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PublicHealth Summit-2026

International Experts Summit on
Public Health and Preventive Medicine

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**Domenico Merante, MD**

*Independent Global Clinical Development Consultant
Physician Zug, Switzerland*

Digital pharmacovigilance after COVID-19: integrating randomized trials, real-world evidence, and AI-enabled vaccine safety monitoring'

Abstract

The COVID-19 pandemic highlighted both the strengths and limitations of contemporary vaccine safety evaluation systems. Randomized controlled trials (RCTs) established vaccine efficacy and identified common adverse events, yet were not designed to detect rare, delayed, or subgroup-specific safety outcomes in heterogeneous populations and across diverse underlying clinical conditions. As global vaccination programmes expanded, real-world evidence (RWE) became essential for identifying uncommon adverse events, including, for instance, myocarditis associated with mRNA vaccines and thrombosis with thrombocytopenia syndrome following adenoviral-vector vaccines. These observations exposed important gaps in traditional pharmacovigilance approaches, which often remain fragmented, reactive, and dependent on passive reporting mechanisms.

This presentation explores structural limitations of trial-centric vaccine safety evaluation and proposes a digital pharmacovigilance framework integrating RCT evidence, real-world data, and artificial intelligence (AI)-assisted signal detection. The framework incorporates continuous longitudinal data capture, subgroup-sensitive analyses, fairness-aware machine learning methodologies, and adaptive regulatory feedback loops. Particular attention is given to the challenges of delayed adverse event detection, under-represented populations, interoperability between healthcare systems, and equitable participation of low- and middle-income countries through distributed

analytical approaches such as federated learning.

The proposed framework aims to transform pharmacovigilance from a predominantly retrospective activity into a continuously learning system capable of supporting real-time benefit/risk assessment. By integrating diverse evidence streams and enhancing early signal detection, digitally enabled pharmacovigilance may improve vaccine safety monitoring, strengthen regulatory decision-making, and support public trust during future vaccination programmes and public health emergencies. The framework may also provide a scalable model for strengthening preparedness and surveillance capabilities in future global health crises.

Biography

Domenico Merante, MD, is a Global Clinical Development Consultant Physician, specialist in diabetes and endocrinology, with extensive experience in clinical research, pharmacovigilance, and drug development across academia, pharmaceutical and biotechnology industry. His professional interests include vaccine safety, real-world evidence, digital health technologies, regulatory science, and innovative approaches to pharmacovigilance. He has authored peer-reviewed multiple publications in the fields of drug safety, vaccine evaluation, and public health, including two editorials published in Expert Opinion on Drug Safety in 2020 and 2025, at the very start and at the end of COVID-19 pandemic. His current work focuses on integrating randomized clinical trial evidence, real-world data, and digital technologies to improve post-authorisation safety monitoring and support evidence-based healthcare decision-making.



Fatemeh Mohammadsadeghi

*Shahid Beheshti University, Faculty of Medical Science,
Tehran, Iran*

Explainable machine learning for cardiometabolic risk stratification and preventive public health decision support using population health data

Abstract

Cardiometabolic diseases, including diabetes, hypertension, and cardiovascular disease, remain major global public health challenges and contribute substantially to preventable morbidity, mortality, and healthcare costs. Early identification of individuals at high risk is essential for targeted prevention, lifestyle intervention, and efficient allocation of public health resources. However, conventional risk assessment tools may not fully capture complex nonlinear interactions among demographic, behavioural, socioeconomic, clinical, and biochemical risk factors. Machine learning provides an opportunity to improve population-level risk stratification while supporting more personalised and equitable preventive medicine. This study aimed to develop an explainable machine learning framework for early cardiometabolic risk prediction using routinely collected population health data and to evaluate its potential value for preventive public health decision support. The study used the publicly available National Health and Nutrition Examination Survey (NHANES) dataset. NHANES provides questionnaire, examination, and laboratory data and is released as public-use datasets; since 1999, continuous NHANES has been conducted in two-year cycles and is designed to represent the non-institutionalized population. Adult participants aged ≥ 20 years were included. Input variables included age, sex, ethnicity, body mass index, waist circumference, blood pressure, smoking status, alcohol intake, physical activity, dietary indicators, income-to-poverty ratio, education level, fasting glucose, HbA1c, lipid profile, C-reactive protein, kidney-function markers, and medication history. The target

outcome was a composite cardiometabolic risk endpoint defined as the presence of diabetes, hypertension, dyslipidaemia, or self-reported cardiovascular disease. Data preprocessing included variable harmonisation across survey cycles, exclusion of records with insufficient outcome information, outlier handling, multiple imputation for missing values, z-score normalization of continuous variables, and one-hot encoding of categorical variables. Class imbalance was addressed using class-weighted learning and synthetic minority oversampling within the training folds only. The proposed framework compared several models: logistic regression as an interpretable baseline, Random Forest, XGBoost, LightGBM, and a multilayer perceptron neural network. Model development used stratified five-fold cross-validation with a held-out test set. Performance was assessed using AUROC, AUPRC, accuracy, sensitivity, specificity, F1-score, and calibration metrics including Brier score and expected calibration error. Model interpretation was performed using SHAP values to identify the most influential risk factors globally and at the individual level. Subgroup performance was also evaluated across sex, age groups, and socioeconomic strata to assess fairness and potential public health equity implications. Among all models, XGBoost achieved the strongest overall performance, with AUROC = 0.91, AUPRC = 0.84, accuracy = 0.86, sensitivity = 0.83, specificity = 0.88, and F1-score = 0.82 on the held-out test set. LightGBM produced comparable results (AUROC = 0.90, F1-score = 0.81), while Random Forest achieved AUROC = 0.88 and logistic regression achieved AUROC = 0.82. The neural network achieved AUROC = 0.89, but required stronger calibration correction. After probability calibration, the expected calibration error of the XGBoost model decreased from 0.046 to 0.018, indicating improved reliability of predicted risk scores. SHAP analysis identified age, waist circumference, systolic blood pressure, HbA1c, body mass index, triglycerides, HDL cholesterol, smoking status, physical inactivity, and income-to-poverty ratio as the most influential predictors. Interpretively, the model captured both biological risk factors and social determinants of health, suggesting that cardiometabolic risk is shaped by combined clinical, behavioural, and socioeconomic pathways. Subgroup analysis showed slightly lower sensitivity in younger adults and lower-income groups, highlighting the need for fairness-aware threshold adjustment before real-world implementation. This study demonstrates that explainable machine learning can improve cardiometabolic risk stratification using population health data and can support preventive public health planning. By combining high predictive performance, calibration, and transparent feature attribution, the proposed framework provides a practical decision-support approach for identifying high-risk individuals and designing targeted prevention strategies. The findings also emphasise that public health AI systems should be evaluated not only by accuracy, but also by interpretability, calibration, and equity across population subgroups.

Biography

Fatemeh Mohammadsadeghi is a medical student with a strong academic interest in clinical medicine, artificial intelligence, precision healthcare, and evidence-based medical research. Her educational background in medicine has provided her with a solid foundation in human physiology, pathology, diagnosis, patient care, and clinical decision-making. Alongside her medical training, she is particularly interested in how emerging digital technologies, especially machine learning and deep learning, can support clinicians in improving early disease detection, risk prediction, and personalised patient management.

Her research interests focus on the integration of artificial intelligence into healthcare systems, including predictive analytics, clinical decision support, digital health, medical data analysis, and the use of real-world clinical datasets to improve patient outcomes. She is especially motivated by research that bridges clinical knowledge and computational methods, allowing complex patient information such as vital signs, laboratory results, imaging findings, and electronic health records to be transformed into practical tools for earlier diagnosis and more effective treatment planning.

**Dr. Fikre Belay**

*Department of Geography & Environmental study
Adigrat University*

The Effect of War on Health Institutions of Eastern Tigray Zone, Tigray State, Ethiopia

Abstract

Background: The war in Tigray has caused significant damage to the region's healthcare facilities. This study aimed to assess the extent of the war's impact on healthcare facilities in the Eastern Tigray Zone.

Methods: A mixed research strategy was used, with both quantitative and qualitative approaches. Primary data were collected through questionnaires, interviews, focus group discussions, and observations, while secondary data were obtained from published and unpublished documents. Participants were selected using a simple random sampling method. The collected data were analyzed using a linear regression model to determine the statistical significance of the findings. Result: The study found that the impact of the war on healthcare facilities was high to very high, with 97.9 percent of the damage attributed to the war. Of the 177 healthcare facilities in the Eastern Tigray Zone, 29 (16.4 percent) were severely affected, and 118 (66.66 percent) were totally damaged. This indicates that 83 percent of the health system in the region was damaged. The linear regression model showed that the war explained 55.8 percent of the observed health facility damage. The damage to health facilities in the Eastern Tigray Zone has led to the complete collapse of the health system at the zone level.

Conclusions: The urgent need for reconstruction and restoration of health facilities is highlighted to provide essential health services to the affected population. The government and concerned individuals must take immediate action to address this critical situation and help mitigate the negative impact of the war on the health of the

people in Tigray.

Keywords: War, Health institutions, Effect, Eastern Tigray zone.

Biography

Dr. Fikre Belay Tekulu is a scholar in urban and regional planning, specializing in public health, development, and spatial dynamics in Ethiopia. He earned his PhD in Urban and Regional Planning in [insert year], with research focusing on urbanization, conflict impacts, and socio-economic transformation in the Tigray region. His work examines issues such as the effects of war on health systems, urban growth trends, and development challenges. Dr. Fikre integrates geographic analysis with policy-oriented research to support sustainable development and community resilience. He has experience in academic writing, peer review, and international publishing. Actively engaged in research and collaboration, he seeks opportunities for further training, fellowships, and global partnerships to strengthen his academic and professional contributions.

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**Assoc Prof Lee Kheng Hock***10 Hospital Boulevard, Singapore 168582*

Enhancing Social Prescribing Through Controlled-Crowdsourcing: Participatory Action Research of a Community Asset-Mapping Platform in Singapore

Abstract

Social Prescribing, the connection of individuals to community assets that address social needs, is often limited by poor visibility of community resources, constraining effective referrals. Hence, we decided to evaluate the feasibility of a controlled crowdsourcing asset mapping platform, known as the Living Asset Map (or “LAMP”) to enhance community asset mapping. The aim of the study was to develop and implement a digital solution to strengthen social prescribing effectiveness through enhanced community asset mapping. Using a participatory action research approach, Social Prescribing practitioners contributed to platform development and testing through interviews, field validation, and community walks, where qualitative data were thematically analysed. Technology used included publicly accessible ESRI ArcGIS Survey123 mobile applications and web map. In total, 433 community assets were mapped by 21 practitioners. From the qualitative interviews, four interrelated findings emerged, which included adoption drivers of the asset mapping platform, potential applications, best practices and sustainability challenges. The findings seek to provide evidence and to support researchers and policymakers in adopting digital solutions via controlled crowdsourcing and asset mapping to enhance Social Prescribing efforts beyond geographical boundaries.

Biography

A/Prof Lee is the Director of the WHO Collaborating Centre for Social Prescribing in Singapore, as well as the Deputy CEO (Academic Medicine & Partnerships) at SingHealth Community Hospitals. In 2019, he introduced Social Prescribing as a further enhancement to care transition and navigation. Other courses that he developed and taught include the WSQ Course in Implementing Health and Social Care Programmes, and Motivational Interviewing for Social Prescribing. A/Prof Lee has also led the Singapore Community of Practice in Social Prescribing (SCOMP), which emphasises a ground-up approach, fostering collaboration and knowledge sharing driven by the passion and expertise of its members to enhance Social Prescribing in Singapore. A/Prof Lee is also a Senior Consultant at the Department of Family Medicine and Continuing Care in Singapore General Hospital and his practice is focussed on patients in complex health and social needs.



Dr. Monish Bhandari

S.S. Medical Systems (I) Pvt. Ltd.

Health System Strengthening Through Next-Generation Infection Control Technologies

Abstract

Universal Health Coverage remains humanity's greatest aspirations. Today, approximately 4.6 billion people-more than half the world's population-still lack full access to essential health services, while over 2 billion people face financial hardship because of healthcare expenses.(WHO)

It is not about building Hospitals but making them safer, smarter, sustainable and more resilient to pandemics is a TRUE Healthcare Ecosystem.

Healthcare-associated infections (HAIs) with MRSA & AMR continue to be daunting & adverse in effective healthcare delivery. Globally, around 1 in every 10 patients acquires a secondary infection during healthcare delivery, with the burden rising to as much as 15% of patients in many low- and middle-income countries.

Millions of patients are affected annually, creating enormous clinical and severe economic Burden on Health Systems. (WHO) A brief tabulation of Asia vs Europe reference HAI is detailed below:

Table:-HAI & Device associated infection Rates Asia vs Europe

Sl.no	Metric/Infection Type	India Statistics	International Statistics (Europe)	Contributing Factors
1.	Overall Ward Prevalence	≈15%	7%	High Patients Load, Resource Constrains
2.	ICU Prevalence Rate	≈ 33.3%	6.5%	High Frequency Invasive Procedures in ICUs
3.	Ventilator- Associated Pneumonia (VAP)	≈ 10.4 per 1,000 ventilator days	1.43 per 1,000 ventilator days*	Major HAI contributor to mortality
4	Central Line Bloodstream infections (CLABSI)	2.40 per 1,000 central line days	1.02 per 1,000 central line days*	Inconsistent performance across facilities
5	Catheter-Associated Urinary Tract Infections (CAUTI)	9.4 per 1,000 catheter days	> 2.0 per 1,000 catheter days	Largest Contributor to HAI
6	Annual Burden of Resistant Infections (HARI)	~ 9 Million cases/year	136 Million cases/ year*	India has among the highest HARI in the world

* US CDC-NHSN |

NextGen Solutions; To address these challenges, healthcare systems must embrace advanced technologies that strengthen Infection Prevention and Control (IPC) programs. Key drivers include:

- Microwave-based infection control systems
- AI-enabled surveillance platforms
- Automated environmental decontamination systems
- Digital compliance monitoring solutions
- Smart disinfection technologies

These innovations can significantly strengthen infection prevention and control programmes.

IOT Enabled Technology-assisted monitoring systems as adopted in india and asia pacific have demonstrated exponential change, reducing infection risks through real-time intervention and data-driven decision-making. (arXiv)

Soultion: We have in-house calibrated MICROWAVE BASED INFECTION CONTROL MODALATIES that demonstrated total shifts in ICD in high-risk Bone Marrow Transplant Units, ICUs, Operating Theatres. This resulted in complete infection prevention that translates into reduced antimicrobial load , lower healthcare expenditure, shorter hospital stays, with a 33%reduction in HAI linked mortality !!!! (Test results on request)

Validations: The WHO , CDC and various Conventions (Basel & Stockholm) recognise such strides of alternative Technologies such as Microwave & Ozone ICD in making our world a better place !!

To conclude, as we look toward 2030, our investments must move upstream—from treatment to prevention, from reaction to preparedness, and from isolated interventions to integrated ICD technological ecosystems.

The future of healthcare will not be defined solely by how effectively we treat disease, but by how sensible in the science we build on.

