage should always be explored as it may cause a vast spectrum of neurological diseases.

Keywords: Kratom; ketum; neurology; hearing loss

## Comparison of Optical Coherence Tomography Angiography (OCTA) Parameters of Different Groups in Stage 3 Diabetic Kidney Disease (DKD)

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### ABSTRACT

Diabetic kidney disease (DKD) is a known complication of Diabetes Mellitus (DM) and is growing worldwide. Since the eyes and kidneys share structural and developmental similarities, Optical Coherence Tomography Angiography (OCTA) has emerged as a non-invasive method to assess their systemic correlation. This research aims to compare the OCTA parameters of different groups in stage 3 DKD. This is a single-center, cross-sectional study on patients with Type 2 DM with CKD. They were divided into two groups: proteinuric and non-proteinuric. The OCTA parameters namely foveal avascular zone (FAZ), perfusion density (PD) and vascular density (VD) were recorded. A total of 87 patients were included with the mean age of subjects in the proteinuric and non-proteinuric groups being 59.17 + 6.28 years and 59.13 + 11.28 years, respectively. No statistical difference was found in demographics, HbA1c level, eGFR, coexisting hypertension, and ischemic heart disease. The median FAZ area in proteinuric group compared to non-proteinuric group was similar. For both PD and VD, the most significant contributing region is the central area. All OCTA parameters showed non-significant differences between both groups. Age significantly predicted the FAZ value in proteinuric group while coexisting IHD significantly predicted the w-VD and w-PD in non-proteinuric group. In conclusion, there is no difference in the OCTA parameters between both groups. Therefore, OCTA may not yet be suitable as a screening tool to differentiate between the groups. Age and IHD are strong risk factors for vascular changes in diabetic patients.

Keywords: Octa; proteinuria; diabetic kidney disease; foveal avascular zone; perfusion density; vascular density

# Bipolar Disorder and Cancer: Finding the Correlation

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## ABSTRACT

Around 2% of the world's population is affected by bipolar disorder. However, studies demonstrated an increased relative risk of cancer in bipolar patients and are even greater in lithium-treated ones, which is serious as this drug emerged as a core mood stabilizer. Hence, this literature review is undertaken to observe the cancer incidence in bipolar patients as well as the relevant factors. This review aimed to identify the relationship between bipolar disorder and the risk of cancer by observing cancer incidence in bipolar patients, studying the factors that contribute to the risk of cancer in this population and relating cancer with Islamic perspectives. PubMed, Science Direct, Wiley and Google Scholar are the electronic databases with keywords of 'Bipolar disorder', 'Cancer', 'Risk of cancer', and 'Malignancy' utilised. Results showed an overall high incidence of cancer in bipolar disorder, except melanoma. Cancers highly associated with bipolar disorder are breast cancer, lung cancer, colorectal cancer and renal tumors. Numerous factors have been put forth and they can be broken down into three components, which are the genetic predisposition of the illness itself, the unhealthy lifestyle of bipolar patients and side effects of the medications. Cancer and its treatment weaken the immune system, making the prevention of infection and disease crucial. Understanding the overall health consequences of bipolar disorder will assist healthcare providers in conducting early cancer intervention and this will be improved with further research that will determine various pathways mediating the disease link.

Keywords: Bipolar disorder; cancer; risk of cancer; malignancy

# Digital Health and the Indigenous Group: A Literature Review

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## ABSTRACT

“Digital health” refers to managing illnesses and health risks using information and communication technologies in medicine. Gadgets, mobile health, telehealth, health information technology, and telemedicine are examples of digital health. Objective: This review aims to identify the issues and improvement related to digital health of the indigenous people. Methodology: PUBMED, Google Scholar, and other related websites were used to access journals published from 2010 to 2022, using key words of “Health Digitalization”, “Indigenous”, “Aboriginal”, “Digitalization”, “e-Health” and “Digital Technology”. Results: Indigenous people face issues of suboptimal health care due to living in geographically remote locations, limited access to healthcare services, cyberbullying, and due to insufficiency of research data, as difficulty in approaching the group. Following these problems, there are actions taken to improve digital health system such as deploying telehealth, promoting health education in multimedia and social media, development of web-based therapeutic interventions (WBTI), that is self-guided or clinician-assisted. Programmes delivered aim to provide guidance, support, and treatment. For e-Health research with indigenous populations to be effective, there are six cultural safety aspects. These are establishing a mutually respectful relationship, maintaining a cordial relationship, effective communication, and support by the stakeholders for the local team throughout the research, dedication to co-creating the innovation, examining mistakes and lessons learned, as well as areas for improvement that promote learning and cultural safety. Conclusion: More research on the digital health system is required to establish effective interventions and treatments for the indigenous population in the future.

Keywords: Digital health; aborigines; health technologies; e-health; digital technology

# Digital-Gaming Addiction among Depressed Children

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## ABSTRACT

Internet game disorder is an addictive behaviour describe as excessive playing game, neglecting the healthy lifestyle and significant social isolation. Meanwhile, depression is one of major mental illness. Both disorders can cause dysfunction in cognitive functions. However, there is little study mentioning specifically these disorder among special population such children. The following electronic based were used for the literature review using Google Scholar, Medline, PubMed electronic database, books, journals and articles on relevant topics, to look for the relation of the information between the digital-gaming addiction among depressed children. The objectives are to explore the potential connection between online gaming addiction and the increased risk of depression in children. As the result, children with addictive behaviour such as game addiction are in risk to experience such depressive symptoms due to their negative affects towards the neurodevelopment changes and permanent impairment of cognitive function. This can lead to the self-perpetuating cycle, model of escapism and emotional regulation, lack of social behaviour and often sleeping patterns disruption. The conclusion is, this review discovers the corelation between the digital-gaming addiction and the depressed children. This can help for better understanding on how both prevalence can lead to one another. Therefore, early identification, intervention, and providing appropriate support are essential for children experiencing symptoms of IGD or depression.

Keywords: Depression; effect gaming; internet addiction; online; children; stressful event



# Lady of Steel: Defining the Representation of Female Orthopaedic Surgeons

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## ABSTRACT

Orthopaedic surgery is a labor demanding branch of medicine historically dominated by men. Malaysia, with a mere 10% representation, is ranked as the third ASEAN country with the greatest number of female orthopaedic surgeons. This review aims to identify the magnitude, and the associated factors affecting the glaring disparity in the representation of female surgeons in various aspects of the orthopaedic surgery. Relevant articles were searched through PubMed, Google Scholar and Science Direct to extract human studies of equality aspects of female orthopaedic surgeons. Studies were selected if (a) compared the male and female orthopaedic surgeon in any aspect, (b) used female orthopaedic surgeons as sample/patients and (c) are primary studies. Disparity starts early, as less female medical students expressing interest to pursue orthopaedic surgery as a career. The number of female surgeons' undergoing residency is greatly uneven, with males outnumbering females at each different year. Registered female orthopaedic surgeons also receive lower financial compensation for their services in contrast to male counterparts. In the academic field, there is a disparity of female surgeon authors that can be found in literature and as keynote speakers. The barriers for professional growth in female surgeons were identified included male privilege mindset, constraint communications and unequal support. Existence of work place harassment both in the verbal or physical form frequently haunts the female surgeon. Recently, spousal support has been identified important driving force for professional growth. In conclusion, awareness of the barriers that female orthopaedic surgeons face their careers is the first step to advocating for women this professional field. Programs designed to advocate early interest to participation, and to remove barriers to professional advancement are steps to bridge the disparity gap.

Keywords: Female surgeons; orthopaedics; inclusion; gender; disparity; diversity

## Ear Bleeding Secondary to Noise Exposure following Recent Myringotomy and Grommet Insertion

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### ABSTRACT

Otitis media with effusion (OME) is defined by presence of middle ear fluid without sign of bacterial infection or illness. For adult patient without effusion that does not resolve within 12 weeks can be referred for myringotomy and grommet insertion. Bleeding immediately following procedure is uncommon but can happen. We report a case of noise induce bleeding two weeks following myringotomy and grommet insertion. A 35-year-old male who works part time as a contractor had a myringotomy and grommet insertion in his right ear 2 weeks earlier. The procedure was uneventful. A day earlier he had been working with his colleague who has been renovating a bathroom and a toilet which involve hacking and drilling work. Following the drilling work, he noticed there's a fresh painless bleeding from his right ear associated with slight reduce hearing and subsequently seek medical attention. Clinically on otoendoscopy showed there is a hematoma over the tympanic membrane and the tympanic membrane was dull. The grommet was not readily visualised. He was treated conservatively and the bleeding and reduce hearing resolved. The cause of bleeding was unknown but most likely due the high frequency of drilling and hacking work during the renovation process. Following the treatment with oral antibiotic and follow up the bleeding resolved. Noise induce bleeding following myringotomy and grommet insertion is an unknown risk following the procedure. This case illustrates that care or advise has to be taken postoperatively in patient who's job involve constant noise or high frequency at work.

