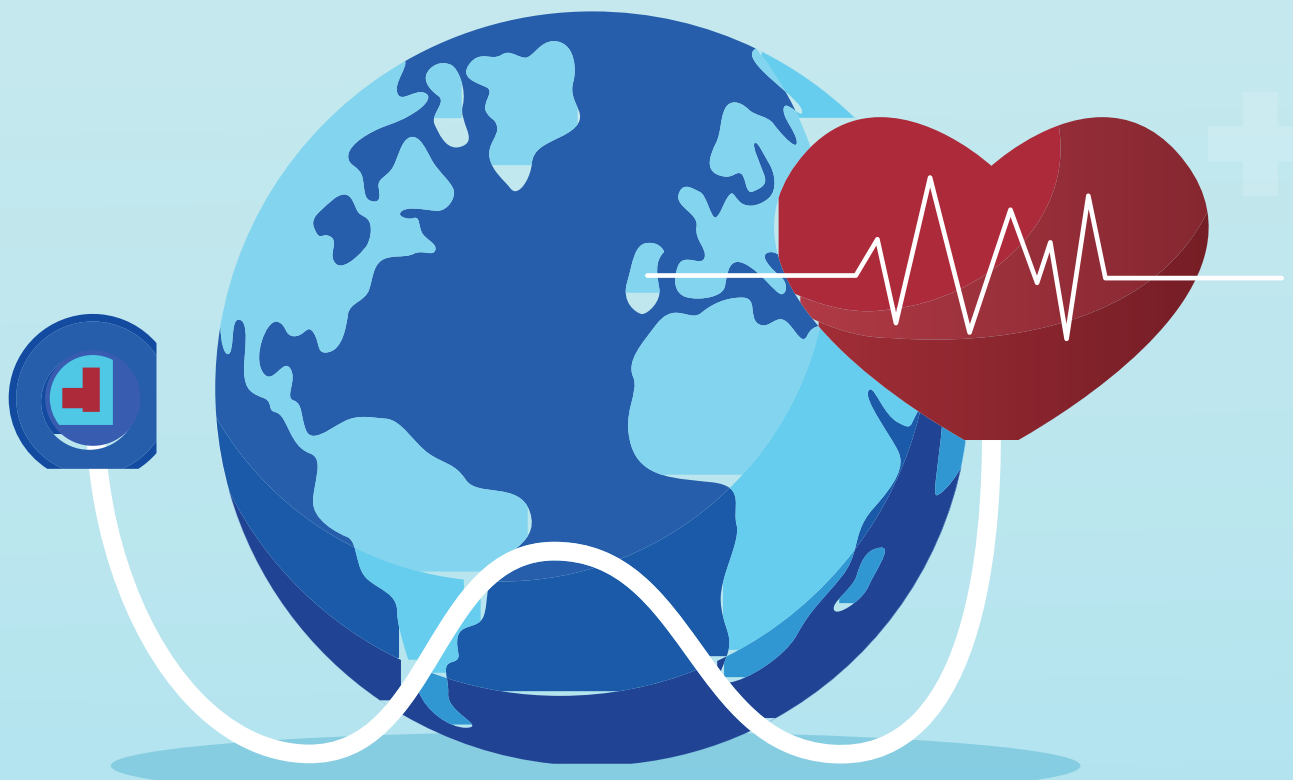


VIRTUAL EVENT

5th International Conference on
**FUTURE OF
PREVENTIVE MEDICINE
AND PUBLIC HEALTH**



MARCH 20-22
2025

FUTURE OF PMPH 2025

SCIENTIFIC PROGRAM

DAY 01

THURSDAY

MARCH 20, 2025

GMT - Greenwich Mean Time

08:20-08:30

Inaugural Ceremony

Sessions: Public Health | Preventive Medicine | Healthcare Innovations | Midwifery | Patient Safety | Digital Health | Primary Care | COVID 19 | Nursing | Internal Medicine | Family Medicine | Women's Health | Psychology and Psychiatric Disorders | Pharmaceuticals | AI in Healthcare

Distinguished Speaker Talks

08:30-08:50

Title: Multiple Stressors Induced Amygdalohippocampal Volume Reduction and Long-Lasting Fear Responses in Adult Male Rats

Rie Ryoke, *Niigata University of Health and Welfare, Japan*

08:50-09:10

Title: Impact of Fruits and Vegetables Intake on Immune-Mediated Inflammatory Diseases: A Two-Sample Mendelian Randomization Study

Sen Hu, *Zhengzhou University People's Hospital, China*

09:10-09:30

Title: Significance of Heart Rate Variability (HRV) to Predict Intradialytic Hypotension (IDH) using Wearable Device in Hemodialysis Patients

Ji Hyun Park, *Yeungnam University Medical Center, South Korea*

09:30-09:50

Title: Orthopaedic Patients' Emergency Department Attendance Behavior in Relation to Weather Conditions: Temperature, Rain, Day and Time, and Regional Thursday Effect