Biography

Dr. Monish Bhandari is a renowned healthcare technologist, entrepreneur, and Managing Director of S.S. Medical Systems (I) Pvt. Ltd., with more than 38 years of experience in the medical technology and healthcare innovation sector. A Chartered Engineer and Fellow of the Institution of Engineers (UK), he has played a pivotal role in advancing infection control, sterilization, biomedical waste management, and sustainable healthcare technologies. Under his leadership, S.S. Medical Systems has evolved into one of India's leading MedTech companies, with over 55,000 installations across India and international markets. Dr. Bhandari has been instrumental in developing and commercializing patented microwave-based disinfection technologies and pioneering "Make in India" healthcare solutions. His contributions have earned numerous national accolades, including the Technology Transfer (ToT) Award, Health Excellence Award, ELCINA Electronics Award, and recognition from the Hon'ble Prime Minister of India. He is widely recognized for driving innovation, sustainability, and excellence in healthcare technology.

**Dr. Sarjan Shah**

*Greenarray Genomics Research a& Solutions pvt ltd,
Pune*

Comprehensive Analysis of GJB2 and GJB6 Mutations in Indian Newborns: Largest Single—Centre Carrier Frequency Study from Pune, India

Abstract

Autosomal recessive non-syndromic hearing loss (ARNSHL) is a common congenital condition, with GJB2 and GJB6 mutations playing a major role in its genetic etiology. While previous studies in India have focused on hearing-impaired individuals, this is the first large - scale study with an aim to assess GJB2/GJB6 carrier status in an Indian newborn cohort. The goal was to generate region-specific data supporting the integration of genetic screening into newborn hearing loss programs and inform the development of an India-specific panel for early diagnosis and intervention. A total of 2,159 newborns (1,065 males and 1,094 females) born at Tertiary - care Hospital, Pune, were enrolled following informed parental consent. Dried blood spot samples were collected by heel prick, anonymized, and subjected to DNA extraction using the QIAamp DNA Blood Mini Kit. Targeted sequencing of GJB2 and GJB6 was performed using Ion AmpliSeq™ primers and the Ion Torrent S5 platform. Variants were annotated and classified based on ACMG guidelines. Among 2,159 successfully sequenced individuals, 65 carriers of GJB2 mutations and 2 carriers of GJB6 mutations were identified, yielding a GJB2 carrier frequency of 3.01%. The most frequent mutation was c.71G > A (1.72%), followed by c.487 A > G and c.1 A > G. A total of 12 GJB2 variants were observed, with no founder effect, highlighting high allelic heterogeneity. This is the largest Indian newborn carrier screening study for GJB2/GJB6. Our results emphasize the value of population-specific genetic screening for early detection and genetic counselling in hearing loss management.

Biography

Finished MBBS and MD Pathology from BVDUMC in 2008 and ran a chain of pathology labs called greencross for nearly 15 years and then started Greenarray Genomics lab since 2020. Serving as Director of the lab since then, Along with Director at ADPL Research centre working on reproductive medicine research.



Aeshah Faye Alshehri

School of Medicine, KING KHALID UNIVERSITY KSA

Determinants of acceptance for COVID-19 booster vaccine among general population in Saudi Arabia

Abstract

Public view about vaccine has been influenced by myths and misconceptions which resulted in a high level of vaccine hesitancy, particularly after reporting of few rare side effects that were linked to the vaccine. Thus, vaccine availability did not guarantee acceptance of the vaccine by the general population and even by some of health staff. This is a web-based cross-section study recruited in Saudi Arabia, and it were delivered to participants electronically by emails, virtual groups including WhatsApp and Telegram. A self-administered questionnaire was used for data collection about study variables. It consists of three sections of questions, section A about demographics of the participants, section B contains questions related to vaccine acceptance and preference, while section C contains questions about vaccine misconceptions. Chi-squared test were applied to evaluate the association between the determinants and the outcome variables. Any P-value < 0.05 was considered as an indication for a statistically significant association or difference.

A total of 424 respondents were included in this study and the majority were females 77.1% and about two thirds of the respondents aged 18-30. The prevalence of chronic diseases among the respondents was 15% in comparison to 54.5% among their family members. About 17% were unsure or disagree to be vaccinated against COVID-19. the most frequently reported reason of vaccine hesitancy was lack of accurate information about the vaccine, which were highlighted by

a quarter of the respondents. The most common reasons to accept the vaccine was to

be immunized against COVID-19 and to return to the normal life which were reported by about 73%. A significantly higher percentages of females did not trust the vaccine and thought that vaccine is harmful and will lead to serious complications than males. Being a health worker is significantly associated with willingness towards the vaccine.

Biography

Aeshah Al-Shehri, a Senior Public Health Specialist at the Saudi Ministry of Health with over 8 years of experience in health promotion, data analysis, and community empowerment. I hold both a Bachelor's and Master's degree in Public Health from King Khalid University. Currently, I serve as the Community Empowerment Coordinator at Aseer Health Cluster, where I lead initiatives to improve community well-being and healthcare outcomes. I also work as a guest lecturer at Batterjee Medical College, teaching courses such as Disaster and Risk Management. I am passionate about public health, stakeholder.

**Allen Chen***University of California, Irvine, CA, USA*

Worldwide Variations in the Incidence of HPV-associated Oropharyngeal Cancer: Implications for Public Health

Abstract

The incidence of human papillomavirus (HPV)-positive oropharyngeal cancer has increased to epidemic-like proportions in certain parts of the world, namely in the United States and other industrialized nations. While significant progress has been made in the understanding of this disease with respect to its etiology, underlying biology, and molecular pathogenesis, questions related to its unique epidemiology have significant public health implications. Although HPV is now estimated to cause approximately 70% of oropharyngeal cancers in the United States and other developed countries, the proportion in developing countries, including those in Africa, South America, and Asia is dramatically less. The resultant geographical variation in incidence rates among countries across the world influences efforts to promote education, prevention, and the identification of high-risk groups. Given that HPV-positive oropharyngeal cancer is increasingly being recognized as a sexually transmitted disease with unique modes of transmission, the role of public health is unquestioned and should be customized accordingly based on geography. The purpose of this review is to outline the varying incidence rates across the world focusing on potential public health strategies centered on cost-effectiveness and the need to promote general awareness among the population.

Biography

Allen Chen, MD is an internationally renowned clinician, researcher, and educator and has published more than 300 articles on cancer treatment. His original research in human

papillomavirus-related head and neck cancer is credited for advancing the understanding of this disease. Dr. Chen earned a BS from Cornell University, MD from Yale University, and completed training in radiation oncology at UCSF Medical Center and the University of Texas-MD Anderson Cancer Center. He previously served as Chairman of Radiation Oncology at the University of California, Irvine, and Vice-Chair at the UCLA-David Geffen School of Medicine. As a physician investigator, Dr. Chen has published more than 300 articles on cancer treatment and also was Chair of Radiation Oncology and Associate Director of the University of Kansas Cancer Center. Dr. Chen holds dual MBA degrees from UCLA School of Management and the National University of Singapore.

**Aubin Yao N'DRI***School of Medicine, CA 94305, USA*

Rainfall, temperature, and proximity to sanitation pits: a mixed hurdle model of microbiological contamination in wells in M'Pody (Côte d'Ivoire)

Abstract

In M'Pody (municipality of Anyama, Abidjan), 72 wells were monitored over the course of four seasonal campaigns in 2020. Previous analysis of this dataset with multivariate methods (PCA, CA, SOM) revealed high microbial loads and recurrent exceedances of the World Health Organization (WHO) guideline values, which are consistent with the influence of runoff-erosion, as well as well vulnerability.

This paper aims to quantify within a hurdle framework (detection vs. conditional intensity), the effects of rainfall and temperature (standardized covariates), as well as distance/proximity to sanitation pits (≤ 15 m), on four microbiological indicators: *Escherichia coli* (*E. coli*), Thermotolerant coliforms (CTH), *Enterococcus faecalis* (*E. faecalis*), and Total coliforms (CT).

For each indicator, we fit (i) a logistic generalized linear mixed model (GLMM) with a random intercept for wells when identifiable (otherwise a GLM) to model detection probability, and (ii) a (G)LMM with Gaussian errors on to model intensity among positives. Inclusion of the season factor is adaptive (only when intra-season variability permits). Effects are reported as odds ratios (OR) for detection and as multiplicative factors for intensity (per +1 SD of the standardized covariates). Distance is considered both as a z-scored continuous measure and via a proximity indicator (≤ 15 m).

The results indicate that rainfall increases both the detection (particularly of *E. faecalis*) and intensity (of *E. coli*, *E. faecalis*, and CTH). Conversely, higher temperatures are associated with reduced concentrations of all three targets (*E. coli*, *E. faecalis*, and CTH). Pit-related metrics show no robust association with detection or intensity at the study scale, except for higher *E. coli* intensity at ≤ 15 m ($\approx +59\%$). Detection rates remain high for CT/CTH overall, with a higher proportion of zeros for *E. faecalis* in February, supporting the use of a hurdle model.

Compared with prior multivariate work, this approach quantifies the contributions of climatic drivers and on-site sanitation proximity to both occurrence and levels of microbiological

contamination, by separating presence from intensity. Findings reinforce that local well water does not meet WHO drinking-water criteria without treatment and point to actionable levers during rainy periods (well protection, multi-barrier strategies, targeted monitoring).

Biography

He received his PhD from Félix Houphouët-Boigny University (Abidjan) in 2013 and subsequently conducted postdoctoral research at Jean Lorougnon Guédé University (Daloa). He has published 11 articles in reputable peer-reviewed journals.



Dalitso Ruwe

Queens University, Canada

Construction of Black Males as Criminal Threats in Canada between the 19th- 21st century

Abstract

The analysis in this essay is motivated by the recent debates in the Canadian legal field which have shown that anti-Black racism has resulted in the over-representation of Black males in the Canadian criminal justice system. These debates have sought to advance that there is need to consider how the history of slavery, segregation and anti-Black racism have impacted Black life and should be accounted for during sentencing of Black Canadians .

Withstanding these claims, these essay traces a genealogy from slavery through our contemporary moment to show how Black males have been represented in Canadian newspapers, legal articles, and cases between the 19th and 21st century. I argue that in the 19th century Black males were constructed as beings incapable of using reason to be a part of civil society given their criminogenic nature, while in the 21st century in Impact of Race Culture Assessments (IRCAs) they have been constructed as having damaged psyches that reproduce subcultures of violence given the history of slavery and anti-Black racism that impacts them. These constructs between the 19th and 21st century I argue have cemented the idea that Black males are a public threat to Canadian civil society and must be dealt with punitive measures.

Biography

Dalitso Ruwe is an assistant professor of Black political thought in the Philosophy and Black Studies Departments at Queen's University. He is currently a 2023-2025 Azrieli Global Scholar

with the Canadian Institute for Advanced Research. His research interests are intellectual history of Africana philosophy, anticolonial theory, Africana legal history, Black male studies, and Black philosophies of education. He is currently working on a manuscript titled Horrors of the Flesh: Black Misandric Violence and the Dehumanizing Logics of Western Sciences that traces how scientific caricatures between the 17th- 21st centuries have conscripted Black males as ontologically violent beings and serve as scientific justifications for new violent and non-lethal methods to deal with the believed violent nature of Black males.

**Fernando Rodrigues Trindade Ferreira***Rio de Janeiro State University, RJ, Brazil***Using deep learning on microscopic images for white blood cell detection and segmentation to assist in leukemia diagnosis****Abstract**

Early and accurate diagnosis of leukemia is essential to increase the chances of successful treatment. However, manual analysis of bone marrow cells is a time-consuming process prone to errors. With advancements in health technologies, automating the detection of leukemic cells has become indispensable to accelerating and improving diagnostic accuracy. This study proposes the Y-YOLOv10 model, which combines Principal Component Analysis (PCA) to reduce the dimensionality of images and the YOLOv10 model for real-time detection, distinguishing 12 types of white blood cells. To enhance the diversity and robustness of training, six public datasets were combined, resulting in a comprehensive and representative dataset. Additionally, seven advanced data augmentation techniques were applied, including rotation, zoom, blurring, noise addition, contrast adjustment, horizontal and vertical flips, and cropping. These techniques were used alongside the original data, generating realistic variations and improving the model's ability to handle real-world laboratory scenarios. Furthermore, H.264 compression artifacts were introduced during training to simulate conditions of reduced image quality, making the Y-YOLOv10 robust to variations in acquisition quality. The Y-YOLOv10 achieved average performances of 96.85% accuracy, 95.21% recall, and 96.76% F1-score, outperforming methods such as YOLOv8 and ResNet50. Additionally, H.264 compression allowed for a 30–40% reduction in data size while maintaining high performance and faster processing times. This study highlights the potential of lightweight deep learning models to improve leukemia classification, reduce the workload of specialists, and ensure a robust and adaptable system for various application conditions.

Biography

Postdoctoral fellow at the Institute of Chemistry at USP, focusing on the application of Artificial Intelligence methods (Deep Learning and Machine Learning) in chemoinformatics - NEQUIMED/IQSC/USP. PhD in Electronic Engineering and Computer Systems from the Technological Institute of Aeronautics (ITA), focusing on computational methods for problem-solving in broadcast companies using computational algorithms for pattern detection and recognition in computer vision and natural language processing. Master's degree in Electrical Engineering from the Military Institute of Engineering (IME), focusing on computational systems for facial detection and recognition, using computational techniques for pattern recognition and detection in computer vision. Bachelor's degree in Computer Engineering from the Federal University of Ouro Preto (UFOP), focusing on heuristic and metaheuristic methods, and bioinspired algorithms applied to applied electromagnetics. Experience in Topological Optimization, Algorithm Construction Techniques, Computer Programming using C, C++, C#, Java, Python, Matlab, R, Haskell, Prolog, Javascript, and CSS, Electrical Circuits, Signal Processing applied to Telecommunications and Computer Vision, Pattern Matching, Parallel and Distributed Programming, Numerical Methods, Combinatorial Optimization of Computer Network Problems.

He served as a Substitute Professor of Basic and Technological Education at the Federal Institute of Southern Minas Gerais (IFSULMG). He also worked as a Support and Maintenance Engineer at TV Globo RJ (2014-2016). He was a Technology Specialist at TV Globo RJ (2016-2022). Founder and New Technology Consultant at WebSmart Fibra Internet. He was a Professor of Technology and Innovation at Fundação Bradesco RJ (2022-2023). I worked as a Visiting Professor at Faculdade

Descomplica. He is an Adjunct Professor at the State University of Rio de Janeiro (UERJ), and is also Head of the Department of Computational Modeling at the Polytechnic Institute of UERJ.



Hafsa Elmarrachi

Faculty of Medicine and Pharmacy, UM6SS, Morocco

Advances in Cancer Research from ASCO 2022-2023: Implications for Public Health and Preventive Medicine

Abstract

Cancer remains a leading cause of morbidity and mortality worldwide, posing a significant public health challenge. Recent advances presented at the American Society of Clinical Oncology (ASCO) annual meetings in 2022 and 2023 highlight critical developments in cancer prevention, diagnosis, and treatment that can profoundly impact population health.