Keywords: Otitis media with effusion; myringotomy; grommet; bleeding

# Empowering Communities through Training of Trainers (ToT): A Health Literacy Intervention in Taman Negara Pahang

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## ABSTRACT

The community living in Taman Negara Pahang has limited health literacy due to the remoteness of its geographical area which poses significant challenges to their overall well-being. This issue hinders individuals from making informed decisions about their health, leading to preventable health disparities. To address this critical issue, we propose the implementation of a Training of Trainers (ToT) program as an intervention approach. The study aims to assess the impact of the ToT program on the community's health literacy. We employed a mixed-methods research design, involving six teachers as trainers and 155 students as participants. For the quantitative aspect, we collected baseline and immediate post-intervention data on leptospirosis knowledge as a proxy for health literacy, calculated total knowledge scores, and analyzed the differences between pre- and post-intervention knowledge scores. Simultaneously, the qualitative component delved into the perceptions and experiences of the participants. The results reveal a significant enhancement in the knowledge scores. Participants also reported that they have positive confidence in disseminating this newfound knowledge within their communities. These findings underscore the ToT program's potential to enhance health literacy among communities in Taman Negara Pahang. By empowering community members to become health educators, this intervention has the potential to bridge the health literacy gap and contribute to better health outcomes and informed decision-making. Further research is needed to refine the program and assess its long-term impact on the health of the community.

Keywords: Health literacy; protected areas; training of trainers

# Dynamic CT Changes of a Rare Case of Pelvic Emphysematous Osteomyelitis: A Case Report

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## ABSTRACT

Emphysematous osteomyelitis is a rare disease caused by gas-forming organism characterised by presence of intramedullary air locules. Commonly involved bones are pelvis, femur, tibia, fibula, and thoracolumbar vertebra. Hematogenous spread of infection is the commonest route of infection. This case illustrates the dynamic bone changes on CT scan of a patient diagnosed with emphysematous osteomyelitis. 27 years old female, Para 1, 14 days post spontaneous vaginal delivery (SVD) with underlying antiphospholipid syndrome, complicated with autoimmune hemolytic anemia, was diagnosed to have *E. coli* bacteremia from blood culture. She complained of severe bilateral hip pain requiring intravenous opioid. Pelvic radiograph and the first CECT Abdomen/Pelvis were unremarkable. Repeated CT after 2 weeks due to unresolved pain showed ill-defined lytic bone lesions with cortical erosion of bilateral iliac bone with multiple intramedullary air within giving rise to pumice bone sign. She was treated with intravenous antibiotic for 8 weeks and the symptoms were improving. CT scan done after completion of treatment showed reduction in the intramedullary gas with more definite lytic lesions in the pelvis. She was discharged home well. *E. coli* bacteremia in an immunocompromised patient is a catastrophe as the infection usually severe as seen in this patient. The first CT scan showed normal appearance of the bone although patient is symptomatic, which is common in early stages of disease. Other modalities like MRI, bone scintigraphy or FDG-PET may detect early osteomyelitis changes at this point of time. Lytic lesion in the pelvic is only evident after 2 weeks and subsequently showed further bony destruction. Other modalities like MRI, bone scintigraphy or FDG-PET may detect early osteomyelitis changes at this point of time. According to a published meta-analysis, the sensitivity and specificity to detect osteomyelitis are 67% and 50% for CT scan, 84% and 60% for MRI, 83% and 25% for bone scintigraphy and 96% and 91% for FDG-PET scan.

Keywords: Emphysematous; osteomyelitis; CT scan

# Ethical Dilemmas in Videoconferencing for HIV Patients: Balancing Confidentiality and Healthcare Advancements

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## ABSTRACT

The post-pandemic era has witnessed a transformation in healthcare, with the adoption of telemedicine. With significant opportunities, it also raises critical ethical dilemmas, particularly for Human Immunodeficiency Virus (HIV) patients. This scoping review aims to examine through the lens of medical ethics the ethical challenges associated with videoconferencing in HIV patients. It analyses the responsibility and duty of physicians related to handling videoconferencing with HIV patients. We explored PubMed for articles published between 2019 and 2023 concerning telemedicine, videoconference, HIV and ethics. A total of 46 were found. Abstracts were scanned and articles that fulfilled the aim of the study were included. Videoconferencing provides additional non-verbal cues that are linked to the symptomology, diagnosis, and provider-patient relationship to enhance care. One of the main ethical dilemmas is the safeguarding of patient confidentiality. HIV is a stigmatised condition, and maintaining confidentiality is paramount. The challenge lies in ensuring the platforms are secure and that physicians adhere to stringent protocols to prevent inadvertent disclosure. Informed consent also emerges as a crucial dilemma. Patients must fully understand the implications including potential data sharing and security risks. Establishing comprehensive ethical guidelines is imperative. These guidelines should address patient confidentiality, informed consent, data security, and stigma reduction. In conclusion, virtual care needs to be built on a foundation of privacy protection, a robust informed consent process, and the mitigation of stigma. Balancing patient confidentiality is crucial for unlocking the full potential of videoconferencing and fostering trust between physicians and their patients.

**Keywords:** Confidentiality; human immunodeficiency virus (HIV); videoconferencing; telemedicine

## Ethical Issues Regarding Euthanasia in Palliative Care

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### ABSTRACT

Euthanasia, the act of intentionally ending a patient's life to relieve suffering, raises significant moral and ethical questions. This review explored the complex ethical situation surrounding euthanasia in the context of palliative care. This study identified different types of euthanasia, discuss the advantages and disadvantages of euthanasia. PubMed, ScienceDirect, Google Scholar, EBSCOHost, and ResearchGate were among the electronic databases used to identify relevant academic journals and related resources, to gather insights and information on the ethical dimensions of euthanasia in palliative care. This review revealed the existence of active euthanasia, passive euthanasia, Physician-Assisted Suicide (PAS), and indirect euthanasia as distinct categories within the realm of euthanasia. Pros of euthanasia include its potential to alleviate the immense suffering experienced by terminally ill patients, granting them autonomy over their end-of-life decisions, offering a peaceful option compared to other interventions, and efficiently utilizing healthcare resources. However, the cons encompass legal and regulatory challenges, the risk of misuse and abuse of euthanasia, and resulting in potential impacts on the physician-patient relationship. This review offers insights into the complex ethical concerns and challenges related to euthanasia from different viewpoints and helps lay the groundwork for educated discussions on this delicate subject. A guideline related to euthanasia in Malaysia is needed because of the increasing cases of palliative care.

Keywords: Euthanasia; physician-assisted suicide; ethics; palliative care

# Exploring Youth Gender Identity in the Online Gaming Realm: A Qualitative Study Protocol

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## ABSTRACT

This research protocol focuses on the qualitative assessment of gender identity in online gaming among youths in Kuala Lumpur, recognizing the significance of online gaming as a platform for identity exploration, particularly among urban youth populations. Employing qualitative research methods, this study will explore the multifaceted dynamics of gender identity within the unique context of online gaming. The objective is to explore factors associated with gender identity preferences online among youths. Participants will consist of youths between the ages of 18 and 25 who are actively engaged in online gaming communities in Kuala Lumpur. The selection aims to reflect a diversity of gender identities, gaming preferences, and cultural backgrounds, offering a comprehensive perspective on the subject. Data collection methods will include semi-structured interviews, focus groups, and participant observation. These approaches facilitate the extraction of individual narratives, experiences, and challenges associated with gender identity in online gaming. In addition, participant observation provides valuable context by observing in-game interactions and behaviors. The study's ultimate goal is to shed light on the complex and ever-evolving relationship between digital spaces, youth culture, and the fluid nature of gender identity. It strives to offer an understanding of how gender identity is expressed in online gaming environments. The findings from this research are expected to contribute to the understanding of the gender identity culture among youths in online gaming and the impact it has on real life. The insights may inform recommendations for mental health policy, highlighting the need for mechanisms that would support these youths.

Keywords: Gender identity; online; youths

## Post Chikungunya Arthritis; A Case Report

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### ABSTRACT

Chikungunya virus (CHIKUV) is an established arbovirus affecting the tropical area like Malaysia. CHIKUV is on the rise again in recent years and has become endemic in certain areas. We report 2 cases of female siblings from CHIKUV endemic area in Kuala Lumpur. They presented with typical viral fever for 5 days, rash and joint pain that lasted until 5 weeks later. The joint pain was inflammatory in nature. On examination, both had swollen ankles and knee joints. The infection was confirmed with CHIKUV serology. Antibody examination showed positive antinuclear antibody with negative rheumatoid factor. Both received oral corticosteroid (CS) with hydroxychloroquine (HCQ). During follow-up review at 4 months, the other sibling needed addition of methotrexate to control the joint pain. Post CHIKUV inflammatory arthritis is one of the established complications following the infection. It can be persistent up to more than a year after the infection. Among the reported predictors for chronicity include being female, positive immunoglobulin G, and moderate to severe functional disability. Most patients had negative rheumatoid factor and positive anticyclic citrullinated peptide antibody. The most established treatments from limited clinical trials include use of non-steroidal anti-inflammatory drugs (NSAIDs), CS, and HCQ in acute phase (less than 3 months), while introduction of disease-modifying antirheumatic agents (DMARDs) and biologic might be needed in chronic phase respectively. CHIKUV has increasingly become more transmissible due to tourists and viral mutations. Similarly, like dengue infection the *Aedes* spp. mosquito as vectors should be contained while awaiting the ongoing vaccine development.