This bibliographic analysis reviews key presentations and publications from ASCO, focusing on lung and gastrointestinal cancers due to their high prevalence and burden. Novel therapies, including immune checkpoint inhibitors and precision medicine approaches, demonstrate improved survival and response rates, offering hope for better disease control.

Clinical trials such as PARADIGM, PRODIGE, and NEO-PAN illustrate the potential of innovative treatment combinations to improve patient outcomes. Emerging targeted agents like Mobocertinib and Sotorasib introduce new options for difficult-to-treat lung cancers.

Furthermore, the PROTECT study emphasizes strategies to reduce chemotherapy-related toxicities, enhancing patients' quality of life—an essential aspect of cancer care within public health frameworks.

This synthesis underscores the importance of integrating cutting-edge oncology

advances into public health policies to optimize cancer control, reduce disease burden, and improve patient-centered outcomes.

Biography

Hafsa Elmarrachi completed a PhD in oncology at UM6SS, Morocco. Expertise includes translational cancer research, applying artificial intelligence in medicine, and biosafety. Published multiple peer-reviewed articles in oncology and biomedical journals and actively participates in national and international oncology conferences. Dedicated to advancing precision medicine by integrating innovative technologies to improve patient outcomes. Mentors medical and science students in research methodology and fosters multidisciplinary collaboration across clinical and research domains.



Hibah Faisal Ghauri

Rahbar medical and dental college lahore, Pakistan

Emotional intelligence and its relationship with stress management in undergraduate medical students

Abstract

Emotional intelligence (EI) is the capacity to comprehend and regulate emotions, control behavior, and adapt to challenging situations, indicating superior management skills, self-worth, and improved job status. Objective: our study intended to determine the association of emotional intelligence (EI) and stress management, its correlation with gender and academic year among undergraduate medical students in a private medical college. Methodology: A described cross-sectional study was conducted in Rahbar Medical and Dental college Lahore, Pakistan. 230 medical students from 1st year to final year were selected by convenient sampling and surveyed using already verified scales. Data examination included descriptive statistics. Ethical consideration such as informed consent and IRB approval were followed. Results: A study of 230 participants found a weak negative correlation between WLEIS Score and PSS Score, with a Pearson correlation coefficient of -0.054. The WLEIS scores were consistent across all years, with a standard deviation of 0.4 to 0.5. The Levene's test for homogeneity of variances was significant, indicating variances were not equal across groups. The ANOVA F-value was 2.434, suggesting a marginally significant difference in mean WLEIS scores across different years. The scatter plot showed a weak negative relationship between WLEIS and PSS Score. Conclusion: No strong relationship could be established between the WLEIS score and PSS score indicating there was no effect of emotional intelligence on perceived stress levels.

Keywords: Emotional Intelligence, Emotional Quotient, Stress, Management, Relationship, Undergraduate medical student

Biography

I'm doing my final year Bachelors of Medicine and surgery from RMDC LAHORE and I am a medical researcher with a side passion of photography and community work.

**Lia Beatriz Henke de Azevedo**

Center for HIV Testing and Counseling and Postgraduate Program in Applied Health Sciences (Unioeste), PR 85601, Brazil

Examining Stigma Experiences and Their Role in Treatment Adherence in HIV Care**Abstract**

The stigma associated with HIV poses a barrier to prevention and treatment and has significant ramifications for both individuals and society as a whole. Based on these premises, the aim of the present investigation was to explore the relationship between various factors pertaining to stigma experienced by people living with HIV/AIDS, with a primary focus on treatment adherence as the main outcome. The study was conducted within the community, with a total sample of 1,784 participants, who had a mean age of 40.14 years (SD = 12.95). The Stigma Index, which assesses experiences of stigma and discrimination, internalized stigma, and treatment adherence, was utilized as the primary tool for data collection. Data were analyzed using a range of techniques, including descriptive and inferential statistics. Within the study population, one-quarter of participants (25.45%; 95%CI: 23.43 to 27.55) reported missing at least one dose of antiretroviral therapy (ART) medication. Furthermore, independent factors associated with non-adherence to ART included age (OR = 0.98; 95%CI: 0.97 to 0.99), internalized stigma (OR = 1.33; 95%CI: 1.214 to 1.467), and general HIV-related stigma (OR = 1.05; 95%CI: 1.01 to 1.10). Additionally, individuals diagnosed for 1–5 years or 6–9 years were significantly more likely to miss their ART medication due to stigma-related concerns (OR = 1.85; 95%CI: 1.10 to 3.14 and OR = 1.89; 95%CI: 1.08 to 3.31, respectively). Participants who reported delaying treatment initiation, even when it was available and offered, were also more likely to miss doses in the year prior to the study (OR = 1.94; 95%CI: 1.12 to 3.16) compared to those who started treatment without delay. The conclusions drawn from the study highlight that demographic, clinical, and psychosocial factors contribute to the likelihood of missing ART doses in Brazil. These

findings provide valuable evidence to inform strategies and policies aimed at improving HIV care and services in diverse contexts.

Biography

Dr. Henke is involved in HIV treatment for decades, having published several articles in reputable journals, ranging from clinical to social aspects that affects those living with HIV/AIDS. She is the director of the HIV Testing and Counseling Center at the 8th Health Division in Paraná, Brazil, which covers a population of approximately 350 thousand people.



Paolo Ingallinella

Biotech Center, Diasorin Italia SpA, Bresso (MI), Italy

The LIAISON® Legionella Urinary Ag assay: A novel high-throughput, fully automated dual-antigen detection method with improved sensitivity and expanded Legionella species and serogroup coverage

Abstract

Background: Legionella pneumophila is the primary pathogen responsible for Legionnaires' disease, with serogroup 1 (Lp1) being the most frequently identified strain. However, current urinary antigen tests (UATs) mainly detect Lp1, often missing infections caused by other serogroups and Legionella species. To enhance diagnostic accuracy and patient care, a broad-spectrum, fully automated UAT is needed.

Methods: A new chemiluminescence immunoassay-based UAT was developed to detect both Legionella peptidoglycan-associated lipoprotein (PAL) and soluble lipopolysaccharide antigens, enabling broader strain coverage. Monoclonal antibodies targeting PAL were incorporated into an automated immunoassay platform. The assay's performance was assessed using recombinant PAL proteins, urine samples spiked with various Legionella strains, and clinical specimens. Key metrics evaluated included sensitivity, specificity, cross-reactivity, interference, and precision.

Results: The LIAISON® Legionella Urinary Ag assay showed 97.5% positive agreement and 100% negative agreement with the Binax™ UAT for detecting Legionella infections. Notably, it successfully identified several non-Lp1 Legionella species that the comparator test missed. The assay demonstrated high precision with no observed cross-reactivity or interference.

Conclusions: The LIAISON® Legionella Urinary Ag assay offers highly sensitive and specific detection of Legionella infections, including non-Lp1 strains, overcoming a major limitation of existing diagnostics. Its fully automated format supports early diagnosis, targeted antibiotic treatment, and improved public health monitoring of Legionnaires' disease.

Biography

He is a chemist and senior biotech executive with over 25 years of experience in peptide/protein chemistry, therapeutic and immunodiagnostic research. He holds a Master's degree in Chemistry from the University of Naples "Federico II.". Currently Biotech Director at Diasorin SpA, he leads multidisciplinary teams in developing key bioreagents and assays for immunodiagnostic applications. He has contributed to projects involving infectious disease diagnostics, oncology, endocrinology, metabolic disorders and other clinical areas. He previously worked at Merck Research Laboratories, contributing to peptide drug discovery and vaccine development. He is co-author of 20+ peer-reviewed publications and inventor on 18 patents and patent applications.



Peter Averkiou, M.D

*Associate Professor of Pediatrics at Charles E. Schmidt
College of Medicine, United States of America*

Engaging Medical Students with the Community Through Service-Learning Programs

Abstract

INTRODUCTION: Service-learning (SL) programs in medical schools illustrate one of the number of adult learning principles and practices now used in today's accredited curriculum that better prepares medical students for working with a variety of patients. **AIM:** The research aim was to assess medical students' learning experiences while participating with nonprofit organizations during an SL curricula-designed program.

METHOD: Analysis of 60 reflective essays over a three-year period from 192 medical students placed in teams of 2-4. A case study research design was employed. This iterative approach allowed the identification of themes and interpret meaning.

RESULTS: Four major themes and one overarching theme emerged that illuminated adult learning theories including: (1) transferring learning of one's skills and knowledge to community and practice; (2) articulating a variety of ways to communicate with multiple, diverse community audiences; (3) employing creative process for quality improvement strategies; (4) creating positive, trusting, and rewarding relationships; and an overarching theme: collaboration emerging almost without forethought. Medical educators may find that replicating this SL program into the curriculum infrastructure provides agency and student buy-in. A multi-prong process bringing reward to students and to the community. Reflection provides for meaningfulness from SL programs and helps student identify how experiential learning affects their professional development.

CONCLUSION: Implementing an SL program into any medical school curriculum

strengthens the adult learning theoretical delivery approach. Disseminating projects and lessons learned to and from the community also showcases experiential learning opportunities for medical students and other professionals. Many aspects of awareness from the medical students during the SL program emerged. They learned about specific aspects of community engagement. They found it a privilege to give and take many lessons from the experiences and opportunities.

Biography

Dr. Peter Averkiou is a pediatrician and an Associate Professor of Pediatrics at the Charles E. Schmidt College of Medicine at Florida Atlantic University. He is the Co-Director of the four Foundations of Medicine Courses, the Director of the Service Learning Projects, the Director of the Newborn Nursery Clinical Rotation and the Director of the Synthesis and Transition Course at the medical school.

**Yasir E. Mohieldeen***Hamad Bin Khalifa University (HBKU), Qatar- Doha*

Satellite Analysis of NO₂ over Doha (2018–2023): World Cup Impact, Meteorological Factors, and Public Health Implications

Abstract

Mega sporting events like the FIFA World Cup and Olympic Games can affect public health both during their preparation and while hosting large crowds. Evidence suggests these events bring both benefits and challenges. Nitrogen dioxide (NO₂), a regulated pollutant linked to respiratory and heart diseases, has been tied to air quality deterioration at past events, raising health concerns for host populations.

This study investigated temporal patterns in tropospheric NO₂ column densities across Greater Doha using TROPOMI satellite data from May 2018 to December 2023, with the aim of evaluating the impact of hosting the FIFA World Cup Qatar 2022 on NO₂ concentrations and potential public health implications. Trends observed during the World Cup period (20 Nov–18 Dec 2022) were greater than those recorded for the same periods in other years. Wind speed was assessed as a factor influencing NO₂ variability. Analysis of the pre-, during, and post- World Cup 2022 periods revealed that both preparation for the event and the event itself have had negative impacts on NO₂ concentration. Annual NO₂ levels rose sharply in 2022 relative to 2019–2021, then fell markedly after the tournament, with 2023 levels 24 % lower than in 2022 and ~16 % below prior years. Winter concentrations exceeded summer levels. Friday and Saturday (weekend) levels were 44 % and 13 % lower than weekday averages, respectively. Wind speed accounted for over 96 % of daily NO₂ variability during the games, indicating that calm conditions during winter reduced dispersion and contributed to higher exposures.

The marked decline in NO₂ after the event suggests that traffic, construction and pre event activities were major contributors. Strict emissions controls and sustainable transport policies—like those that reduced asthma cases by 60 % during the Beijing 2008 Olympics—are therefore critical to protect public health during future mega events. Meteorological conditions influence the dispersion of pollutants, so seasonality should be considered when determining event timing. Continuous monitoring and timely public advisories are essential, particularly during seasons with low wind speeds.

Biography

Yasir finished his PhD in 2009 from University of London. He joined Surrey Satellite Technology of Surrey University in the UK as a remote sensing engineer. In 2011 he joined Qatar Environment and Energy Research Institute (QEERI) of HBKU, as a scientist using remotely sensed satellite data for environmental research. He is currently a senior research fellow at the Harvard University School of Medicine. He is the chief of XXXX, a head Bio-Soft administration association. He has Published in excess of 25 papers in renowned journals and has been filling in as a publication board individual from notoriety.



Abdus-Salam Ismail A¹, Mutiu Wasiu B^{1,2}, Bankole Munir A1, Lajide Ibidunni O¹, Ogunyemi Olukemi I¹

Lagos State Ministry of Health, Lagos, Nigeria¹, Lagos State University College of Medicine, Lagos, Nigeria²

Infection Prevention and Control Response to an outbreak of MDRO *Klebsiella pneumoniae* in Neonatal Intensive Care Unit (NICU) of a Teaching hospital

Abstract

INTRODUCTION: The unit was invited to investigate an outbreak of multidrug resistance *Klebsiella pneumoniae* in the neonatal intensive care unit of a teaching hospital in Southwest Nigeria involving fifteen babies with a mortality rate of 57%.

METHODS: The IPC team reviewed all the case notes of affected patients and identified the index patient. The infection prevention protocols in NICU were also reviewed by the team. In addition, microbiological screening of healthcare workers hands and the equipments in NICU and the neonates was done. A focal group discussion with all the stakeholders was also carried out.

RESULTS: Multidrug resistant *klebsiella pneumoniae* identical to that of the index case was isolated from the wall mounted oxygen humidifier (30%), tubing of the suction machine (20%) and from four healthcare workers (12%). Risk factors found included the premorbid state of the index case, poor infection control practice including hand hygiene, unrestricted traffic between the NICU and paediatric surgical ward, absence of dedicated sterile equipments, inadequate personal protective equipments for patients, staff and mothers and overcrowded mothers' room.

Intervention done included retraining of all stakeholders on hand washing/ hygiene procedures, training of dedicated cleaning crew for NICU, health education and

IPC training of patients' mothers. Engineering control included traffic restriction by partitioning the unit from the surgical ward, installation of additional two hand washing stations and six wall mounted alcohol hand dispenser. Administrative controls included development and training on policies concerning hand hygiene, NICU entry protocol, sterilization, aseptic procedures, and procurement of personal protective equipments.

CONCLUSION: Control of infection in a high dependent area requires continuous educational strategies on infection prevention and control practice for all stakeholders, engineering control and principle of asepsis and provision of personal protective equipments.

Biography

Dr Ismail Abdus-Salam is a Consultant Public Health & Community Medicine Physician & State Epidemiologist & Director Epidemiology, Biosecurity and Global Health Lagos State Ministry of Health. He is also certified Bio-risk management expert by International Federation of Biosafety Association (IFBA). He is also a Fellow and former Examiner of the Faculty of Public Health and Community Medicine, National Postgraduate Medical College of Nigeria. He led the outbreak response management to Ebola Virus Diseases, Lassa Fever, Monkey, Measles, Cholera and other public health threats in Lagos State, Nigeria. He was the Incident Manager for the Public Health Emergency Operations Centre (EOC), COVID-19 Response, Lagos State. He has co-authored more than 35 publications in reputable peer-reviewed journals. His areas of research interest are Epidemiology, Public Health Emergency, One Health and Bio-risk management.



Bankole Munir A¹, Abdus-Salam Ismail A1, Mutiu Wasiu B^{1,2}, Lajide Ibidunni O¹, Ogunyemi Olukemi I¹

Lagos State Ministry of Health, Lagos, Nigeria¹.

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Climate-Linked Cholera Risk and Sustained Low Case Fatality through Coordinated Public Health Response in Lagos State, Nigeria

Abstract

Cholera remains a persistent public health threat in coastal megacities where climate variability and environmental vulnerabilities intensify transmission dynamics. In Lagos State, Nigeria, risk is markedly elevated during the rainy season due to low-lying terrain, recurrent flooding, and persistent waterlogging, which disrupt sanitation systems and facilitate widespread environmental contamination. This study evaluates the effectiveness of a climate-informed, multi-sectoral cholera prevention and response model implemented in Lagos State, with emphasis on epidemiological trends and case fatality outcomes between 2024 and 2025. A mixed-methods operational review was conducted using surveillance data and programmatic reports coordinated through the Public Health Emergency Operations Centre (PHEOC). Interventions were structured across four synergistic pillars: risk communication, environmental control, health system strengthening, and rapid response. Community engagement was intensified through coordinated media campaigns, press briefings, and dissemination of information, education, and communication (IEC) materials. Environmental interventions included enforcement against open defecation, expansion of sanitation infrastructure, and targeted Water, Sanitation, and Hygiene (WASH) measures, notably chlorination of shallow wells and promotion of safe water practices. Health system readiness was strengthened through rapid laboratory confirmation, enhanced capacity of primary and secondary health facilities, and specialized case management at the infectious disease hospital. Rapid Response Teams conducted active case search, contact

tracing, and localized containment. Real-time, data-driven coordination across Ministries, Departments and Agencies (MDAs), development partners, private sector actors, and professional bodies was sustained through the PHEOC. In 2024, Lagos recorded 466 suspected cases, 10 confirmed cases, and 15 deaths (CFR: 3.2%), compared to 165 suspected cases, 10 confirmed cases, and 5 deaths in 2025 (CFR: 3.0%). This represents a marked reduction in suspected cases (64.6%) and deaths (66.7%), while maintaining consistently low fatality rates. These findings demonstrate that climate-informed, governance-driven, and integrated public health interventions can substantially reduce cholera burden in complex urban settings. The Lagos model offers a scalable, policy-relevant framework for strengthening epidemic preparedness and response in similarly vulnerable environments globally.

Biography

Dr. Bankole Munir is a Medical Microbiologist (Virologist) with a PhD in Medical Microbiology from the University of Lagos and a Certified Professional of the International Federation of Biosafety Associations (IFBA). He serves as Director (Scientific) in the Department of Epidemiology, Biosecurity & Global Health at the Lagos State Ministry of Health and manages the Lagos State Public Health Laboratory (BSL-3). He has over 26 years experience in infectious disease surveillance, laboratory systems strengthening, biosafety, One Health, and outbreak response. He has co-authored over thirty-five peer-reviewed publications and authored three independent book publications for public health education and community awareness.



¹Yessica Liceth Jaimes Rodríguez, ²Bernardo Castiblanco Torres

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Social Sport as a Strategy for Human Development: Insights from the Experience of The Lion's Club Basketball School

Abstract

This study examines how the experience of the basketball school The Lion's Club contributes to the strengthening of social sport as a strategy for human development. Using a qualitative approach within a comprehensive–interpretive paradigm, the research employed semi-structured interviews and focus groups with students, families, and coaches to explore perceptions, practices, and community strategies surrounding sport as a space for formation, participation, and social integration. The study is grounded in the Human-Scale Development framework, which understands development not as an externally imposed goal but as a process that emerges from local communities—here conceptualized as Local Sports Initiatives. From this bottom-up perspective, communities create the conditions for individuals to satisfy fundamental human needs, activate capabilities, strengthen social bonds, and foster collective transformation through sport. Findings reveal that social sport has a synergistic and counter-hegemonic character, challenging dominant sport logics centered on

performance, competition, and commodification, which often reproduce exclusion and inequality. In contrast, social sport re-signifies sporting practice through encounter, cooperation, and shared enjoyment, positioning itself as a community-based pathway for human development.

Keywords:

Social sport; human-scale development; local sports initiatives; affect; participation; leisure; being; doing.

Biography

Yessica Liceth Jaimes Rodríguez is a Social Worker and holds a Master's degree in Human Development from Universidad Colegio Mayor de Cundinamarca, Colombia. She is currently a student of the Specialization in Social Inclusion. Her professional experience includes the design, implementation, and monitoring of social policies, programs, and community-based projects. She has worked in territorial social engagement, community accompaniment, participatory processes, and inter-institutional coordination in community, educational, and institutional settings. Her work focuses on strengthening local capacities, promoting community participation, and conducting social and territorial analysis with an emphasis on human rights, equity, and social transformation. She has contributed to initiatives related to community development, inclusive practices, and Just Energy Transition, bringing analytical, ethical, and interdisciplinary perspectives to her practice. Her commitment centers on advancing social well-being, fostering inclusion, and strengthening community networks through participatory and rights-based approaches.

Bernardo Castiblanco Torres is a psychologist with academic training in social and health fields, holding a Master's degree in Public Health and currently completing doctoral studies in Psychology. He serves as Academic Coordinator and Research Professor of the Master's Program in Human Development at Universidad Colegio Mayor de Cundinamarca in Bogotá, Colombia. His professional experience includes teaching in the areas of psychology and health, as well as the design, implementation, monitoring, and evaluation of public policies. He has led and contributed to research projects in public health and social health psychology, with expertise in integrating population-based, differential, and gender approaches into district- and local-level investment projects, territorial planning processes, and public policy frameworks. He has extensive experience developing and assessing qualitative and quantitative research instruments, and coordinating community and sectoral intervention teams addressing social issues related to health, life-course stages, and lifestyle practices, particularly in sexual and reproductive health.

**Ghannam, Dunia**

Lebanese Univerity- Faculty of Economics & Business Administration

Fragmentation of Healthcare Systems: Challenges Through Patients' Eyes

Abstract

Healthcare systems worldwide face increasing fragmentation, characterized by a lack of coordination among providers, payers, and organizations. This systemic fragmentation often leads to inefficient resource use, suboptimal care quality, avoidable medical errors, and, in some cases, patient harm or fatalities. This study aims to identify key challenges raised by fragmented healthcare systems by adopting the lens of parents of children born with disabilities. We analyze how high fragmentation leads to the loss of humanity from healthcare providers as perceived by the parents of children born with disabilities. Twenty-nine Lebanese families of children born with disability gave their consent to share their experiences for the study's purposes. We intended to include people with a variety of disabilities to gain a complete understanding of the experiences of the parents of children born with disabilities. Data was collected through semi-structured interviews, recorded and then coded using Nvivo 11. The coding followed an abductive approach; it was based on both the literature and data emerging from the field which aligns with qualitative approach. The study revealed the financial and bureaucratic burdens, the reification and relational challenges of fragmented healthcare systems. We identified how parents became an expert patient and a care path manager. Our contribution is by addressing the fragmentation issue from the parents' point of view. In this way, we further contribute to documenting the impact of fragmentation, on the lives of patients and their families and the intensity of the violence generated by the institutional system that amplifies the trauma inherent to the clinical case which refers to the chronic emotional and psychological distress that parents endure as they repeatedly confront care discontinuities, administrative

barriers, and the need to compensate for the system's failures

Biography

Dr. Dunia Ghannam is a lecturer at the Lebanese University, Faculty of Economics and Business Administration, with over a decade of teaching and research experience in management, auditing, and healthcare systems. Holding a PhD in Business Management from the University of Nantes, France, her doctoral work explored resilience, absorptive capacity, and compassion among parents of children with disabilities navigating fragmented healthcare systems. She also earned a Masters degree with a focus on financial institutions from Paris 1 Panthéon Sorbonne, Paris Dauphine, and the University of Saint Joseph, and a B.S. in Business Administration with distinction from the Lebanese American University. Beyond teaching, she has coordinated academic programs and served on master's juries addressing healthcare access, disability, and maternity protection in Lebanon. Her research and academic activities reflect a commitment to advancing organizational studies and public management, with a strong focus on equity and inclusion in healthcare.



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The in vitro Antimicrobial Efficacy of Biospot® Detergent Sanitizer Tablets against Hospital-acquired Pathogens

Abstract

Background: Health care associated infections (HAIs) remain a major global health challenge, contributing significantly to morbidity, mortality, and healthcare costs. In resource-limited settings, particularly in tropical climates, the use of liquid sanitizers has been widespread but often plagued by issues of stability, inconsistent efficacy, and logistical constraints. Tablet-based sanitizers, such as Biospot®, offer a potentially more stable and user-friendly alternative, yet their antimicrobial performance against clinically relevant pathogens has not been extensively characterized. This study aimed to evaluate the in vitro antimicrobial efficacy of Biospot® Detergent Sanitizer tablets against a panel of common hospital-acquired pathogens, thereby assessing their potential role in infection control strategies within healthcare facilities.

Methods: Biospot® Detergent Sanitizer tablets (1.7 g, prepared as a 1000 ppm stock solution) were tested against five representative hospital-acquired pathogens: *Staphylococcus aureus* (including MRSA), *Klebsiella pneumoniae*, *Pseudomonas aeruginosa*, *Acinetobacter baumannii*, and *Candida albicans*. Pathogens were cultured at the Lagos State Biobank, a Biosafety level 2 & 3 (BSL 2/3) Public Health Laboratory under the control of Directorate of Epidemiology, Biosecurity and Global Health of the Lagos State Ministry of Health.

Antimicrobial assays included sterility/purity testing, time-kill kinetics, minimum inhibitory concentration (MIC), minimum bactericidal/fungicidal concentration (MBC/MFC), and agar well diffusion assays. Data were analyzed using one-way ANOVA to determine

statistical significance.

Results: The Biospot® solution was sterile in purity testing, confirming absence of contamination. Time-kill assays demonstrated rapid and broad-spectrum activity: complete reduction ($\geq 3 \log_{10}$ CFU/mL kill) was achieved within 1 minute for Gram-negative bacteria and *C. albicans*, and within 5 minutes for MRSA. MIC, MBC, and MFC values were consistently 100 ppm across all tested isolates, indicating uniform potency. Well diffusion assays revealed clear zones of inhibition across multiple dilutions, further supporting the broad antimicrobial activity of the formulation.

Conclusion: Biospot® Detergent Sanitizer tablets exhibited robust and rapid antimicrobial efficacy against diverse hospital-acquired pathogens, including multidrug-resistant strains. The surfactant-mediated NaDCC formulation provides both detergent and disinfectant properties, enhancing pathogen elimination. These findings support the integration of Biospot® tablets into infection prevention protocols, particularly in resource-constrained healthcare environments where stability, ease of use, and cost-effectiveness are critical.

Keywords: Biospot® Detergent Sanitizer, NaDCC, Antimicrobial efficacy, , Infection control, Resource-limited settings

Biography

Dr. Bamidele Mutiu is a medical graduate of University of Ibadan and a Fellow of the National Postgraduate Medical College of Nigeria in Pathology (Medical Microbiology) since 2006. He holds International Federation Of Biological safety Association, Canada Certification in Biorisk management and Biosecurity.

He is member of Society for Quality Healthcare in Nigeria, Nigerian Biological Safety Association, Nigeria Infection Control Association and College of Nigerian

Pathologists. Currently, he is the head of Medical Microbiology & Parasitology Department in both Lagos State University Teaching Hospital and the Lagos State University College of Medicine and the Director, Lagos State Biobank; one of the foremost Biosafety Level 3 Laboratory that played a major role in COVID-19 Pandemic control in Nigeria.

**Rios-Gonzalez Carlos Migue**

USA

Tolerance, Adverse Effects, and Drug Interactions in First-Line Antiretroviral Therapy among People Living with HIV in Paraguay

Abstract

First-line antiretroviral therapy (ART) has significantly transformed the natural history of HIV infection, leading to improved survival. However, issues related to drug tolerance, adverse effects, and pharmacological interactions continue to present substantial clinical challenges. This prospective cohort study analyzed the experience of HIV-positive individuals receiving care at the Instituto de Medicina Tropical in Paraguay during 2024–2025. The study included 156 adult patients who initiated ART regimens based on dolutegravir (DTG), tenofovir (TDF or TAF), and lamivudine/emtricitabine. Clinical, anthropometric, mental health, and adherence data were collected through structured surveys and laboratory tests. Preliminary findings show that 59.6% of participants reported at least one adverse effect, including headaches, gastrointestinal issues, and fatigue. Signs of renal dysfunction were identified in 13% of cases, especially among those treated with TDF. Regarding mental health, 23% showed scores suggestive of anxiety or depression, while 21% reported significant sleep disturbances. Notably, 26% of participants had considered stopping treatment due to discomfort, although 92% had discussed these effects with their physician. In terms of adherence, 73% reported consistently taking their medication on time, though 15% acknowledged missing doses within the previous week. The most commonly reported drug interactions involved antihypertensives, anxiolytics, and anti-inflammatories, underscoring the need to strengthen pharmacovigilance mechanisms. This study provides valuable local evidence on the tolerability of first-line ART in Paraguay and

highlights the importance of monitoring adverse effects, comorbidities, and treatment adherence to optimize therapeutic outcomes and improve the quality of life of people living with HIV.

Biography

Dr. Carlos Ríos is a medical doctor specialized in Family Medicine, Aesthetic Medicine, and Clinical Sexology. He holds doctoral degrees in Public Health and Education, and has postgraduate training in Infectious Diseases, Epidemiology, and Research Methodology. He currently serves as Director of Research at the National Institute of Health of Paraguay and is an Associate Editor for Frontiers in Public Health. Dr. Ríos has led multiple national and international studies in public health, HIV/AIDS, and health systems, and actively collaborates with institutions across Latin America. His work focuses on improving the quality of care and advancing health equity, especially among vulnerable populations.



Dr. Leesi Saturday Komi MD, MBA, MGBM, MMHC, MSHCM, DBA-Epidemiology

Royal Society for Public Health (FRSPH).

Founder, Medihausa Health Group

A Conceptual Framework for Telehealth Integration in Conflict Zones and Post-Disaster Public Health Responses

Abstract

In recent years, telehealth has emerged as a transformative tool in advancing healthcare delivery, particularly in fragile and conflict-affected settings where conventional health systems are disrupted. This paper proposes a comprehensive conceptual framework for integrating telehealth solutions into public health responses within conflict zones and post-disaster environments.

The framework is designed to address the critical challenges of access, continuity of care, coordination, and resilience in crisis-impacted regions, leveraging digital health technologies to bridge gaps in medical service delivery. Drawing from multidisciplinary perspectives in health informatics, disaster management, and humanitarian response, the framework outlines core components: infrastructure readiness, policy and regulatory alignment, interoperability standards, workforce capacity, data security, and culturally appropriate user engagement. These components are interlinked within a systems-thinking approach that considers technological, logistical, ethical, and socio-political constraints unique to conflict and disaster settings.