Keywords: Chikungunya; post viral inflammatory arthritis; post Chikungunya inflammatory arthritis; CHIKUV



# Child Abuse in Daycares and Kindergarten: A Review

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## ABSTRACT

Child abuse is one of the serious problems that has significant impacts on the child's mental and physical health as well as their well-being and development. Increasing trend of child abuse in daycares and kindergartens nowadays have raising concern among parents which require more invasive intervention from the stakeholders and government. The present review discusses different forms of child abuse with its presentations and the causative factors leading to the abuse in these places. Besides, this review explains several approaches that can be implemented to reduce this phenomenon. The information in the review was obtained from selected papers from several databases such as PUBMED and Google Scholar using keywords related to "child abuse", "child abuse in daycares" and "abuse in kindergarten". This review was written narratively as a general overview of the topic. A variety of child abuse forms have been described namely physical, emotional, sexual, and negligence. These forms of abuse were stated to happen due to several causative factors including the caregiver, child, and family factors, as well as socioeconomic and environmental factors. Several approaches for early detection and preventive measures have been enforced which include involvement from the law, childcare workers, parents, community, and the children themselves. In conclusion, child abuse in daycares and kindergartens has several forms and presentations that need to be aware of by the parents and stakeholders. Early detection and effective preventive measures ensure a future of freedom of abuse for our children.

Keywords: Child abuse; kindergarten; daycares

# Unusual Sighting: A Case of Laryngeal Histoplasmosis and Herpes Infection Mimicking Carcinoma in Immunocompetent Patient

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## ABSTRACT

**Introduction:** Histoplasmosis, caused by the dimorphic fungus *Histoplasma capsulatum*, is uncommon in immunocompetent individuals. Co-infection with *Herpes simplex* virus has not been reported thus far. **Case report:** An elderly man without any prior medical conditions presented with a two-month history of odynophagia. He appeared emaciated. Upon direct laryngoscopy, an irregular and ulcerated mass was observed in the supraglottic region, strongly indicating laryngeal carcinoma. A tracheostomy was done following the examination. However, histopathological examination revealed the presence of numerous intracellular fungal infections, morphology suggestive of *H. capsulatum* or *Penicillium marneffe* along with concurrent herpes infection. Polymerase chain reaction confirmed the presence of *H. capsulatum*. The patient was treated with oral acyclovir and intravenous antifungal. Tragically, the patient succumbed to severe sudden onset of upper gastrointestinal bleeding. **Discussion:** Laryngeal carcinoma is an increasingly prevalent form of head and neck cancer. This patient's presentation closely aligned with the typical manifestations of a carcinoma. Although rare, laryngeal histoplasmosis can manifest similarly, making it an important consideration when evaluating laryngeal masses. Concurrent herpes infection may lead to more severe manifestations. Laboratory tests specific to fungal diagnosis are essential since histopathological examination alone cannot provide a definitive identification. Maintaining a high level of suspicion is crucial for early diagnosis, which facilitates optimal patient management and avoids unnecessary aggressive interventions.

**Keywords:** Histoplasmosis; herpes; immunocompetent

# Harrowing Blistering Disease Adult Linear IgA Bullous Dermatoses a Case Report

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## ABSTRACT

Linear IgA bullous dermatoses (LABD) is a rare autoimmune blistering disease characterized by subepidermal blister, with linear IgA deposition at the dermo-epidermal junction. We reported a case of LABD which does not poses a typical histopathological finding thus render the diagnosis challenging. We report a case of 28-year-old Chinese man presented with vesicular rashes on his upper and lower limbs for the past one year. He had previously received treatment for bullous pemphigoid at a private clinic without undergoing a skin biopsy for confirmation. The prescribed regimen included methotrexate, cyclosporine, oral betamethasone, and topical steroids for three months, but he claimed to have experienced no improvement. Upon examination, multiple tense vesicles with erythematous bases were observed on his limbs and back, accompanied by erosions. A skin biopsy revealed subepidermal splitting with detachment of the epidermis, and scanty inflammatory cells within. Periadnexal and interstitial areas showed occasional eosinophils, lymphocytes, and neutrophils. Immunofluorescence testing confirmed linear IgA deposition at the dermo-epidermal junction. LABD generally carries a favorable prognosis in children, but controlling the disease in adults poses greater challenges. The clinical manifestations and histological findings may resemble other blistering diseases, making diagnosis complex. Typical finding of LABD on routine H&E staining showed predominant neutrophilic infiltrates with many eosinophils intermixed within which is not seen in our case. In this aspect immunofluorescence study is gold standard in establishing the diagnosis.

Keywords: Bullous; subepidermal; IgA

# Human Milk Contents and its Relationship with Food Allergies among Exclusively Breastfed Infants: A Scoping Review

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## ABSTRACT

In recent years, there is an increase of awareness about the possibility of food allergies through the human milk among exclusively breastfed infants. This triggered many researchers to investigate how the human milk and its contents are able to sensitise infants into getting food allergies. Hence, this scoping review aims to determine the types of human milk contents that could lead to food allergies in exclusively breastfed infants and their mechanisms. Following the PRISMA Extension for Scoping Reviews (PRISMA-ScR), search engines such as PubMed, ScienceDirect and Google Scholar were used to search for articles published from January 1, 2002 to November, 2022. A total of 430 articles were screened by title and abstract for eligibility. Articles that discussed the presence of food allergens in human milk, the immunological manifestation among breastfed infants and modifications in maternal diet were included for review. Papers that were not available in full text or other than English were excluded. A final full-text of 31 articles were reviewed. Further evaluation revealed that the presence of protein allergens such as cow's milk, eggs and peanuts are potentially allergenic molecules especially in the milk of mothers with an allergic tendency. The mechanisms identified are via IgE or non-IgE mediated pathways. However, the role of maternal diet and food elimination are still yet to be proven. Despite the clear relationship between maternal diet and presence of food allergens in human milk, exclusive breastfeeding is still advocated for at least four months or six months in most countries worldwide.

Keywords: Human milk; breast feeding; food allergies; exclusive breastfeeding

# In the Best Interest of the Child: Analysing Paediatric Discharge against Medical Advice in Relation to Malaysian Legal Framework

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## ABSTRACT

Discharge against medical advice (DAMA) is when a patient leaves a healthcare facility before completing treatment, against physicians' recommendations. This case report aims to examine ethical and legal aspects of paediatric DAMA in Malaysia. It will emphasize the underscoring of comprehending and effectively applying ethical principles and Malaysian legal framework to protect children's well-being. A 14-month-old girl was referred to the Emergency Department for failure to thrive and generalized skin rashes. She is not in any life-threatening state, subsequently was planned for admission. Her parents, having other social and family commitments are under the impression that child was well. They insisted on taking the child home. Parental decisions are ethically justified to be overruled when their decisions cross a threshold level of harm. For their decisions to be respected, it needs to be such that it would not result in potential harm to the child. However, there are more factors would take into consideration for example, social norms, legal, personal and professional reasons. The practical implementation of Child Act 2001 remains a concern, as there is a common misconception that parents have absolute decision-making authority over their children. The Act primarily aims to safeguard children when parents make choices that could be detrimental. Unfortunately, this protective role often faces challenges stemming from a lack of information and misinterpretation. In conclusion, physicians can draw upon the Child Act as a dedicated legal framework aimed at safeguarding the well-being of children in Malaysia.

**Keywords:** Patient discharge; child advocacy; relational autonomy; clinical decision-making; clinical ethics

# Beyond the Serotonin Surge: Shedding Light on SSRI Unusual Effect

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## ABSTRACT

Mrs. A is a 25-year-old married lady who is a non-smoker with no known underlying medical illness. She was first seen in primary care clinic for persistent depressive symptoms that had been afflicting her since her teenage years. However, she sought help in the clinic eight years after her first onset because her condition had escalated to multiple instances of self-harm. She was initially prescribed with fluvoxamine but she developed a dry cough with no other respiratory symptoms. Her antidepressant was switched to sertraline, but cough symptom persisted leads to non-adherence to medication. Nevertheless, her medication was switched again to escitalopram, yet her symptoms persisted leading to respiratory outpatient clinic referral. Thorough investigations were done, and all results were negative. She had experimented with various antidepressants, such as fluvoxamine, sertraline, and escitalopram, but the persistent dry cough remained unchanged. In view of this, her medication was cross-taped with vortioxetine. She is able to tolerate the medication without experiencing any side effects, including a dry cough. She is able to comply with the medication, and therefore, her symptoms have improved along with her quality of life. The objective of this case report is to highlight the rare side effects of selective serotonin reuptake inhibitors (SSRIs), namely persistent dry cough, even though they are widely used and generally well tolerated in the population. By acknowledging this uncommon side effect, it may help patients improve their compliance with the medication, therefore facilitating symptoms recovery and enhancing their quality of life.

Keywords: SSRI; chronic cough; vortioxetine

## Medical Officers Interest in Enrolment of Postgraduate Diploma Program in General Practice and the Associated Factors

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### ABSTRACT

A Postgraduate Diploma Program in General Practice (PGDGP) is an option to upgrade knowledge in primary care, other than a master's degree in family medicine. This is important because it signifies an upgrade of profession in the primary care. It was reported that most medical officers (MOs) including general practitioners (GPs) working in private clinics do not have postgraduate qualification. Therefore, this study aimed to determine the level of interest of MOs to enrol in PGDGP. A cross-sectional study was conducted among MOs in Malaysia from June 2022 till August 2022. A self-administered questionnaire consisting of socio-demographic profile, reason to upgrade knowledge and level of interest in joining the PGDGP programme was distributed via online platform through universal sampling. Data was analysed using SPSS Software 25. 171 respondents participated, with the majority of them being female (63.7%), Malay (50%), and married (72.1%). Among them 56.1% were permanent government doctors, 20.5% were contract government doctors, while 23.4% are from the private sector. Regarding skills and knowledge, 85.4% of respondents were keen to upgrade their skills and knowledge whereby 69.6% felt their knowledge and skills were inadequate. 62% of them were interested to join the PGDGP programme based on the brochure review provided. Monthly income ( $p=0.006$ ), future plan concerning job ( $p=0.043$ ), gaining knowledge ( $p=0.016$ ), interest in the field ( $p=0.000$ ), family influence ( $p=0.02$ ) and self-upgrade ( $p=0.014$ ) were significantly associated with their interest in joining PGDGP. This study provides valuable insights for the development and promotion of the PGDGP program among MOs in Malaysia.

Keyword: Postgraduate Diploma Programme in General Practice (PGDGP); medical officers; primary care

## A Rapid Scoping Review Examining Metaverse Interactions with Gender Identity

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### ABSTRACT

The evolving paradigm of the digital realm has brought forth the emergence of the metaverse, a collective virtual shared space created by converging physical and virtual reality. This includes augmented reality (AR), virtual reality (VR), and the internet, also collectively known as extended reality (XR), enabling individuals to interact with a computer-generated environment and other users. Simultaneously, gender identity, as the deeply felt experience of gender, has been variably expressed and explored within these boundless cybernetic expanses. Based on the scoping review framework by Arksey and O'Malley, our rapid scoping review explores existing literature perceptions and narratives surrounding the intersection of the metaverse and gender identity. Preliminary findings reveal a dichotomy of user experiences; the metaverse has obfuscated traditional norms and conceptions of gender, enabling a flexible and personalized manifestation of self-identity through avatars. Yet, predicaments surface, particularly when avatars and contexts are predominantly, and perhaps stereotypically, associated with specific genders, inadvertently engendering a digital replication of existing societal gender norms and biases. While some individuals utilize this second realm to validate and express their gender identities away from the conventional gaze, others find the platforms problematic, witnessing an insufficient and superficial engagement with genuine gender validation and exploration. Though researchers have proposed numerous solutions to navigate the entanglements of gender identity within the metaverse, there is a perceptible shift toward strategies aiming for wealth accumulation, frequently side-lining crucial discussions on the ethics of diversity and equity. This review underscores an imperative need to deliberate the societal, psychological, and ethical considerations entwining gender identity and metaverse interactions.



## Exploring Adolescent Sexual History Taking in Healthcare Practices: A Scoping Review

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### ABSTRACT

Adolescence is a critical period for sexual health development, yet there is a paucity of literature addressing the efficacy of sexual history taking and its enforcement by healthcare professionals in this context. This scoping review addresses the limited literature available on the topic, emphasizing the imperative for healthcare providers to engage in healthy sexual discussions with adolescents. A comprehensive search was conducted in PubMed, Medline and ScienceDirect, identifying relevant studies published between September 2018 and August 2023. Barriers to optimal care provision for high-risk adolescents are explored, revealing challenges across practice, knowledge, and attitude domains within various medical fields. One notable issue is the consistent poor documentation of sexual histories by healthcare professionals, even when adolescents willingly share this information. Adolescents overwhelmingly express the belief that discussing sexuality is essential for their healthcare, favoring a caring yet direct approach. This review also reveals disparities in sexual history taking for hospitalized adolescents, with girls being screened more often than boys, despite similar rates of sexual activity. While physicians are generally comfortable discussing sexual health when prompted, these discussions are less common in routine or preventive healthcare, and important components of a comprehensive sexual history are often missed. It's important to note the limited data from Asian countries, particularly Malaysia, which necessitates further exploration. In conclusion, further research and interventions are needed to bridge the gap between adolescent needs and healthcare practices, ensuring better sexual healthcare for this population.

Keywords: Sexual history taking; adolescent; healthcare setting; sexual health

## Discrimination against an Effeminate Student: A Case Study

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### ABSTRACT

Effeminates in Malaysia are known as “lelaki lembut” or “bapok” or “pondan”. This term related to any man, whom having feminine qualities, not manly in appearance or manner.”. This local term itself brings stigma to the effeminates. Most assumed that the effeminate guys are gays and transsexuals. Effeminate refers to untypical of a man, lack of masculinities men who are feminine in terms of gestures, conversations, and appearances. Lack of understanding among society about related to this group leads expose them to the risk of bullying and other such negative reactions response such as bad judgment or harassment. The numbers of effeminate students in Malaysia are increasing particularly in the at university levelies. Many Majority of them the prevalence are Malays and not to forget other races too. This research explores a single case study of an effeminate male student effeminate by exploring the challenges that he faced in his daily life , with through his friendship with peers and interactions with others while in campus. The findings show that risk factors underlying depression in from this effeminate male students with underlying depression are includes stigma, lack of social support, and internalized homophobia. These risk factors elaborated further in this writing. The paper also discusses in detail regarding the major challenges faced and the strategies to cope with discrimination for better psychological and social functioning.

Keywords: Effeminate; students; discrimination; case study

## The Role of Love in Islam to Deal with Mental Health Challenges in LGBTQIA Circles

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### ABSTRACT

Love is a deep affection for someone or something. Love affects an individual's mental health, and this includes gender issues such as LGBTQIA. Mental health became an increasingly acute issue when the COVID-19 outbreak broke out in 2020. Various mental health problems related to anxiety, depression and suicide attempts are seen to be increasing day by day. The understanding of love in Islam is identified as one medium of intervention to deal with this challenge. Love in Islam is love that is based on the Qur'an and Sunnah, which makes God's law upheld through sincerity, faith and piety. Thematic analysis was conducted to identify topical research trends in the literature related to this topic. The following three themes were identified: (i) Anxiety, depression and suicide attempts according to psychology; (ii) Studies on LGBTQIA related to love; and 3) Efforts to address mental health challenges among LGBTQIA individuals through love in Islam. Recommendations are also provided to assist future research in addressing the issue of mental health involving gender issues more thoroughly.

Keywords: Love in Islam; LGBTQIA; mental health; gender

# Unveiling the Unseen: Navigating Marital Rape Laws and Ethics Involving Minors In Malaysia

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## ABSTRACT

This paper delves into the intricate ethical and legal framework surrounding the issue of marital rape involving minors in Malaysia. In Malaysia, a disconcerting practice persists where some minors are wedded off without their consent. This situation is made more disheartening by its legality, as parents are authorized to make this life-altering decision on behalf of their children. Regrettably, the existing legal landscape and ethical guidelines in Malaysia do not provide adequate protection for these vulnerable children. The central concern of this paper is to investigate the potential applicability of marital rape laws to minors who have been forced into marriages without granting their consent to intimate relationships. The key question that we aim to address is whether minors, once married, possess the legal rights to refuse engaging in intimate relationships against their will. We will then scrutinize the current legal provisions in Malaysia concerning both marriage and rape. We will analyze how these laws intersect and whether they offer any protection to minors facing marital rape. Additionally, we will investigate international human rights conventions, such as the Convention on the Rights of the Child, and their implications on the rights of minors subjected to non-consensual marital intimacy. Our analysis will touch upon issues of individual autonomy, parental consent, and the fundamental rights of minors. Furthermore, we will examine case studies and empirical evidence to illuminate the real-world consequences of this legal and ethical quagmire with the aim to underscore the urgency of addressing this pressing issue. Ultimately, this paper seeks to contribute to the discourse on child protection, gender equality, and human rights in Malaysia by advocating for a more comprehensive legal and ethical framework that safeguards minors from the harrowing ordeal of non-consensual intimate relationships within the confines of a child marriage.