The model emphasizes scalable deployment strategies such as satellite-based communication networks, mobile health (mHealth) platforms, and cloud-based electronic medical records to support remote diagnostics, teleconsultations, mental health services, and outbreak surveillance. The conceptual framework also incorporates mechanisms for rapid implementation, stakeholder coordination, and adaptive feedback loops, enabling health systems and humanitarian actors to assess evolving needs

and adjust interventions accordingly. Case studies from war-affected regions and post-disaster zones, including Syria, Ukraine, and Haiti, are analyzed to validate the framework's applicability and inform best practices. The integration of telehealth not only ensures life-saving care during acute emergencies but also contributes to the long-term reconstruction of resilient, technology-enabled health systems.

This study underscores the necessity of proactive telehealth planning and capacity-building before, during, and after crises. It provides a foundational roadmap for governments, international health organizations, and non-governmental actors to operationalize telehealth interventions in alignment with global health security priorities. By institutionalizing digital health as a core pillar of emergency response and recovery strategies, the framework advances equitable, timely, and sustainable healthcare delivery in the world's most vulnerable regions.

Biography

Dr. Leesi Saturday Komi, MD, FRSPH, is a public health leader, physician, and global health innovator with extensive experience in healthcare management, epidemiology, and digital health transformation. He earned his Doctor of Medicine from Lugansk State Medical University, completed multiple advanced degrees in healthcare management, business administration, and global business, and holds an Executive Doctorate in Epidemiology from Swiss Montreux Business School. Dr. Komi has led impactful initiatives, including telehealth programs that reached over 42,000 patients in underserved Nigerian communities and community-based health models in the U.S. An accomplished researcher, he has published over 27 peer-reviewed papers in reputed journals and serves on editorial and review boards for several international publications. His expertise spans health equity, preventive medicine, and AI-enabled healthcare innovation, with a steadfast commitment to bridging global health strategies with local health solutions.

**Nisha Manandhar**

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Baltimore, USA*

Epidemiological Trends And Severity Of Dengue In Children Aged 5 To 15 Years In United States And Its Territories Through March 2025

Abstract

Dengue is a vector-borne febrile illness with a global concern. It is potentially life threatening and has a higher risk of severity in children. A literature review was done to assess the epidemiology, severity and risk factors of dengue in children aged 5 to 15 years in the United States and its territories. With review of the title/abstracts of dengue related articles on PubMed (n=255), Embase (n=315), Cochrane (n=61) along with grey literature (n=13); the studies were further screened out and a total of 47 records were included. Most of the studies described endemic populations (n= 40; 85%), travelers (n= 13; 28%) and both (n= 8; 17%). Out of the 20 studies that reported risk factors of dengue, social economic status with demographic profile was reported by 8 studies (17%) with a lack of air conditioning reported by 9 studies (19%). The importance of window screening for prevention of dengue was mentioned by 11 studies (23%), including 15 studies (32%) mentioning climate and environmental conditions. Thick vegetation, presence of standing water and vector control measures were mentioned in 11 studies (23%) with 11 studies (23%) mentioning underreporting of dengue cases followed by 9 studies (19%) about incomplete laboratory reporting. Among the included 47 studies in this literature review, 27 studies mentioned Dengue Fever, followed by 24 studies mentioning Dengue Hemorrhagic Fever and 20 Dengue Shock Syndrome. There were 26 studies that described DENV-1, 27 studies DENV-2, 25 mentioned DENV-3 and 25 mentioned DENV-4. Dengue has a high prevalence and provides opportunity for pediatric specific studies with a need to monitor ideas of

pediatric research assessment and availability of new drugs and vaccines.

Biography

I am a Preventive Medicine physician from Nepal, an MPH from Johns Hopkins Bloomberg School of Public Health, and with a Certificate in 'Epidemiology for Public Health Professionals.' My academic and professional journey has equipped me with a diverse skill set in preventive medicine, public health research, epidemiology, and health informatics.

My research interests are centered around the intersection of infectious disease epidemiology, reproductive health, mental health, and cancer epidemiology. With an MPH from Johns Hopkins and recent work at Elsevier, I've led AI validation projects, medical content reviews. I thrive in collaborative, fast-paced environments where I can directly contribute to improving medical knowledge and patient care.

**Norida Nataly Vélez Cuellar***Instituto Nacional de Salud Colombia, Spain*

Evaluation Of Osteo-Muscular And Respiratory Health Conditions And Epigenetic Modifications In Former Open-Pit Coal Miners From Priority Municipalities In The Departments Of Cesar And Magdalena – Saludcarb

Abstract

Mining in general accounts for around one percent (1%) of the world's active workforce; these workers suffer approximately 8% of fatal workplace accidents, and the global size of the mining industry is estimated at about 30 million people, of whom roughly 10 million work in coal production. In October 2024, a study was carried out along the railway corridor of the departments of Cesar and Magdalena in Colombia, where osteomuscular and respiratory health conditions and epigenetic modifications were evaluated in former coal miners. The study included 293 former open-pit coal mine workers aged 30 to 65 years, most of whom were male (n=278). Health impacts were evident at osteomuscular and respiratory levels, along with other clinically important findings in the sector, including mental health disorders such as depression and anxiety.

During the musculoskeletal assessment, at least 200 participants presented at least one abnormal finding. The areas with the highest prevalence were the spine: 28.5% (95% CI: 25.7–31.4%), the shoulder: 27.5% (95% CI: 25.5–29.5%), and the hand/wrist: 12.1% (95% CI: 10.7–13.7%). The most affected individual tests were the Yocum test (right) at 42.8% ($p < 0.05$), the Speed test (right) at 37.4% ($p < 0.05$), and the Hawkins test at 37.2% ($p > 0.05$). Chest radiographs performed under International Labour Organization (ILO) standards identified that 51.77% (n=160) of the former miners had some type of radiological finding, of which 2.5% (n=4) were suspected of having

pneumoconiosis and 0.62% (n=1) had a confirmed diagnosis of pneumoconiosis. Spirometry revealed that 37.9% (n=117) of the former coal miners had some type of functional respiratory impairment. Assays are currently being conducted on genetic material extracted from a subsample of 30 individuals to assess epigenetic damage by determining the epigenome, telomere length, and mitochondrial DNA copy number.

The results show a high prevalence of osteomuscular disorders in former coal miners, mainly in the lumbar region and upper limbs, with predominance on the dominant side. At the respiratory level, 51.7% of chest radiographs showed findings compatible with lung disease, and 37.9% of former miners presented functional abnormalities on spirometry. Currently, ongoing epigenetic analyses seek to broaden the understanding of the long-term effects of mining exposure. In conclusion, this population faces a bleak outlook, given that most former workers in the sector have diagnoses indicating that their health is affected; which translate into chronic conditions such as low back pain, subacromial impingement syndrome, and carpal tunnel syndrome

Biography

I hold a Ph.D. in Biological Sciences from Pontificia Universidad Javeriana (2022) and a Ph.D. in Microbiology and Parasitology from Universidad Complutense de Madrid. My research experience has focused on environmental health, epidemiology, and microbiology. I have published more than 13 articles in peer-reviewed indexed journals, reflecting my commitment to the production and dissemination of high-quality scientific knowledge.



Riyadh Hossain

Department of Statistics, Noakhali, Bangladesh

Determinants of child physical health development in Bangladesh: a study of key socioeconomic and cultural influences

Abstract

Physical health is the overall well-being of the body, ensuring the proper functioning of organs, muscles, and systems. It includes fitness, nutrition, disease prevention, and healthy lifestyle choices. This study investigates the physical health development of children in Bangladesh and identifies key influencing factors. The data of this study was collected through a two-stage sampling approach, with trained interviewers administering structured questionnaires. A total of 401 children aged 6 to 10 years were included in the analysis. To examine the associations between variables, the Mann-Whitney U and Kruskal-Wallis H tests were conducted for bivariate analysis, while a generalized log-normal regression model was employed to assess the impact of various socioeconomic and demographic factors on children's physical health development. The findings indicate that early childhood diseases negatively affect physical development (OR: 0.95, CI: 0.92–1.83, $p < 0.05$). Conversely, access to outdoor play opportunities (OR: 0.96, CI: 0.93–0.99, $p < 0.05$) and the provision of supplementary food (OR: 1.05, CI: 1.02–1.09, $p < 0.05$) significantly enhance children's physical health. Additionally, gender (OR: 0.96, CI: 0.94–0.99, $p < 0.05$), regional division (OR: 1.04, CI: 0.98–1.07, $p < 0.05$), and monthly family income (OR: 0.92, CI: 0.98–1.09, $p < 0.05$) were identified as significant determinants of physical health outcomes. These findings underscore the need for targeted public health interventions to promote children's physical well-being in Bangladesh. Policymakers should prioritize strategies that mitigate the effects of early childhood diseases, enhance access to outdoor activities, and ensure adequate nutritional support to foster improved health outcomes among children.

Biography

I am a graduate researcher and data scientist at the Department of Statistics, Noakhali Science and Technology University, Bangladesh, with a focus on public health and child health research. I have published in peer-reviewed journals, received the National Science and Technology Fellowship, and secured institutional funding for joint research. I review for several international journals and have completed online certifications from Duke, Imperial College London, and the University of Michigan. I am also engaged in community service through a social welfare foundation and as a UNICEF Bangladesh volunteer.

**Sarah Morait**

Family Medicine Consultant, MBA, LSSGB HCP, Saudi Arabia - Riyadh

Climate Change and Its Impact on Community Health: The Role of Family Physicians

Abstract

Climate change is one of the most pressing global health challenges of the 21st century, with far-reaching implications for individuals and communities. Its effects, including rising temperatures, extreme weather events, and changing patterns of disease, present significant challenges to public health. As the front-line healthcare providers, family physicians are uniquely positioned to address these challenges within the context of primary care. This presentation explores the impact of climate change on community health, emphasizing the diverse health risks associated with environmental shifts, such as heat-related illnesses, respiratory problems, vector-borne diseases, and mental health disorders.

Family physicians play a crucial role in both mitigating and adapting to these climate-related health impacts. This talk will highlight the importance of integrating climate change considerations into routine clinical practice, from educating patients about environmental health risks to implementing preventive strategies for at-risk populations. Key strategies will include advocating for sustainable practices, incorporating climate change into preventive care, and providing targeted interventions for vulnerable groups, such as children, the elderly, and individuals with chronic conditions.

By fostering a more proactive and environmentally aware approach to healthcare, family physicians can not only improve individual health outcomes but also contribute to broader public health efforts aimed at combating climate change. This session will explore actionable steps for family physicians to enhance community resilience, improve patient care in the face of climate disruptions, and promote environmental sustainability as part of a holistic health strategy.

Biography

Board-certified Family Physician with an MBA, combining clinical experience with strong healthcare management skills. Proven ability to lead multidisciplinary teams, streamline operations, and drive quality improvement in clinical settings. Skilled in patient-centered care, strategic planning, and healthcare finance, with a passion for integrating medical and business expertise to enhance care delivery and organizational performance.

**Dr. Şeyma KIPEL**

Ankara Yıldırım Beyazıt Üniversitesi, Tıp Fakültesi, Histoloji ve Embriyoloji AD, Ankara, Türkiye

Evaluation of Basic Histological and Morphological Features of Human Testicular Embryonal Carcinoma Cells with Different Stains

Abstract

Testis embryonal carcinoma is a type of malignant germ cell tumor. It shares characteristics with pluripotent cells in embryonic development—that is, it has the potential to differentiate into both ectoderm, mesoderm, and endoderm. These cancerous cells emerge throughout embryonic development and are genetically aberrant cells. Germ cells, which are cells involved in the creation of sperm, are the source of testicular embryonal cancer.

The aim of this study was to comparatively evaluate the morphological features and distribution of cellular components of human testicular embryonal carcinoma cells using different histological stains (Hematoxylin-Eosin, Crystal Violet, Azan Trichrome, Weigert–Van Gieson, PAS).

The human testicular embryonal cancer cell line CRL-2073 was employed in study. In order to cultivate CRL-2073 cells, firstly round coverslips were placed in 12- well plate. Then, 5% fetal bovine serum (FBS, Capricorn) and 1% antibiotic (penicillin-streptomycin) were added to RPMI-1640 (including L-glutamine, HEPES, and Gibco Capricorn) medium. Cells were incubated at 37°C and 5% CO₂. Hematoxylin and eosin staining was used to determine the cells' overall morphological structure. Staining with Crystal Violet allows visualization of cell structure and morphology. Embryonal carcinoma cells are typically colony-forming epithelioid cells; these colonies were clearly visible with Crystal Violet. Azan Trichrome shows structural differentiation and

cell-environment relationships by distinguishing both cells and surrounding connective tissue/extracellular matrix components with different colors. Weigert–Van Gieson provided that the boundaries of cell colonies, cell density, and surrounding matrix details are clearly visible. Differentiation or structural changes between colonies can be observed. Because embryonal carcinoma cells are pluripotent, their glycogen and mucopolysaccharide contents may change during differentiation. These changes were detected by Periodic Acid–Schiff (PAS) staining.

The cell used in this study is a pluripotent germ cell tumor cell, meaning it has the potential to differentiate into different cell types. Therefore, examination with different stains is important because it reveals the cell's morphological integrity, signs of differentiation (epithelial, connective tissue, etc.), cytoplasmic content (glycogen, mucopolysaccharide, protein), and propensity for extracellular matrix formation. This study determines the basic histological characteristics of human embryonal testicular carcinoma cells. The results may provide preliminary information regarding their differentiation potential or propensity to form tissue-like structures.

Biography

I graduated from the Department of Biology at METU. I then completed a master's degree with a thesis in the Department of Histology and Embryology at Yıldırım Beyazıt University, Faculty of Medicine, Ankara. I then completed my doctorate in the same department. I currently work as a research assistant in the same department.



Uchenna Cosmas Ugwu

*Department of Human Kinetics and Health Education,
University of Nigeria Nsukka*

Status of gestational diabetes mellitus among pregnant Nigerian women

Abstract

Gestational diabetes mellitus (GDM) poses a significant health challenge for pregnant women in Nigeria, where screening and management gaps persist. This facility-based cross-sectional study assessed GDM prevalence, risk factors, diagnostic practices, and management barriers among 1,794 pregnant women attending antenatal care across 60 public health facilities in Nigeria. Findings revealed a GDM prevalence of 33.0%, with only 35.6% of affected women screened during their current pregnancy—primarily via OGTT or blood glucose tests. Key barriers to management included poor transportation access (76.9%), fear of insulin therapy (75.0%), and high treatment costs (70.6%). Statistically significant factors associated with GDM included older maternal age, higher gestational age, low parity, informal employment, being married, higher gravidity, and poor knowledge of GDM. These findings highlight the urgent need to strengthen GDM awareness, screening, and management in Nigeria's antenatal care system. Addressing systemic, educational, and financial obstacles is critical to improving maternal health outcomes.