Keywords: Woman's rights; minors; child abuse; rape; personal autonomy

## Association of Biochemical Parameters with Sociodemographic Characteristics of Multiracial Hemodialysis Patients in Negeri Sembilan and Klang Valley, Malaysia

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### ABSTRACT

Biochemical markers play a crucial role in the management of end-stage renal disease (ESRD) patients undergoing hemodialysis. There are multiple factors that influence these biochemical levels. Hence the aim of the study is to determine the association of biochemical parameters with sociodemographic characteristics among multiracial hemodialysis patients in Malaysia. A purposive sampling of a cross-sectional study was conducted at a few dialysis centres in Klang Valley and Negeri Sembilan, Malaysia. Sociodemographic data was collected from the clinical records. The biochemical blood parameters obtained were the serum levels of hemoglobin, albumin, creatinine, blood urea nitrogen (BUN), sodium, potassium, calcium, phosphate and lipid profiles [total cholesterol (TC), low-density lipoprotein (LDL) and triglyceride (TG)]. SPSS version 22 was used to analyze the data. Chi square test, Mann Whitney, and One way ANOVA were utilized. Forty-five hemodialysis patients comprising of 15 Malays, 15 Chinese and 15 Indians participated in this study. The mean age was 52.9 years (SD 12.2); 28 patients (62.2%) were male and 17 (37.8%) were female. The mean duration of dialysis was 4.9 years (SD 3.6 years). The serum albumin level was significantly associated with gender ( $p=0.017$ ) and race ( $p=0.0007$ ). However, there was no significant association between age, gender and race with the serum level of hemoglobin, creatinine, BUN, phosphate, TC, LDL and TG. In conclusion, serum albumin was associated with gender and race among multiracial hemodialysis patients in Malaysia. Further study is suggested to explain these findings.

Keywords: End-stage renal disease; biochemical parameters; dialysis efficiency; hemodialysis

# The Study of Wellbeing and Life Satisfaction among Employees in One of Public Universities in Malaysia

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## ABSTRACT

The well-being of an individual includes coping with the various stresses of everyday life and realising an individual's full potential as a productive member of society. Online cross-sectional study between January and April 2023 using the well-being WHO index and life satisfaction questionnaires. A descriptive cross-sectional study was conducted on 373 staff members at a public university in Malaysia between January to April 2023 through an online platform using the well-being WHO index and life satisfaction questionnaires. The highest age group was 31–40 years old, followed by 41–50 years old and 20–30 years old. The lowest age group was 51–60 years old. More than 60% of the respondents were female, the majority were Malay (n = 335, 97.4%), and more than 98% were Muslim. Approximately 142 (41.3%) had a Master's or PhD, followed by a degree (n = 84, 24.4%), a diploma (n = 71, 20.6%), and high school (n = 47, 13.7%). The Faculty of Medicine and Health Sciences recorded the highest number of respondents (n = 52, 15.1%), followed by the Faculty of Dentistry (n = 22, 6.4%), and the Department of Registrar (n = 21, 6.1%). The majority were lecturers and professionals (n = 145, 42.2%), followed by support staff (n = 121, 35.2%), and administrative staff (n = 78, 22.7%). More than half were permanent staff (n = 280, 81.4%), with the majority having worked for 11–15 years (n = 98, 28.5%). Approximately 286 (83.1%) were married, and the majority of them had 2–3 children (n = 128, 37.2%). In terms of monthly household income, only 41 (11.9%) had an income of less than RM2,500, while the majority fell between RM 4,850 and RM 10,959 (n = 117, 34%). About 30 (8.7%) expected that the financial situation in the subsequent years would be worse than it is now, while 168 (48.8%) expected it to be better. A total of 331 (good well-being) and 41 (poor well-being),

with 274 (73.7%) satisfied with their lives, only 47 (17.7%) dissatisfied, and 32 (8.6%) were neutral. This study reported high well-being among staff members. However, further exploration of associated factors is needed for better understanding and for the improvement of well-being and life satisfaction in the future.

Keywords: Well-being; life satisfaction; staffs; university

# The Clinical Spectrum of Oropharyngeal Squamous Cell Carcinoma in Klang Valley Malaysia: A Retrospective Study

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## ABSTRACT

The disease profile of OPSCC is still scarce in Malaysia; instead, the number of cases keeps rising worldwide. This study aimed to look at the clinical spectrum of OPSCC cases in Klang Valley, Malaysia. We conducted a retrospective study among patients with confirmed OPSCC from 2009 to 2019. The available patients' data were retrieved from the medical records of five tertiary hospital in Klang Valley. About 101 OPSCC cases were identified in this study. The number of cases has been inconsistent for the last 10 years. Our patient's age ranged from 23 to 87 years old, with a mean (SD) of 59.4 (12.0). The majority of cases were male (69.3%), of Chinese ethnicity (43.6%), and from low socio-economic groups. The risk factors and clinical presentation were almost identical to those of HPV-related OPSCC, which involved non-smokers and non-alcoholics, presented with advanced neck nodes, and had a common primary tumor arising from the tonsil and base of the tongue. We also found that our OPSCC patient was less associated with the second primary tumor (SPT) and had a good response to treatment. Recurrent cases had a significant correlation with Chinese ethnicity. The clinical spectrum of OPSCC cases in this study appears to be almost similar to HPV-related OPSCC. However, during this study period, no routine HPV detection was done to support the findings. Therefore, prospective studies involving multiple hospital across Malaysia can be done in the future to look for HPV identification and its clinical correlations for better understanding.

Keywords: Oropharyngeal carcinoma; squamous cell carcinoma; human papillomavirus; head and neck carcinoma



# Comparison of Binocular Digital Dichoptic Treatment with Monocular Patching Treatment among Amblyopic Children

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## ABSTRACT

Amblyopia emerges in childhood affecting 1.3% to 3.6% of children is described as a decrease in best-corrected visual acuity in one or both eyes. This are caused by numerous deficiencies in monocular and binocular visual afferent function, such as decreased visual acuity, contrast sensitivity, depth perception, interocular suppression, and irregularities in efferent function The majority of current amblyopia treatments are monocular or commonly known as patching treatment, with the goal of improving vision in the amblyopic eye through either patching the fellow fixing eye or visual training of the amblyopic eye. The primary objective of this review is to assess the effectiveness of monocular patching treatment in comparison to binocular digital dichoptic treatment for children afflicted with unilateral amblyopia. This evaluation encompasses considerations related to treatment efficacy, divergences in treatment duration, and patient adherence to the prescribed regimens. A comprehensive literature review was conducted utilizing electronic databases such as Science Direct, PubMed, Google Scholar, and NCBI. As a result, the evidence suggests that both treatments can effectively address amblyopia, but binocular digital dichoptic treatment offers advantages, including improved stereoacuity, faster improvement, and shorter treatment duration compared to patching. However, the adoption of binocular digital dichoptic treatment in Malaysian public hospitals is hindered by the lack of specialized infrastructure. In conclusion, while binocular digital treatment shows promise for amblyopia patients, it cannot entirely replace monocular patching, which remains the primary treatment in Malaysia. Further research and infrastructure development are needed to fully leverage the benefits of binocular digital dichoptic treatment within the healthcare system.

Keywords: Amblyopia; binocular; patching

# Preliminary Study: Exploring Malaysian Parents' Views and Practices in Delivering Sexuality Education to Their Adolescents

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## ABSTRACT

In the rapidly evolving landscape of the modern world, the importance of comprehensive sexuality education has gained immense significance. This preliminary research aims to delve into the perspectives and practices of Malaysian parents regarding the delivery of effective sexuality education to their adolescents. To achieve this objective, a qualitative approach was adopted, involving semi-structured interviews with six exemplary parents, as identified and referred by a prominent parent-related non-governmental organization. Thematic analysis was utilized to identify significant themes, with consent duly obtained from all participants. The interviews were audio-recorded and transcribed verbatim, and the transcripts were analyzed using Atlas Ti software. Several key themes emerged from the interviews, shedding light on the multifaceted nature of sexuality education in the Malaysian context. These themes included the integration of Islamic principles as a guiding framework, the importance of age-appropriate content, the need for promoting gender affirmation, and the consideration of a suitable sexual education model. In conclusion, this preliminary research suggests that Malaysian parents exhibit a diverse range of views and practices when it comes to delivering sexuality education to their adolescents. These findings underscore the necessity of developing tailored, culturally sensitive, and inclusive approaches to sexuality education in Malaysia, where the intersection of cultural, religious, and modern values is especially pertinent. Further research and policy initiatives should focus on better understanding these dynamics and promoting open and informed discussions about sexuality education within the Malaysian family context.

Keywords: Adolescents; taboo; sexuality; parent

# Estrogenic Endocrine Disruptors (EEDs) from Environmental Pollutants as a Contributing Factor to Gender Diversity in the Human Population: An Exploratory Review

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## ABSTRACT

For millennia gender is a simple concept with little discussion on variations limited only to small and specialized circles. There is a noticeable trend of greater acknowledgement of gender diversity in the Western world in recent years. The predominant explanation is due to rising liberal awareness. Coincidentally there are increasing reports of the existence of gender-influencing environmental pollutants potentially affecting human populations. This review aims to explore whether there is a valid concern of gender being affected by these EEDs. A rapid exploratory narrative review was conducted beginning with a literature search of PubMed using the keyword of EEDs with appropriate wildcards. Any papers mentioning EEDs in the title or abstract was screened for inclusion. The resulting references were compiled and examined for relevant evidence of effect on human populations. The search resulted in over 6000 references relating to the topic reflecting a significant amount of research in environmental sciences but also in health sciences. The omnipresence of 450 types of EEDs including bisphenol A (BPA) in the environment is well characterized. Significant concentrations of EEDs were detected in all waterways sampled as well as numerous human food and drink. The effect of EEDs to multiple biological systems were described e.g. drastic sex changes or intersex among fish. Many emerging lab studies describe multiple deleterious reproductive, developmental, endocrine, metabolic, oncogenic, neurological and other system effects to humans. Counterintuitively epidemiological studies are very limited. The role of EEDs in gender diversity and in other human systems need further study.

Keywords: Estrogenic Endocrine Disruptors; gender confusion; environmental pollution; human effects

## Gender Swapping Online – Trends and Impact

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### ABSTRACT

Gender swapping is when a user uses an avatar of a different gender from their biological gender online. Online gaming and virtual reality allow users to change their appearance using avatars according to their desire. A rapid scoping review was conducted to identify the impact that are related to gender swapping. Using the keywords metaverse, virtual reality, augmented reality and gender swapping, studies that reported on gender swapping was included in the review. Three databases were used namely Ebscohost, Scopus, PubMed and Google Scholar. The studies show that gender swapping can occur in both male and female users. However, there is a discrepancy in terms of which gender most commonly engages with gender swapping. Users who are homosexually orientated are reported to more likely to swap gender compared to straight users. The results also show that gender swapping results in a change of behaviour among users according to the avatar gender, change in decision making, allow the user to interact better online, avoid harassment, and allow the user to have better enjoyment online. Although the virtual world is a convenient place to experience gender equality, it can perpetuate gender stereotypes in the real world. Gender swapping has psychological impact on users and the long-term impact of gender swapping should be studied. This review highlights the need for a comprehensive understanding of the effects of gender swapping in online gaming and virtual reality. It presents a complex interplay of psychological impact and potential societal consequences.

Keywords: Gender swapping; online; virtual reality

# The Knowledge and Attitudes on Pain Assessment and Management amongst Doctors in Internal Medicine Department, Malaysia, A Single Centre Study

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## ABSTRACT

Pain is part of clinical assessment. The study was aimed to assess the knowledge and attitudes on pain assessment and management amongst doctors who worked in the Internal Medicine Department in one of the tertiary hospitals to identify the gap in the pain knowledge. This cross-sectional study employed universal sampling technique. The "Knowledge and Attitudes Survey Regarding Pain" questionnaire comprised 41 True/False and multiple-choice questions. 84 questionnaires were collected and analysed. 38 out of 84 of the participants passed the questionnaire. The mean score of the study sample was 58%, slightly below the set passing mark of 60%. The doctors fared poorly in terms of the pharmacokinetics of opioid, such as the duration and the recommended route of administration. They also scored poorly when assessing pain severity based on the patients' behaviour, sleeping pattern and vital signs. Besides, the doctors were inclined to prescribe lower doses of opioid despite patients complaining of severe pain. The odds of passing the study questionnaires were higher in the group who worked as registrars, specialists, or consultant (OR 19.2, 95% CI: 3.5- 360.6,  $p= 0.006$ ) and in the group who had served for more than 5 years in the hospital (OR 12.4, 95% CI: 3.0- 67.2,  $p= 0.001$ ). The prior experience of attending any pain course did not confer any extra advantage in passing the questionnaire. This study, albeit with its own study limitation, has demonstrated the gap on certain aspects of pain assessment and management among doctors in the respective department.

Keywords: Knowledge; attitude; pain

# LGBT in the Workplace: What are their Rights?

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## ABSTRACT

Lesbian, Gay, Bisexual and Transgender (LGBT) groups are a minority group in Malaysia. However, the number of these minorities is showing a high increase from year to year. In the workplace, LGBT people who are open about their appearance or express their sexual orientation, are said to often receive negative perceptions from their colleagues. Therefore, this study was conducted to identify the existence of discrimination for this group at work. This study is a quantitative study using descriptive and inferential analysis. The Homogenous Microaggression Scale was used. A total of 39 respondents were involved in this study obtained through purposive sampling. The results of the study found that the frequency value and the mean value for the overall score for workplace discrimination were at a low score except for the stereotypical behavior component (2.6205). In addition, there is no significant difference in the rate of discrimination against LGBT between the private sector and the government sector. In conclusion, this study can provide a true picture of the increasingly prevalent LGBT symptoms as well as the level of society's acceptance of this group. It can further be an indicator and reference to interested bodies related to the management aspect of this group.

Keywords: LGBT; workplace; discrimination

## Loneliness and Social Isolation among Older Malaysians: A Scoping Review

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### ABSTRACT

Social isolation/loneliness are negative feelings that can occur in any individual due to a lack of social contact or perceived dissatisfaction with relationships. When this occurs among older adults, higher morbidity and mortality ensues. This review identifies the prevalence, risk factors, and interventions for social isolation and loneliness among older adults in Malaysia. PubMed, SCOPUS, MyCite, and Google Scholar databases were systematically searched until 2022 following the PRISMA guideline. Quantitative and qualitative studies in Malay and English languages with information regarding the prevalence, risk factors, and interventions surrounding social isolation and loneliness among older adults in Malaysia were included. An initial 442 studies were screened, and 19 studies were included for review. Prevalence for social isolation/loneliness ranged between 9.2% to 95.5%. Risk factors for loneliness were categorized into social factors (i.e., poor relationships with family members, poor social support, abandonment, stigma, death of loved ones), health-related factors (i.e., depression, chronic illness, frailty, physical limitations), and demographic factors (i.e., marital status, living condition, unemployment). Only one intervention study was found focusing on spiritual reminiscence therapy, showing positive outcomes. Four qualitative studies found that engaging in hobbies, having social support, having good internal and external coping strategies as well as being socially active help alleviate loneliness. Malaysian elders feel socially isolated and lonely, but there is a lack of intervention for loneliness studies published in Malaysia. This review asserts future research on interventions to identify potential strategies to overcome loneliness among older adults.

Keywords: Older adults; loneliness; Malaysia; social isolation; review

# Application of Three-Dimensional Geometric Morphometric Method for Determination of Shape Variations between Male and Female Malaysian Scapula Models

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## ABSTRACT

Scapula bone has been identified as a sexually dimorphic bone and frequently used for sex estimation in forensic identifications. Despite, there are no reported studies on the scapula shape variation between male and female in Malaysians population. The aim of the study is to determine the shape variations between male and female Malaysian scapula using there-dimensional (3D) geometric morphometric method. A total of 470 (248 females and 222 males) computed tomography images were collected and reconstructed into three-dimensional scapula models using Stratovan Checkpoint software. Twelve landmarks were recorded on each scapula models using the same software. By generalized Procrustes analysis, the Procrustes coordinates were generated and used in principal component analysis (PCA) to explore the scapula shape variation between sexes. Using Landmark Editor software, the mean scapula shapes (3D image) were morphed according to the coordinates of the extreme positive or negative principal components (PC) for male and female. The results yielded PC 1-5 showed significant shape variation between male and female and had more than five percent of variance. Visualization of the 3D scapula models showed the variations between male and female is identified based on positioning and shape of superior angle, superior border, medial border, infraglenoid tubercle, suprascapular fossa and notch, coracoid process and the acromion. In conclusion, there are presences of shape variations between male and female Malaysians scapula and this may contribute to the development of the databases for forensic identification in Malaysian population.

Keywords: Scapula; shape variation; forensic identification



## Sex Estimation in the Malaysian Population: Analysis of The Form of Os Coxae Virtual Models

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### ABSTRACT

Sex estimation is crucial in identifying unknown human skeletal remains in forensic investigations. Assessing the os coxae for sex estimation is particularly relevant as it is part of the most sexually dimorphic bone in the human skeleton. The form of the os coxae is determined by both its shape and size. This study examined the variations in the form of the os coxae in different sexes. The cross-validated classification accuracy rate of sex estimation using the os coxae form was also determined. Os coxae virtual models were created from 402 multislice computed tomography scans. Application of twenty-five anatomical landmarks captured the form of the os coxae. Landmark data were analysed using size-preserving geometric morphometrics approach and principal component analysis (PCA). Sex variations in the form of the os coxae were quantified by multivariate analysis of variance (MANOVA). Discriminant function analysis (DFA) was conducted to classify individuals into specific groups and determine cross-validated classification accuracy. The first four principal components accounted for 53% of form variations in the os coxae, with the PC1 accounted for 25% of the variations. The form of the os coxae differed significantly between the sexes ( $F = 32.41$ ,  $p < 0.001$ ; Wilk's Lambda = 0.129, partial eta squared = 0.87). Using the os coxae form, sex was correctly assigned in 97.5% individuals in the study sample (male - 96%, female - 99%). These findings demonstrate that geometric morphometrics methods using the os coxae form are highly accurate and therefore are useful for forensic sex estimation in Malaysia.