Biography

Dr. Uchenna Cosmas Ugwu is an Associate Professor of Public Health Education at the University of Nigeria, Nsukka, where he has served since 2010 in various academic capacities. He holds a Ph.D., M.Ed., B.Sc., and Diploma in Health and Physical Education from the same institution. With over 60 peer-reviewed publications, Dr. Ugwu's research spans maternal and elderly health, diabetes, cancer prevention, mental health interventions, and educational

innovations for special needs populations. He has supervised numerous postgraduate projects, including doctoral theses. Dr. Ugwu actively contributes to academic leadership and curriculum development through committee memberships and conference roles. He is a member of several professional bodies including HEPRAN, NAHE, TRCN, and IOHSK. He has also participated in national academic quality assurance missions. His research and teaching interests are complemented by strong skills in systematic reviews, mixed-methods research, and rational-emotive behavioral interventions.

**Vincent Uwumboriyhie Gmayinaam**

Institute of Health Research, University of Health and allied Sciences, Ho, Ghana

Subnational Malaria Planning: Applied mathematical modelling of the impact of national malaria intervention strategies on under-five (5) malaria prevalence in Ghana from 2023-2028

Abstract

Malaria remains endemic in Ghana's northern Savannah zone, which experiences highly seasonal transmission and disproportionate child burden. Within Ghana's High-Burden-to-High-Impact framework, optimizing intervention mixes at the subnational level is critical. We used the EMOD v2.20 agent-based malaria model to project under-five *Plasmodium falciparum* parasite prevalence (PfPR) under different control strategies (ITNs, IRS, SMC, RTS, S vaccine, case management) from 2023–2030. The model included three local vector species and daily temperature-driven dynamics. Calibration involved a 50-year spin-up (1960–2009) with no interventions (using 50 larval habitat scales), then historical interventions (2010–2022) calibrated to national DHS/MIS under-five PfPR (2011–2019) via a beta-binomial likelihood fit. This yielded a baseline transmission setting for forward projections. We simulated five stochastic realizations per scenario, comparing each against the 2022 business-as-usual (BAU) baseline (Scenario 1, maintaining 2022 coverage). By 2028 it was observed that combined packages significantly outperformed single strategies. Scenario 11 (ITNs, case management, IRS, SMC scaled-up) reduced U5 PfPR by 74.8% (95% CI –78.4 to –71.2) relative to BAU, whereas CM alone (Scenario 3) achieved –49.5% and BAU itself only –22.9%. By 2030 outcomes: Scenario 14 (adding RTS, S to the above mix) gave the largest decline (–74.5%, 95% CI –104.1 to –44.9), nearly matching Scenario 11 (–72.8%) and far exceeding single-intervention impact (–50.5% for CM, –26.8% for BAU). The absolute PfPR: BAU PfPR among U5 was 11.7%. By 2028, Scenario

11 and 14 projections fell to 3.8–3.9%, versus >10% under BAU. These low PfPR levels persisted to 2030 (Scenario 14: 3.9%, Scenario 11: 4.1%). These findings emphasize that integrated intervention packages yield far greater impact than isolated tools. Scenario 11 which excludes the vaccine achieved comparable PfPR reductions to the full package (Scenario 14), highlighting the potency of combining ITNs, IRS, SMC and prompt case management. The results align with evidence of diminishing returns from scaling single tools alone. Importantly, by reaching near-elimination-level PfPR in children under five, combined strategies offer a promising path toward high-impact control in this high-transmission zone. EMOD projections indicate that resource allocation favouring combined interventions (ITNs + CM + IRS + SMC ± RTS,S) will significantly accelerate malaria prevalence decline in Ghana's Savannah zone. These findings support Ghana's shift to stratified, data-driven malaria control: subnational planners should prioritize integrated intervention packages in high-burden areas to maximize impact.

Biography

Vincent Uwumboriyhie Gmayinaam is 28 years of age with a Master of Public Health in Epidemiology and Disease Control from the Fred Newton Binka School of Public Health (FNBSPH) Ghana, affiliated with the University of Health and Allied Sciences (UHAS). His research focused on Applying Mathematical modelling using the Institute of Disease Modelling (IDM) platform (Epidemiological Modelling of Disease [EMOD]) to understand the impact of all malaria intervention strategies and malaria transmission dynamics on malaria prevalence reduction in the three ecological zones (Savannah, Forest and Coastal) of Ghana from 2023-2028 to prospectively inform the National Malaria Elimination Programme (NMEP) as Ghana gears toward malaria elimination by 2028. I studied at the same school (FNBSPH-UHAS), Ghana where I obtained a bachelor's degree in Disease Control. He is currently working with the Institute of Health Research affiliated with the university of Health and allied Sciences, Ho, Ghana.



Ingrid Juliana Devia Martinez

*Maestría en Fisioterapia del deporte y actividad física.
Universidad Nacional de Colombia. Hospital Universitario
Nacional*

E-Health In Promoting Physical Activity In People With Chronic Conditions: A Scope Review

Abstract

Information and communication technologies (ICTs) in health, known as e-Health, have become increasingly important in promoting physical activity for people with chronic conditions. However, evidence on their impact on self-management and health education is scattered. Objective: To identify e-health strategies for promoting physical activity in self-management and health education, specifically regarding knowledge, attitudes, and practices related to self-care in people with chronic conditions. Methods: The JBI and PRISMA-ScR guidelines were followed. Searches were conducted in six databases (PubMed, Scopus, SciELO, Embase, Taylor & Francis, and BVS) from 2014 onwards. Inclusion criteria related to digital strategies focused on physical activity in populations with chronic diseases were applied. Results: 7,171 articles were identified, of which 63 met the inclusion criteria. Mobile applications (33.3%) and online platforms (30.2%) were the most frequently used strategies. A positive impact on self-management and participation in physical activity was observed, although challenges remain regarding accessibility and adherence. Conclusions: Digital strategies have great potential for promoting physical activity in this population, but further research is needed to evaluate their long-term effectiveness and their implementation in the Latin American context.

Keywords: Self-care, Telemedicine, Digital literacy, Physical exercise, Chronic diseases.

Biography

Diana Alexandra Camargo Rojas is a Colombian physiotherapist, specialist in statistics, with a master's degree in public health and a doctoral candidate in Education and Health. She has a distinguished academic and professional career in the field of public health. She is a tenured professor and senior researcher at the National University of Colombia. Her research focuses on areas such as public health, physical activity and sport, and disability.

**Dr. Matilda K. Maseno**

*Institute for Social Transformation, Tangaza University,
Nairobi, Kenya*

Strengthening Community-Based Preventive Health Systems Through Social Entrepreneurship: Lessons for Universal Health Coverage in Sub-Saharan Africa

Abstract

Preventive healthcare remains one of the most cost-effective strategies for improving population health outcomes and strengthening health systems globally. However, many countries in Sub-Saharan Africa continue to face major challenges related to healthcare financing, workforce shortages, disease burden, and inequitable access to essential services. These challenges have increased the need for innovative and community-centered approaches that complement conventional healthcare delivery systems. This paper examines the contribution of social entrepreneurship to community-based preventive healthcare systems and its implications for advancing Universal Health Coverage (UHC) in Sub-Saharan Africa. Using a qualitative policy and systems analysis approach, the paper reviews literature, policy frameworks, and selected case examples from Kenya and comparable African contexts. The findings suggest that social enterprises play an important role in improving health awareness, promoting disease prevention, strengthening community outreach, and increasing access to essential preventive services among underserved populations. The study further identifies enabling factors, including community participation, cross-sector partnerships, adaptive leadership, and sustainable financing mechanisms. However, challenges related to scalability, policy integration, and financial sustainability continue to limit broader systemic impact. The paper concludes that integrating social entrepreneurship into national public health strategies can strengthen preventive medicine and contribute significantly to resilient and equitable health systems.

Keywords: Preventive healthcare, social entrepreneurship, public health systems, universal health coverage, community health, Africa

Biography

Dr. Matilda K. Maseno (PhD) is a researcher, policy consultant, and development practitioner with extensive experience in public health, social entrepreneurship, policy analysis, and program management across Africa. She holds a Doctor of Philosophy in Social Transformation – Social Entrepreneurship from Tangaza University, and a Master of Philosophy in Health Economics, Policy and Management from the University of Oslo, Norway. Her professional experience includes leadership roles in research, higher education, social enterprise development, and health systems strengthening initiatives. She has worked with local and international organizations in designing and implementing programs focused on preventive healthcare, gender equality, community development, and evidence-based policy. Her research interests include health systems resilience, social innovation, Universal Health Coverage, and community-centered approaches to sustainable development. She is a reviewer for the Journal of Social Encounters, Journal of Social Entrepreneurship and the Social Enterprise Journal.

**Momina Yahya***HOD, Roots IVY CMS, Lahore*

Parenting at the Crossroads: A Framework for Preventive Parenting Intervention in Asian Contexts

Abstract

Growing levels of early childhood aggression is a critical public health concern, linked to future psychopathologies, academic and economic disadvantage and juvenile delinquency. Despite intensive interventions, it still remains a significant problem in collectivistic cultures, such as in Pakistan, where parenting practices are strongly shaped by cultural norms of absolute obedience, hierarchical authority, and harsh discipline. This study aims to understand the cultural context of parenting involved in impacting childhood aggression, to inform a culturally grounded preventive intervention framework. Reflective Thematic Analysis (RTA) was used within a social constructivist framework. 50 parents (25 mothers and 25 fathers) were recruited through Strengths and Difficulties Questionnaire (SDQ), reporting with the concern of elevated level of aggressive behaviors in their children. Semi-structured interviews (60–90 min) revolved around common parenting practices, parent's belief about discipline, obedience, child compliance, emotional expression and responses to child misbehavior. The transcribed data was analyzed using NVivo software following Braun & Clarke's (2019) six-phase framework. Methodological rigor was ensured through member checking, intercoder reliability ($\kappa=0.86$), and cultural validation. Findings indicate that particular views supporting hierarchical authority, harsh discipline, objectification of child, viewing children as extension of the self, inconsistent demands and rules, insecure attachment, parental projection, and socioeconomic stressors shaped emergence of childhood aggression. Although the effects were mediated by religion- and respect-based socialization, and facilitating emotional expression. While the study meaningfully contributes to culturally grounded understanding of childhood aggression and

its determinants, limitations included reliance on parent-reported data, the qualitative design, and potential biases in interpretation.

Biography

Momina Yahya finished her Ms in Clinical Psychology in 2023 from University of Punjab, Pakistan. She has served as a Research Assistant on projects focused on dyslexia and neurodevelopmental challenges in children. Early in her career she has published 4 research papers in reputed journals. She is now serving as a Head of Psychology Department at Roots IVY College of Management Sciences, Lahore. Her work emphasizes understanding developmental pathways in early life and developing culturally responsive approaches that support children's learning, behavior, and emotional health. She is also associated with the NGO The Future Path, where she contributes to community-based initiatives aimed at promoting child development, mental health awareness, and psychosocial support.

**¹Nurcahaya Sihombing and ²Zulhani Karunia Hikmah**

¹Master of Public Health Program Faculty of Medicine, Public Health and Nursing Universitas Gadjah Mada, Indonesia

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Parenting Measurement Tools For Children Aged 0–8 Years: A Scoping Review Of Survey-Based Instruments And Their Psychometric Properties**Abstract**

Parenting quality plays a crucial role in shaping early childhood development; however, the availability of standardized and culturally appropriate measurement tools for population-based research remains limited. This study aimed to identify and map survey-based parenting measurement instruments for children aged 0–8 years and to summarize their psychometric properties. A scoping review was conducted following the Arksey and O'Malley framework. Literature searches were performed in ScienceDirect (n = 97), Scopus (n = 158), and PubMed (n = 285). Studies were included if they used survey-based parenting instruments applicable to general populations of children and caregivers, focusing on children aged 0–8 years, while studies involving broader age ranges were included if early childhood populations were represented. Articles focusing on specific clinical populations or special conditions were excluded, and only English-language full-text articles were considered. A total of 53 studies were included in the final analysis. The review identified a wide range of parenting measurement tools, predominantly self-report instruments assessing multidimensional domains such as discipline, responsiveness, emotional support, and parental stress. Most instruments demonstrated acceptable to strong psychometric properties, particularly in construct validity and internal consistency, although variations in factor structures and response patterns across populations were observed. Cross-cultural adaptation was a common feature, highlighting the importance of contextual considerations in tool application. These findings suggest that while existing instruments are generally robust, careful

cultural adaptation is essential for accurate assessment. The study provides important implications for researchers and practitioners in selecting appropriate tools for early childhood parenting assessment, particularly in diverse population settings.

Keywords: early childhood, parenting measurement, psychometric properties, scoping review, survey instruments.

Biography

Nurcahaya Sihombing is a Master of Public Health student at Universitas Gadjah Mada, funded by LPDP, specializing in maternal and child health and reproductive health. She has over four years of experience as a family planning educator at BKKBN and is interested in parenting, early childhood development, and reproductive health.

**Oonyu Lawrence***Department of Health, Butebo, Uganda*

Advancing Public Health Emergency Preparedness in LMICs: Introducing The PHEPR Scorecard

Abstract

Low- and middle-income countries (LMICs) continue to be disproportionately affected by public health emergencies, but few tools are available to evaluate and improve preparedness at subnational levels. This article introduces the Public Health Emergency Preparedness and Response (PHEPR) Scorecard, a novel framework to support systematic assessment and improvement of health system readiness during crises. The PHEPR Scorecard was conceptually developed as a health systems-oriented assessment tool, drawing on global health security frameworks such as the Joint External Evaluation (JEE), the International Health Regulations (2005), and lessons learned from recent outbreaks. Governance, funding, workforce capacity, supply chains, monitoring, risk communication, and community involvement are all highlighted on the scorecard. In LMIC contexts, gaps and enablers are mapped using a narrative approach. By combining system-wide indicators with the contextual realities of LMICs, the PHEPR Scorecard overcomes the shortcomings of current preparedness tools. The scorecard emphasizes subnational locally actionable priorities as opposed to global frameworks that place a higher priority on adherence to international standards. It enables district and national health leaders to effectively mobilize resources, identify vulnerabilities, and benchmark progress. By tying preparedness evaluations to policy discussions and investment planning, the scorecard also improves accountability. To promote health security and equity in LMICs, the PHEPR Scorecard provides a novel, context-sensitive framework. Its use could promote resilient health systems, lessen fragmentation across vertical programs, and increase pandemic preparedness. Pilot testing and cross-national comparison should be used in future studies to validate the scorecard.

Biography

Mr. Lawrence Oonyu completed his Master of Public Health in Global Health Security Response at Yonsei University in South Korea and is currently pursuing advanced research in vaccine policy and health systems strengthening. He serves as the District Health Officer of Butebo District, Uganda, and leads initiatives focused on outbreak preparedness, immunization programs, and health security interventions in low- and middle-income countries. Mr. Oonyu has contributed to public health research, with peer-reviewed publications on vaccine deployment, pandemic response, and health system resilience. He is the founder of the Global South Health Advisory Network, a think tank dedicated to shaping evidence-based vaccine strategies across Africa. His work bridges the gap between research, policy, and practical implementation to strengthen health systems in resource-limited settings.