**Keywords:** Sex estimation; geometrics morphometrics; principal component analysis; os coxae; pelvis; forensic anthropology

# Age Estimation from Os Coxae Size and Shape Using Geometric Morphometrics Approach in the Malaysian Population

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## ABSTRACT

Age-at-death is a parameter determined during forensic investigations into the discovery of unknown skeletal remains. Age-related morphological changes in the os coxae suggest the necessity of exploring its applicability in quantitative age-at-death estimation. This study investigated variations in the size and shape of the os coxae in adults from different age groups. The cross-validated classification accuracy rates of age estimation using the os coxae size and shape were also determined. The study sample consisted of 402 os coxae virtual models created from multislice computed tomography scans. Twenty-five anatomical landmarks were applied to capture the size and shape of the os coxae. Analyses using geometric morphometric approach, analysis of variance (ANOVA), and multivariate analysis of variance (MANOVA) were conducted to determine differences between the age groups. The os coxae virtual models were classified into three groups (20-39, 40-59, 60-79 years) using discriminant function analysis (DFA) based on the size and shape data. Both the sizes and shapes of the os coxae varied significantly ( $p < 0.05$ ) among the age groups. The youngest age group exhibited the largest os coxae size, followed by the middle and oldest age groups. However, this study revealed suboptimal classification accuracy rates when employing the overall size (36.8%) and shape (53.2%) of the os coxae for quantitative age estimation. Future research should consider that exploring specific components of the os coxae, such as the auricular surfaces and the pubic symphysis, may yield better results. These components have demonstrated age-related changes and have been employed in morphological age-at-death estimation.

Keywords: Age estimation; geometric morphometrics; os coxae; pelvis; forensic anthropology

# Diabetic Ketoacidosis as An Unusual Presentation of Pulmonary Aspergillosis

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## ABSTRACT

Diabetic ketoacidosis (DKA) is a well-recognized complication of diabetes mellitus characterized by metabolic derangements, but its association with atypical presentations of pulmonary aspergillosis has garnered increasing attention. We present a case report detailing the rare occurrence of DKA, which serves as an atypical presentation of pulmonary aspergillosis. A 60-year-old male with a long-standing history of type 2 diabetes mellitus presented to the emergency department with a short history of one-day vomiting and difficulty breathing associated with polydipsia and polyuria. His investigation fit with the diagnosis of DKA, including hyperglycemia, ketosis, and metabolic acidosis. Despite aggressive insulin therapy and fluid resuscitation, his glycemic control remained precarious. He was further intubated due to an impending respiratory collapse and severe metabolic acidosis. Chest radiography showed lobar pneumonia. Further evaluation revealed an elevated white blood cell count and inflammatory markers. Computed tomography (CT) of the thorax demonstrated patchy consolidations involving all lung lobes surrounded by ground glass opacities, likely representing halo signs. The patient was promptly started on voriconazole therapy, an antifungal agent with activity against *Aspergillus* species. Bronchoalveolar lavage confirmed the presence of *Aspergillus fumigatus*, solidifying the diagnosis of pulmonary aspergillosis. Over the course of weeks, the patient's respiratory status gradually improved, and repeat imaging showed resolution of the lung lesions. Glycemic control was achieved, and he was eventually weaned off mechanical ventilation. This case report illustrates the importance of considering fungal infections in the differential diagnosis of patients presenting with severe diabetic emergencies and unexplained clinical findings.

Keywords: Diabetic ketoacidosis; aspergillosis; fungal; pneumonia

# Gene Therapy Strategies for HIV infection: A Narrative Review

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## ABSTRACT

HIV/AIDS has killed millions of people worldwide. To counteract its devastating effects, unprecedented international cooperation and resources are needed to reshape strategies towards better intervention and treatments. Although AIDS has decreased due to HAART/cART therapies, dormant HIV cannot be completely eradicated, which means ongoing medication with risk of toxicity is required. This narrative review aims to explore the progress of gene therapy for HIV/AIDS. Literature search was conducted through PubMed and Google Scholar for articles published from 2008 to 2022. Gene therapy is developing as a viable alternative by targeting the CCR5 and CXCR4 co-receptors necessary for HIV-1 entrance, namely with ZFNs and CRISPR-Cas9. Zinc Finger Proteins and nucleases combine to form ZFNs, which have the ability to selectively alter DNA and disrupt genes. ZFN delivery strategies including viruses are effective but come with safety issues. Although less effective, non-viral techniques like nucleofection are safer and cheaper. ZFNs could effectively alter CCR5 in CD4<sup>+</sup> T and CD34<sup>+</sup> cell, producing HIV-resistant cells. Despite promising findings from early studies, total HIV eradication proved to be difficult. HIV capability of selecting CXCR4 instead of CCR5 as co-receptor for entrance in later phase of infection makes prophylaxis more difficult. To strengthen HIV resistance, researchers have begun modifying CD4<sup>+</sup> T cells to interfere with both co-receptors. These changes are made possible by the adaptable CRISPR/Cas9 system. Concerns regarding the physiological effects of completely eliminating CXCR4 are still being investigated, though. Gene therapy has the potential to revolutionise the treatment of HIV/AIDS. Beyond simple administration, it provides hope for a permanent solution.

Keywords: Gene therapy; HIV; AIDS; CXCR4 receptor; CCR5 receptor

## 'Ajwa' Date Palm Fruit Promotes Bone Marrow-Derived Mesenchymal Stem Cells Growth *In Vitro*

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### ABSTRACT

Bone marrow-derived mesenchymal stem cells (BMMSCs) are an important source of progenitor cells required for tissue regeneration. Stimulation of BMMSCs by utilizing natural supplements has emerged as a promising strategy to enhance regenerative capacity of the cells, thus improving general health condition. 'Ajwa' date palm fruits (ADPF), which have been consumed since ancient times, possess enormous types of nutrients and bioactive molecules. Interestingly, this Quranic food was also studied for its regenerative property, however more scientific data are needed to confirm this effect. The present study aims to determine the flavonoid, phenolic and antioxidant content in ADPF's aqueous and methanol extract. Cell viability assay was also performed on BMMSC in 3 different time points with five different concentrations to evaluate the property of ADPF to stimulate stem cells proliferation. Methanolic date palm fruit extract was observed with the highest concentrations of phenolic compounds and antioxidant properties when compared to aqueous extract. Aqueous extract of ADPF significantly induced stem cell viability at the concentration of 1.25 mg/mL in the period of 48h. However, both methanol and aqueous extract exhibit inhibition effect on BMMSCs growth when treated up to 72 hours. Increasing concentration of both extracts has also been proven to inhibit BMMSCs proliferation. We observed a potential usage of minimal concentration of ADPFs for stimulating BMMSCs growth *in vitro*. Even so, further experiments are needed to confirm this effect.

Keywords: *Phoenix dactylifera*; stem cell; proliferation; phenolic content; methanolic content

# Unexpected Intraabdominal Bleeding in Acquired Hemophilia

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## ABSTRACT

Acquired hemophilia, a rare autoimmune disorder characterized by the development of autoantibodies against clotting factors, presents unique challenges in diagnosis and management. We present the unfortunate case of a 66-year-old male with no prior history of bleeding disorders who presented to the emergency department with acute abdominal pain, distension, and hypovolemic shock. Laboratory investigations revealed a significant drop in hemoglobin levels, prolonged activated partial thromboplastin time (aPTT), and the presence of a zero level of factor VIII, establishing the diagnosis of acquired hemophilia. Imaging studies demonstrated intraabdominal hemorrhage with no apparent source. The patient was planned for surgery but developed respiratory distress that required intubation. He was treated with bypassing agents, including recombinant activated factor VII (rFVIIa) and activated prothrombin complex concentrate (aPCC). The massive transfusion protocol was also activated, and the patient received blood products and packed red blood cells as well. The renal function worsened with the acute kidney injury picture, which required hemodialysis support. Unfortunately, during dialysis, the patient's hemodynamics deteriorated and required double inotropic support until ventricular tachycardia and asystole developed. CPR commenced for 30 minutes; however, he succumbed to death. This case report highlights the atypical presentation of acquired hemophilia with life-threatening intraabdominal bleeding. The rarity of this presentation underscores the importance of considering acquired hemophilia in the differential diagnosis of unexplained bleeding in adults, even without a prior history of bleeding disorders. Timely recognition of this condition is crucial for initiating appropriate management, which may involve a combination of surgical intervention and immunosuppressive therapy.

Keywords: Intraabdominal; hemophilia; bleeding; transfusion

## Gaze into the Screen: Unravelling Refractive Errors and Dry Eye Implications Among Esports Player

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### ABSTRACT

Esports has created a new era of gaming. Players spend extensive time on screens. Esports Medical Academic (Esports MedicA), a pioneer in promoting healthy gaming, educating and screening activities in Malaysia. This study aims to investigate the associations between esports players, refractive errors, and dry eyes resulting from prolonged screen time. In a cross-sectional study involving 208 esports players, 89% were Malays, 8% were Chinese, and the rest were from different ethnic groups. The mean participant age was 23.5 + 4.2 years, predominantly male (91%), boasting an average gaming experience of 5.7 + 2.1 years. Refractive analysis highlighted a significant myopia prevalence (37%). It is linked to extensive screen time. Additionally, 14% exhibited astigmatism. Dry eye symptoms were prevalent, affecting 12% of participants. Notably, 28% reported ocular discomfort, 13% experienced redness, and 6% had temporary blurred vision. This study explore the implications of refractive errors on gameplay mechanics and strategies, emphasizing concerns over dry eyes correlating with prolonged screen time. To promote healthier gaming, customized interventions are crucial for improving both visual comfort and gameplay performance. Esports MedicA actively educates and promotes healthy gaming, playing a pivotal role in addressing these issues. In conclusion, this study provide refractive challenges, and ocular health concerns within the esports player. Understanding these factors is crucial for developing focused training methods and promoting eye care practices, ensuring the ongoing performance of esports players.. Through active engagement of Esports MedicA, the esports community can foster healthier gaming practices and elevate the overall well-being of its players.

Keywords: Esports; refractive error; dry eyes

# Concurrent Congenital Diaphragmatic Hernia and Intralobar Pulmonary Sequestration, an Unusual Association; A Case Report and Review of Literature

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## ABSTRACT

Congenital Diaphragmatic Hernia (CDH) is not uncommon is known to have association with bronchopulmonary sequestration (BPS) particularly the extralobar type. The incidence of CDH with extralobar BPS may occur as high as 30 to 40% but association with intralobar BPS is rare. A neonate presented with abrupt deterioration of respiratory distress requiring high oxygen supplementation post-delivery. Serial chest radiographs showed persistent consolidation throughout the admission raised concern of congenital malformation. Computed tomography performed and revealed a combination of CDH and BPS with a characteristic of extralobar type. The patient was surgically treated at day 10 of life where intraoperatively noted intralobar BPS with hepatopulmonary fusion. He underwent resection of the sequestration and was doing well post-operatively. Currently he is under paediatric clinic follow up for general well-being. We reported a case of CDH-BPS with uncommon clinical association and presentation, location and imaging characteristics of the lesion.

Keywords: Neonatology; surgery; radiology; diaphragmatic hernia; bronchopulmonary sequestration



## Preliminary Study: Differences in the Proteome of High Density Lipoprotein (HDL) of Healthy Pregnant Women and Non-pregnant Women

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### ABSTRACT

Pregnant women undergo metabolic changes, one of which is an alteration in lipid and lipoprotein metabolism. Different pathological conditions are shown to alter HDL protein composition thus affecting its function. However, HDL proteomics in pregnancy has not been studied. This study aims to examine the proteome of HDL from healthy pregnant women and non-pregnant women and to determine the differences between HDL proteome of healthy pregnant women with HDL from non-pregnant women. HDL were isolated from healthy pregnant women (HP HDL) (n=10) and non-pregnant women (NP HDL) (n=10). Proteomic analysis was conducted on HDL samples using nano-liquid chromatography coupled with tandem mass spectrometry (nLC MS/MS). A total of 23 HDL associated proteins were found significantly different in HP HDL as compared to NP HDL. 11 proteins including apolipoprotein CII, apolipoprotein CIII, apolipoprotein CIV, apolipoprotein B100, apolipoprotein L1, complement C4B, fibrinogen alpha chain, fibrinogen beta chain, vitronectin, apolipoprotein AIV, and angiotensinogen were at significantly higher concentration in HP HDL compared to NP HDL. 12 proteins were found significantly lower in HP HDL compared to NP HDL. They were apolipoprotein D, apolipoprotein F, apolipoprotein M, SAA- 4, serum PON-3, fibrinogen gamma chain, fibronectin, plasminogen, beta 2 glycoprotein-1, sorting nexin-29, transthyretin, and serum albumin. This study found a significant difference in the proteome of HDL of healthy pregnant women compared to HDL of non-pregnant women using nLC-MS/MS proteomic approach. This indicates that pregnancy affects HDL composition, which may therefore affect HDL function.

Keywords: High density lipoproteins; pregnancy; HDL proteome; proteomics

# The Untold Economic Burden of Mayer-Rokitansky-Küster-Hauser Syndrome (MRKH): Are We Aware?

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## ABSTRACT

Mayer-Rokitansky-Küster-Hauser syndrome (MRKH) is a rare disease that affects women. To date, the actual cause of this problem is unknown and studies have shown that it is related to genetic problems. This disease has led to a significant clinical and economic burden. Nevertheless, the extent of the financial impact is not well documented. A scoping review was conducted to examine the available treatment options for MRKH and the associated costs. A search strategy was conducted from January-December 2022 using appropriate keywords in several databases, namely Google Scholar, ScienceDirect, SpringerLink, Medline and PUBMED journals. Snowballing of relevant references was also performed. A The treatment options for MRKH include the use of a vaginal dilator to create a neovagina, a procedure to lengthen the structure of the vagina. If treatment with a vaginal dilator is unsuccessful, surgery may be performed. The cost of vaginal dilator treatment ranges from USD80 to 210. There is also the cost of counselling sessions, diagnosis and investigations, in addition to the cost of the failed treatment and management of side effects. One study found that the cost of surgical treatment for neovagina ranges from USD2400 to 5600. The complexity of the surgery and bleeding complications during surgery are the cost drivers. Treatment to produce offspring in MRKH patients has so far focused on uterine transplants. The cost of a uterus transplant can be as high as USD125,000 per procedure and includes the cost to screen the donor and recipient of the transplant uterus, test tube fertilization, follow-up visits and immunosuppressive drugs. Overall, the estimated costs to manage MRKH per patient was approximately USD130,000. MRKH is associated with a huge financial burden. Early intervention can improve the quality of life of MRKH patients. However, access to treatment is still limited and the awareness to seek treatment is still lacking in the community.

Keywords: MRKH; cost of illness; reproductive disease

# The Study of Out-of-Pocket Expenditure, Willingness to Pay and Ability to Pay Related to COVID-19 in Malaysia

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## ABSTRACT

COVID-19 infection resulted in significant economic implications for all categories of people. While the vaccination rate is reported to be more than 80%, people are still required to practice standard operating procedures such as using face masks, self saliva test kits, hand sanitizer and others. Due to this, many households incur significant health expenditures for preventive measures. This study aimed to estimate the out-of-pocket (OOP) expenditures for preventive measures and to evaluate the ability to pay (ATP) and willingness to pay (WTP) for COVID-19 vaccination in Malaysia. A study was conducted among government employees at one of the public universities in Malaysia. A validated questionnaire was used which includes questions on socio-demographic profiles, household characteristics and household OOP expenditure. Subsequently, the participants were followed up to obtain information on their ATP and WTP for COVID-19 vaccination. Information on ATP and WTP was obtained through open and close-ended methods. Descriptive analysis was conducted to describe the data obtained. The expenditure and monthly household income were used to determine the proportion of OOP payments from the household income. Any household with a value of more than 10% is considered to have catastrophic health payments (CHP). The average monthly household income among the participants was US\$ 1440. The minimum monthly household income was US\$ 196 while the maximum monthly household income was US\$ 3668. Only 1 household was categorized as poor based on the national poverty line. The average household expenditures related to the COVID-19 preventive measures were US\$ 45.90 per month, which was approximately 4% of the household income. The highest expenditures were for traditional and complementary medicine, including over-the-counter drugs, followed by nutraceutical/supplements and disposable facemask. 8% of the households in this study experienced CHP. Regarding ATP and WTP for the COVID-19 vaccine, through the open-ended method, the mean (SD) ATP and WTP values reported were USD 52.35 (620.83) and USD 52.08 (620.82)

respectively, while through the close-ended method, the mean (SD) ATP and WTP values recorded were USD 52.08 (620.82) and USD 32.38 (147.97) respectively. Through the closed-ended method, lower values for ATP and WTP were found compared with the open-ended method, as the respondents could negotiate through a bidding process to get the best price for the vaccine. Female, Malay, married, permanent staff and respondents with side incomes were recorded to have higher ATP and WTP values. This study highlights the OOP expenditures incurred for preventive measures were substantial for certain households.

Keywords: COVID-19; ATP; WTP; OOP