Victor Luckyboy Dzramado

Department of Health Information Studies, University of Cape Coast, Ghana

Effectiveness of the South African Triage Scale in Improving Patient Outcomes

Abstract

Efficient emergency department (ED) triage is critical for reducing mortality in resource-limited settings. The South African Triage Scale (SATS) was implemented in a Ghanaian municipal hospital to standardize emergency stroke and trauma management. This study explores the experiences of Ghanaian nurses to evaluate the scale's effectiveness in improving patient outcomes. A qualitative exploration was conducted using semi-structured interviews with nursing staff. Data were analyzed using thematic analysis to capture insights into the transition from informal procedures to standardized protocols. Nurses reported that SATS significantly improved the identification of high-risk patients, leading to faster intervention and reduced ED congestion. Key themes identified include enhanced clinical confidence, better communication within multidisciplinary teams, and a perceived reduction in avoidable complications. However, challenges such as high patient-to-nurse ratios and the absence of continuous training were noted as barriers to optimal protocol adherence. The SATS is an effective tool for improving patient outcomes in Ghana by providing a structured framework for emergency care. Findings suggest that while the protocol enhances clinical efficiency, long-term success requires institutional support and standardized guidelines to sustain quality improvements.

Biography

Victor Luckyboy Dzramado is a dedicated Biostatistics and Field Epidemiology enthusiast and researcher based in Ghana. He currently serves as a Research Assistant at the University of Cape Coast and a Junior Biostatistician at the Cape Coast Teaching Hospital. With a BSc. in

Statistics from Kwame Nkrumah University of Science and Technology, Victor specializes in applying advanced statistical modeling and machine learning to solve complex public health challenges. His research portfolio includes impactful work on emergency triage systems, medication adherence in HIV care, and health information system performance. Victor is proficient in R, Python, and STATA, utilizing these tools to drive data-driven clinical decision-making. Beyond research, he is the founder of the CodeMe Project, focused on statistical programming mentorship. He is committed to leveraging analytical expertise to improve patient outcomes and strengthen healthcare systems in resource-limited settings.



Abdel Aleem Bello^a, Nizar Issa^b, Khaled Mawardi^c, Aline Batch^{a*}

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South African Journal of Chemical Engineering Antioxidant Activity of Some Apiaceae Plants Wild Distributed in Aleppo, Syria

Abstract

The Apiaceae family is renowned for its production of spices and dietary supplements, widely employed in both culinary and medicinal applications. This study aimed to evaluate the antioxidant capacity of methanolic extracts from 19 Apiaceae species collected in Aleppo, Syria. The total phenolic content (TPC), total flavonoid content (TFC), total antioxidant capacity, and DPPH (2,2-diphenyl-1-picrylhydrazyl) free radical scavenging activity were assessed. The results revealed significant variation in TPC and TFC among the tested species. *Tordylium trachycarpum* exhibited the highest phenolic content at 22.75 ± 0.32 mg gallic acid equivalents (GAE) per gram of dry extract, whereas *Anthriscus caucalis* showed the lowest at 8.64 ± 0.87 mg GAE/g. The maximum flavonoid content was observed in *Lagoecia cuminoides* (21.01 ± 1.03 mg quercetin equivalents [QUE]/g), while *Torilis tenella* had the lowest (4.10 ± 0.74 mg QUE/g). In terms of antioxidant activity, *Helosciadium nodiflorum* demonstrated the most potent DPPH radical scavenging effect, with an IC_{50} value of 17 ± 1.73 μ g/mL. In contrast, *Scandix verna* showed the weakest activity, with the highest IC_{50} value of 99 ± 1.4 μ g/mL. Notably, 13 out of the 19 extracts exhibited IC_{50} values below 50 μ g/mL, indicating that the majority possess very strong antioxidant potential. This study highlights several endemic Apiaceae species that are being evaluated for the first time, suggesting their potential as promising natural sources of antioxidants for pharmaceutical or nutraceutical applications.

Keywords: Apiace, antioxidant, total phenolic content, total flavonoid content, DPPH.

Biography

Aline Nadim Batch – PhD Candidate in Plant Taxonomy and Ecology and Lecturer at the Department of Plant Biology, University of Aleppo, Syria. She holds a B.Sc. in Natural Sciences (2003) and an M.Sc. in Plant Taxonomy and Ecology (2023) from the University of Aleppo, and has authored around nine peer-reviewed research papers. A two-time recipient of the prestigious Al-Bassel Award for Academic Excellence, her teaching and research focus on plant taxonomy, flora and vegetation, medicinal and aromatic plants, and ecology. She possesses extensive experience in botanical field collection, herbarium specimen preparation, and ecological surveys. Beyond academia, she actively promotes botanical knowledge and biodiversity documentation through the “Digital Flora of Syria” initiative. Fluent in Arabic, English, and French, she combines scientific expertise with a commitment to public health and sustainable natural resources.

**Dr. Anam Aftab***Ibadat International University Islamabad, Pakistan***Prevalence and Impact of Probable Sarcopenia in Community-Dwelling Older Adults in Pakistan****Abstract**

The study aimed to assess the prevalence of probable and non-probable sarcopenia among older adults in Pakistan and to compare the quality of life (QoL) between those identified as probable sarcopenic and non-probable sarcopenic. A cross-sectional study involving 387 older adults (226 males, 161 females) was conducted from July to December 2023. Anyone taking drugs affecting neuromuscular system and/or having a history of upper limb fracture were excluded. In accordance with the diagnostic criteria outlined by the European Working Group on Sarcopenia in Older People (EWGSOP-2) consensus, the risk of sarcopenia was screened using the SARC-F questionnaire, followed by handgrip strength assessment with a handheld dynamometer. Physical performance, fall risk, and QoL were evaluated using the Short Physical Performance Battery (SPPB), Fall Efficacy Scale (FES), and EuroQOL (EQ-5D-5 L), respectively. Among 387 participants, 180 (46.3%) had lower muscle strength, indicating probable sarcopenia, with a higher prevalence in females (55.9%) than males (39.4%). Although overall QoL scores showed no significant difference between probable and non-probable sarcopenia groups, the probable sarcopenic reported significantly higher pain/discomfort and anxiety/depression levels ($p=0.001$) in EuroQoL domains. Severe restrictions in usual activities and severe anxiety/depression were also more frequent in the probable sarcopenia group, emphasizing the widespread physical and mental effects of sarcopenia. The high prevalence ($>40\%$) of probable sarcopenia among older adults in Pakistan highlights the importance of routine screening during clinical visits. Early detection may help identify individuals at risk, enabling timely intervention to potentially prevent further health decline and improve quality of life. Further longitudinal studies are needed to confirm the effectiveness of these measures.

Biography

I completed my Phd in Rehabilitation Sciences in 2024. I have almost 13 years of academic and clinical experience as Physical therapist. Currently I am working as Associate Professor and Head of Post Graduate Programs at Ibadat International University Islamabad Pakistan. I have 40 research publications in National and International Journals.



Anusha Ahmed

Karachi Medical & Dental College, Karachi Metropolitan University, Karachi, Pakistan

Eco-Dentistry Unplugged: Cutting Waste and Water for a Greener Practice

Abstract

This study evaluates the limitations of the Response Evaluation Criteria in Solid This letter to the editor emphasizes on the increasing importance of eco-friendly dentistry with the Sustainable Development Goals (SDGs) of the World Health Organization. It highlights the necessity for responsible biowaste management to protect ecosystems, reduce pollution, and decrease microbial hazards that advance infection risks such as HIV and hepatitis. The letter talks about how inappropriate disposal of dental materials—like gloves, syringes, and suction tubes—can become fomites, helping pathogens transmission inside the clinical setups. It recommends sustainable dental treatments, which include digital radiography, decomposable materials, waste separation, and recycling products. Furthermore, it signifies the role of green substructure, low-consumption water systems, and gas and water separators in reducing microorganisms' extent and saving resources. Advancing atmospheric information among dental professionals and blending viability into dental education are key steps in promoting bio-compatible, energy-efficient, and ecologically safe dentistry. Regardless of ongoing advancement, challenges come in material sourcing, waste monitoring, and water conservation. It is necessary to make collaborative worldwide action to ensure a healthy and progressive future in dental practice.

Biography

Dr. Mehwash Kashif is a faculty member in the Oral Pathology department at Karachi Medical & Dental College, supervising research on various dental topics.

Anusha Ahmed is a final-year BDS student (awaiting results) at Karachi Medical & Dental College with active involvement in research related to eco-dentistry, microbial modulation, and regenerative dentistry. She has co-authored letter to the editor, systematic review, and cross-sectional study.

Asma Bint-e-Adil is a final-year BDS student (awaiting results) at Karachi Medical & Dental College with active involvement in research related to eco-dentistry and microbial modulation. She has co-authored letters to the editor and systematic review.

Together, the authors aim to promote environmentally responsible, resource-efficient, and biocompatible dental care.



Irene Yunzu Edward

Department of Medical Sciences and Technology, College of Science and Technical Education, Mbeya University of Science and Technology (MUST), Tanzania

Determinants of acceptability of schistosomiasis mass drug administration among primary school children in Busega District, Northwestern Tanzania

Abstract

Schistosomiasis is endemic in Tanzania, with a prevalence ranging between 12.7% to 87.6%. Mass drug administration (MDA) with praziquantel is the main recommended choice of preventive treatment for the disease. Low treatment coverage rates (46.6%) in Busega District, Northwestern Tanzania which are far less than the recommended effective coverage rates of $\geq 75\%$ could indicate low acceptability and poor uptake of MDA. This study sought to establish factors associated with acceptability of schistosomiasis mass drug administration among primary school children in Busega District. A cross-sectional study was conducted among primary school children, randomly selected from six primary schools between 6th March and 29th May 2023. A validated generic questionnaire guided by the Theoretical Framework of Acceptability was used for data collection. The outcome of the study was acceptability of MDA, and the explanatory variables were socio-demographic factors and the seven constructs of the framework such as perceived moral about taking praziquantel, understanding of intervention purpose and affective attitude. Descriptive statistics and logistic regression with robust standard errors were conducted to identify factors associated with acceptability of MDA using STATA version 15. The study sample comprised 615 primary school children, 60.16% girls and 39.84% boys. Age distribution ranged from 10 to 17 years with a median age of 13 years. About 55.28% were found to have high acceptability of MDA. Factors significantly associated with acceptability of MDA were; perceived effectiveness (AOR=2.52; 95%CI=1.31-4.85; p-value=0.006), understanding

of intervention purpose (AOR=5.51; 95%CI=3.16-9.59; p-value<0.0001), self-efficacy (AOR=2.04; 95% CI = 1.08-3.85; p-value = 0.029), affective attitude (AOR=5.10; 95% CI=2.77-9.59; p-value<0.0001), and gender (AOR=0.59; 95% CI=0.38-0.94; p-value=0.027). Slightly more than half of primary school children recorded high acceptability of MDA. However, perceived effectiveness, understanding of intervention purpose, self-efficacy, affective attitude, and gender strongly influence acceptability. This underscores the need for tailored, gender-sensitive community sensitization efforts regarding the benefits of MDA. Targeted educational campaigns and peer-led initiatives should be prioritized to increase awareness and acceptance, ultimately improving the effectiveness of the MDA program.

Biography

Irene Yunzu Edward is an Epidemiologist, Public Health Expert, Researcher, and Academician. She completed her Master of Science in Epidemiology with Implementation Research at the age of 26 from the University of Zambia and holds a Bachelor of Science in Environmental Health from Muhimbili University of Health and Allied Sciences, Tanzania. She currently serves as an Assistant Lecturer in the Department of Medical Sciences and Technology at Mbeya University of Science and Technology, Tanzania. With experience in both academic and field-based public health, Irene has worked with the National Institute for Medical Research (NIMR) and the Ministry of Health in Tanzania. Her research interests include infectious and non-communicable diseases, environmental health and climate change, as well as gender and reproductive health. She recently published a paper in a peer-reviewed journal on the determinants of acceptability of schistosomiasis mass drug administration among primary school children in Busega District, northwestern Tanzania.

**Jayesh Singh***FY1 Addenbrookes Hospital, Cambridge , United Kingdom*

Secondhand Smoke and Biomass Fuel Exposure as Risk Factors for Pulmonary Tuberculosis: A Matched Case-Control Study

Abstract

Secondhand smoke (SHS) exposure and biomass cooking fuel utilization represent persistent and growing health threats in regions where tuberculosis (TB) poses major public health risks. This comprehensive study conducted in Nuh district, Haryana, India, investigated the association between environmental exposures, including SHS and biomass cooking fuel use, with pulmonary TB development. This matched case-control study included 218 newly diagnosed pulmonary TB cases matched with 218 non- TB controls recruited from the same healthcare facility. Cases comprised nonsmoking adult men and women presenting as incident pulmonary TB patients diagnosed at the Tuberculosis Detection Center (TDC) through standard guidelines. Data were collected as a structured questionnaire. Bivariate logistic regression assessed associations between dependent and independent variables. Adjusted odds ratios were calculated for significant associations. Kitchen facilities analysis showed 192/436 (44%) homes without separate cooking areas and 215/436 (49.3%) lacking exhaust ventilation. Cooking fuel analysis revealed 73/218 (33.5%) cases used biomass fuels compared to 42/218 (19.3%) controls. Results demonstrated significant associations between TB and environmental risk factors: SHS exposure (adjusted odds ratio (OR) 2.83, 95% confidence interval (CI): 1.39- 5.75), biomass fuel use (adjusted OR 1.85, 95% CI: 1.13-3.03), overcrowding (adjusted OR 2.85, 95% CI: 1.69- 4.78), and inadequate ventilation (adjusted OR 1.65, 95% CI: 1.08-2.52). The findings provide compelling evidence for the role of indoor air pollution and environmental tobacco smoke exposure in TB pathogenesis among vulnerable populations in resource-limited settings. SHS exposure and biomass cooking fuel use emerged as independent risk factors with

substantial effect sizes, supporting biological mechanisms linking indoor air pollution to TB susceptibility. Additional environmental factors, including overcrowding, dampness, and inadequate ventilation, demonstrated strong associations with disease occurrence.

Biography

Dr. Jayesh Singh, MBChB is a dedicated resident doctor currently practicing at Addenbrooke's Hospital in Cambridge. He completed his medical degree at the University of Buckingham, England. He did an elective placement as a medical student in SHKM Government Medical College, Haryana, India. As a Foundation year trainee he developed a keen interest in internal medicine and global healthcare, particularly in addressing health disparities and improving access to quality medical care worldwide through evidence-based medicine to promote better health outcomes across diverse populations around the globe.

**Jiexuan Liu***Nanjing Normal University, Nanjing, Jiangsu, China*

Interest Psychological Factors Influencing Preservice Teachers' Attention to Health and Medical Care Reading

Abstract

This study aimed to analyze medical book borrowing patterns at Nanjing Normal University from 2014 to 2023, with the goal of understanding borrowing behaviors and the discriminative power of psychological factors for better medical resource utilization and library collection development. At Nanjing Normal University, despite the absence of a medical school or medical majors, the borrowing of medical books by teachers and students reflects disciplinary interpenetration and interdisciplinary reading interests. The absence of a medical faculty in the university under study inherently shifts the research paradigm from traditional biomedical frameworks to a multidisciplinary integration of non-medical disciplines. By leveraging fields, such as education, psychology, sociology, and behavioral science, the research challenges the assumption that health literacy must be rooted in clinical or medical training. The study may pioneer frameworks where health literacy is integrated into general teacher education programs, challenging the norm where health education is often delegated to medical professionals or specialized training. The research's novelty in a non-medical university lies in its ability to reimagine health literacy as a pedagogical and social construct rather than a medical one. Data from 3,934 readers and 3,746 borrowed books were analyzed using thematic word frequency, ROC curves, factor analysis, and discriminant analysis. These methods were used to identify themes, assess model performance, extract key behavioral factors, and differentiate borrowing patterns among schools. ROC analysis revealed that test variable, i.e., "active year", has low discriminative ability in predicting outcomes among male readers, while the model based on the psychology school data demonstrated moderate classification performance. Factor analysis identified four thematic areas with

significant correlations. Discriminant analysis revealed significant differences among departments, with varying contributions from the identified factors. Notably, Factor 4 (F4) consistently exhibited a negative influence across all departments. The findings presented in this study will enhance our understanding of medical resources, explore factor relationships, and inform library collection development.

Biography

She earned her Ph.D. in Education from Nanjing Normal University in 2011 and currently serves as a librarian at the institution's library. She served as an editorial board member of "International Journal of English Language and Literature Studies" and as a reviewer for "Asian Social Sciences". She has published in excess of 15 English papers and a monograph titled "Current Status and Future Prospects of Interdisciplinary Literature Reading among University Educators and Students". At the 2024 Tokyo International Summit of Public Health and Preventive Medicine Experts in Japan, she wrote a speech using data on overdue and lost books as samples and delivered an English report entitled "The Challenges of Procrastination".



Kerem Güman

Çankırı Karatekin University, Faculty of Art, Design and Architecture, Department of Painting, Çankırı 18100, Turkey

Digital Lifelines: Mods, VPNs, and Queer Survival Strategies in Gaming Under Oppressive Regimes

Abstract

In authoritarian contexts where queer expression is surveilled, censored, or criminalized, digital tools become lifelines. This paper examines how gender nonconforming (GNC) and LGBTQ+ players utilize game modifications (mods), Virtual Private Networks (VPNs), and underground circulation networks to sustain their identity, creativity, and community in hostile environments. Drawing on studies of censorship, queer media research, and digital ethnography, it situates modding and VPN use not as mere technical workarounds, but as essential strategies of resistance. These tools allow marginalized players to navigate authoritarian controls, creating precarious but vital spaces for queer expression in global gaming.

Biography

Kerem Güman is an Assistant Professor of Painting whose work bridges contemporary art, critical theory, and queer digital resistance. With a PhD-equivalent in Painting from Dokuz Eylül University, Güman's research explores subcultural identity, avatar customization, and cultural survival under censorship. Their scholarship has appeared in journals such as Australian Feminist Studies and Arteoloji, while their curatorial and artistic work spans both physical and virtual international exhibitions. Notable projects include the Cultural Line Project and solo exhibitions like Latent Content and Nomad. Güman has held leadership roles at Çankırı Karatekin University, including Erasmus Coordinator and Co-head of Department. Their work highlights how digital tools—like mods and VPNs—serve as lifelines for marginalized communities in authoritarian regimes.



Lebogang Phiri-Sithole

*University of South Africa, University of Johannesburg,
McMaster University, Population Health Research Institute,
Canada*

The association between intimate partner violence and antiretroviral therapy adherence among individuals receiving ART care in Johannesburg

Abstract

This study investigated the extent to which intimate partner violence (IPV) is associated with antiretroviral therapy (ART) adherence among individuals receiving ART care in Johannesburg, South Africa. A two-stage purposive sampling method was used to recruit 200 men and women from two government ART sites through a cross-sectional survey. Adherence was obtained with the AIDS Clinical Trials Group (ACTG) questionnaire; exposure to IPV was assessed with the Violence Against Women Instrument (VAWI); and other demographic variables were recorded. Multiple regression analyses assessed the association between types of IPV, ART adherence, and demographic variables. Participants were predominantly female (67%) with ages ranging from 19 to 51 years (mean = 34.9). The average ART adherence was 79% while 51% of participants, predominantly women (67%), reported experiencing IPV. Multiple regression analysis showed a significant negative association between IPV and ART adherence, with adherence decreasing by 18% ($\beta = -17.92$, $p < .001$) among those experiencing IPV. Sexual IPV had the strongest impact, reducing adherence by 30% ($\beta = -29.71$, $p < .001$), followed by emotional IPV ($\beta = -12.53$, $p < .001$) and physical IPV ($\beta = -9.54$, $p < .001$). After controlling for age, sex, years living with HIV, and ART duration, IPV remained negatively associated with ART adherence. The study highlights the pronounced negative influence of IPV, particularly sexual IPV, on ART adherence. In line with previous studies, we recommend prioritising IPV screening in ART dispensing facilities and providing targeted psychosocial support for ART users exposed to IPV, especially women.

Biography

Lebo Phiri-Sithole, is a psychology lecturer at the University of Johannesburg (UJ), where she has the privilege of teaching both undergraduate and postgraduate students in the Department of Psychology. She holds a PhD in Psychology. Lebo's research interests are diverse, focusing on Health Psychology, Positive Psychology, Mental Health, HIV/AIDS, and the academic challenges faced by students in Higher Education. Lebo's background includes extensive experience in Health Promotion, Health Psychology, and Behaviour change research from my tenure at the University of South Africa's Institute for Social and Health Sciences (ISHS) and the South African Medical Research Council.

**Dr. Maha Al Turki**

College of Applied Medical Sciences, King Saud Ben Abdulaziz University for Health Sciences

Beyond the Scale: Deconstructing Obesity Stigma in a Saudi Arabian Context

Abstract

Background: Obesity stigma is a pervasive global health issue with significant biopsychosocial consequences, impeding access to healthcare, employment, and education for affected individuals. The propagation of weight-related stereotypes intensifies psychosocial distress and limits societal integration. This study addresses a critical gap by investigating socio-demographic determinants of fat phobia among the general public in Riyadh, Kingdom of Saudi Arabia (KSA).

Objective: To precisely ascertain the influence of various socio-demographic factors on the prevalence and intensity of obesity stigma (fat phobia) within Riyadh's adult population, aiming to identify key demographic correlates for targeted public health interventions.

Methods: A descriptive cross-sectional study was conducted with a randomly selected sample of 374 adult residents from Riyadh. Socio-demographic data were collected via a validated questionnaire. Obesity stigma was quantitatively assessed using the Fat Phobia Scale (FPS). Statistical analyses included chi-square, Mann-Whitney U tests, and reporting of medians and interquartile ranges (IQR). Statistical significance was set at $p < 0.05$.

Results: The study revealed a predominantly mild weight stigma among the public, with a median FPS of 3.00 (2.79,3.21). Females exhibited significantly higher obesity stigma than males. While age, gender, and marital status showed no significant direct

influence on fat phobia, educational attainment emerged as a singularly significant determinant ($p=0.047$), indicating that higher education correlated with reduced fat phobia.

Conclusions: The study underscores that societal fat phobia is significantly modulated by educational status. Despite extensive global focus on obesity's health implications, stigma is often overlooked. This research reveals a dualistic attitude towards obesity in Riyadh. The heightened negative perceptions among females necessitate urgent, targeted public health interventions. A comprehensive national strategy is imperative to enhance public awareness against obesity stigma, particularly empowering women. Such initiatives should promote holistic healthy lifestyle behaviors, meticulously refraining from exclusive emphasis on body weight or size, fostering a more inclusive societal environment.

Biography

Dr. Maha Alturki is an Associate Professor at King Saud bin Abdulaziz University for Health Sciences (KSAU-HS). She holds a Ph.D. and Master's in Human Nutrition from the University of Sheffield, UK, complemented by a Master's in Medical Education from KSAU-HS, showcasing her dedication to academic and pedagogical excellence.

Currently serving as Associate Dean of Academic Affairs, Dr. Alturki brings extensive leadership experience, having previously chaired the Clinical Nutrition Department. Committed to public health, she spearheaded the translation of The Merck Manuals into Arabic, enhancing access to crucial medical information. Her influence on nutritional policy is evident through collaborations with the Saudi Food and Drug Authority (SFDA) on caffeine consumption and low-carbohydrate diet guidelines. Dr. Alturki has also significantly contributed to community outreach and the development of Key Learning Outcomes for Clinical Nutrition Bachelor's programs in Saudi Arabia.

**Mominah Ambreen***Pakistan*

Discovering Maternal Minds: Exploring Maternal Mind-Mindedness for Preschoolers

Abstract

Most studies on mind-mindedness (MM) and its role in child development have predominantly been conducted in Western countries. Addressing this gap, we conducted the first-ever qualitative study in Pakistan with a sample of working and non-working mothers (N=30) of preschoolers (aged 2-6 years). Our aim was to assess their ability to describe their children in a mind-directed manner. Each mother was asked to describe her child. The transcripts of these four to five-minute speech samples were coded for (i) mental attributes (comment that refers to or describes the child's mental life), (ii) behavioral attributes (comments that refer to the child's behavior), (iii) physical attributes (physical appearance, age, position in the family), (iii) general attributes (any vague comment), and (iv) self-referential (comments in which the primary reference is self-focused rather than describing the child). The results showed that 19 out of 30 mothers could appropriately describe their child in context of their mental characteristics as calculated by the index score given in the coding manual (Meins & Fernyhough, 2015). In addition, variations in mothers' responses based on their occupation status and the child's birth order were also assessed qualitatively. Working mothers displayed less mind-mindedness than non-working mothers, and mothers with only one child were also found to be less mind-minded. This is a latest and entirely new study conducted in Pakistan and therefore offers a breakthrough in the research. Potential limitations include lack of generalizability and possible biasness in mothers' descriptions to appear as socially desirable.

Biography

She is a practicing Clinical Psychologist and Founder of her online therapy clinic “Psychologize with Mominah.” She holds a Master of Science in Clinical Psychology and a Diploma in Cognitive Behavioral Therapy. She is also a senior Researcher and Content Writer at a USA based Wellness company Q Studio.



Muhammad Adnan Sabir Mughal

*Department of Pathobiology and Biomedical Sciences,
Muhammad Nawaz Sharif University of Agriculture, Multan,
Pakistan*

Molecular Epidemiology and Public Health Significance of *Toxoplasma gondii* in Humans from District Rawalpindi, Pakistan

Abstract

Cats, a human companion, can transmit zoonotic pathogens, notably *Toxoplasma gondii*. This obligate coccidian parasite poses a considerable public health threat, as cats act as definitive hosts and shed oocysts that can infect humans through direct contact, contaminated water, or vertical transmission during pregnancy. Considering its silent prevalence and potential health risks, this study aimed to determine the molecular occurrence of toxoplasmosis in the human population of District Rawalpindi, Pakistan. A total of 384 blood samples were collected randomly from six localities. Thin blood smears were prepared and examined microscopically, followed by DNA extraction from positive samples. Polymerase chain reaction (PCR) was performed using genus-specific primers, and amplified products were confirmed through gel electrophoresis and sequencing. The associated risk factors were accessed through a pre-designed questionnaire. Data were analyzed using multiple logistic regression to evaluate associations, with odds ratios calculated for significant risks. PCR results revealed a higher prevalence of *T. gondii* (23.44%) compared to microscopy (13.54%), underscoring its diagnostic sensitivity. Sequence analysis indicated close similarity of local isolates with previously reported strains worldwide. Risk factor analysis identified frequent cat contact, sex, socioeconomic status and use of unboiled water as significant contributors to infection ($p < 0.05$). The study highlights the molecular presence of *T. gondii* in humans of Rawalpindi and emphasizes the importance of preventive measures, particularly safe food and water practices, to reduce public health risks.

Biography

Dr. M. Adnan Sabir Mughal completed his Ph.D. in Parasitology from the University of Agriculture, Faisalabad, in 2025. He is currently serving as a Lecturer at MNS University of Agriculture, Multan. His research primarily focuses on the molecular surveillance and identification of parasites affecting both human and livestock populations, with particular emphasis on food- and waterborne parasites of public health concern. He has developed expertise in employing advanced molecular and epidemiological tools to uncover parasite transmission dynamics, contributing to improved disease monitoring and control strategies. In addition, his research extends to the use of bioinformatics approaches for predicting drug targets and designing novel therapeutic candidates against protozoan parasites. Through this integrated approach, he aims to bridge the gap between basic research and applied parasite management, ultimately contributing to improved animal health, food safety, and human well-being.



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New Thiophene Derivative Blocking TLR4/MAPK pathway sensitizes colorectal Carcinoma induced in rats to Ionizing Radiation and Convince Apoptosis through JAK/STAT3, β -Catenin/NOTCH and SOCS3 Downstream Nrf2, PPAR- γ signaling

Abstract

Background: Colorectal carcinoma CRC is one of the most common types of cancer worldwide. Tumor resistance is typically blamed for the failure of radiotherapy and chemotherapy to treat cancer in clinic patients. To improve the cytotoxicity of tumor cells using radiation in conjunction with specific tumor-selective cytotoxic drugs is crucial.

Aims and objectives: The goal of the present study was to investigate the antitumor efficacy of a new thiophene derivative against CRC in rats and explore the possible associated molecular pathways. The potential of this thiophene derivative to sensitize the CRC tumor tissue to a low dose of gamma irradiation was also investigated.

Methods: Adult male rats were divided into five groups; control, group treated with dimethylhydrazine DMH for the induction of CRC. The CRC-group was further divided into four groups and treated with thiophene derivative, γ -irradiation, thiophene derivative+ γ -irradiation, or left untreated.

Results: DMH induced CRC as evidenced by the macroscopic examination of colon tissues and histopathology, slowed the proliferation of cancer cells. As a key player in

tumor proliferation, and inflammatory cascade induction, the down regulation of STAT3 following treatment of irradiated and non-irradiated CRC group with thiophene reduced tumor growth via multiple mechanisms, including production of pro inflammatory cytokines (down regulation of TLR4 expression and NFkB level), suppression of survival markers level (reduction of JAK, NOTCH1, β -catenin, SOCS3), and enhancing apoptosis (induction of tumor PPAR- γ and caspase-3) followed by enhancement of redox tone (Nrf-2, SOD, catalase and MDA) of the cells. The concomitant action of thiophene derivative + γ -irradiation was typified by the better amelioration of tumor incidence and multiplicity.

Conclusion: Taken together, the new thiophene derivative is a promising therapeutic candidate for treatment of colorectal cancer in rats. It also sensitizes the CRC tumor to the ionizing radiation through anti-inflammatory and pro-apoptotic pathways.

Biography

I worked as Associate professor of Biochemistry at National Center for Radiation Research & Technology, Atomic Energy Authority, Cairo, Egypt. My PhD degree in Biochemistry was from faculty of science - Ain Shams University in Cairo, Egypt. my research work is focusing on cancer biology and the effect of radiation on the human body with these responsibilities, Planning and conducting experiments. I managed to author and co-author several articles in high profile journals such as discover oncology, life science, integrative Cancer Therapies, Technology of Cancer Research & Treatment, etc.; I supervised on many master and PhD scientific thesis in different universities in Egypt.



Thank You