Levent Bayam, *Medipol University Sefakoy Hospital, Turkey*

09:50-10:10

Title: Advancements and Emerging Trends in Photobiomodulation Therapy for Enhanced Outcomes in Implantology

Divyabharathi Selvam, *SRM Dental College, India*

10:10-10:30

Title: A Technology-Driven Framework for Pandemic Resilient Healthcare: Addressing Data Gaps and Resource Optimization using IoT and AI in Resource-Constrained Regions

Debashis Dev Misra, *Assam down town University, India*

10:30-10:50	Title: Enhancing Employee Promotion Decisions with Simulation Techniques and Artificial Intelligence Driven Models Loubna Bouhsaien, <i>Abdelmalek Essaadi University, Tetouan, Morocco</i>
10:50-11:10	Title: Role of Forensic Doctor in Promoting Public Health: A Look at the Management of Violence Against Women and Children Hafsa Hajji, <i>Ibn Sina University Hospital Center, Morocco</i>
REFRESHMENT BREAK 11:10-11:30	
11:30-11:50	Title: Analysis of the Evolution of Trends in Cannabis Research Hanane Abbou, <i>Mohammed VI Center for Research and Innovation, Morocco</i>
11:50-12:10	Title: The Factor Structure and Measurement Invariance of Self-Assessment of Nursing Informatics Competency Scale (SANICS) Elif Sarac, <i>The Ministry of National Defense, Turkey</i>
12:10-12:30	Title: Trans-Duodenal Migration of Gossypiboma after Open Cholecystectomy - A Case Report from Pakistan Erum Anwar, <i>Dow University of Health Sciences, Pakistan</i>
12:30-12:50	Title: Development of Valid and Reliable Questionnaire to Evaluate Knowledge, Attitude, and Practices (KAP) of Lifestyle Medicine Domains Nesrain Alhamed, <i>King Abdulaziz University Hospital, Saudi Arabia</i>
12:50-13:10	Title: In Vitro Anti-Leukemic Effects of Wharton's Jelly-Derived Mesenchymal Stem Cells: A Potential Therapeutic Approach Mediha Suleymanoglu, <i>Istanbul University, Turkey</i>
LUNCH BREAK 13:10-13:40	
13:40-14:00	Title: Bacterial Genomes are Internally Formatted Eugene Korotkov, <i>Institute of Bioengineering, Research Center of Biotechnology of the Russian Academy of Sciences, Russia</i>
14:00-14:20	Title: Repair of Critical Sized Defects with Rat Synovial Membrane Derived Stem Cells Seeded on "Collagen, Polyhydroxybutyrate, Carbon Nanotubes" Composite Scaffold in a Rat Model Najmeh Sarafraz, <i>Rafsanjan University of Medical Sciences, Iran</i>
14:20-14:40	Title: Policy Alignment and Health Service Delivery: A Case Study on Mining Communities in Papua New Guinea Dora Kuir-Ayius, <i>University of Papua New Guinea, Papua New Guinea</i>

14:40-15:00	Title: Leveraging a Permutation-Based Approach to Analyze AIS Treatment Practices and Outcomes Barzizza Elena, <i>University of Padova, Italy</i>
15:00-15:20	Title: Transforming Healthcare through Adaptive user Interfaces and AI-Driven Solutions Randy Lin, <i>Algoma University, Canada</i>
15:20-15:40	Title: Antibacterial Effect of Ozonated Solutions on Enterococcus Faecalis and Pseudomonas Aeruginosa Hernán Freddy Ortega Cruz, <i>National University of the Altiplano, Puno-Perú</i>
15:40-16:00	Title: A Cross-Disciplinary Approach to Healthcare Forecasting: Machine Learning and Statistics in U.S. Expenditure Analysis John Wang, <i>Montclair State University, USA</i>
16:00-16:20	Title: Biological Age and its Relationship with Mortality of Elderly People with COVID-19 in a Public Hospital in Northeastern Brazil Isaura Romero Peixoto, <i>University Center of Espírito Santo (UNESC), Brazil Federal University of Pernambuco, Brazil</i>
16:20-16:40	Title: The Role of Imaging in the Diagnosis of Three Endemic Diseases of the Southern Cone Leishmaniasis, Dengue, and Chikungunya Monica Alicia Galeano, <i>Garrahan Hospital, Argentina</i>
16:40-17:00	Title: Current Treatment Strategies for Pulmonary Embolus Sabah David Butty, <i>Indiana University Health, USA</i>
17:00-17:20	Title: Quality of Work Life for Health Professions in Colombia's Adult Critical Care Laura del Pilar Quiñones Roza, <i>Universidad del Valle, Colombia</i>
17:20-17:40	Title: Drug Delivery Applications of Advanced Chlorin e6 Nanoemulsions: Ex Vivo Biosafety and Antitumor Efficacy Stéphanie Rochetti do Amaral, <i>São Paulo State University (UNESP), Brazil</i>
END OF DAY 1	

SCIENTIFIC PROGRAM

DAY 02

FRIDAY

MARCH 21, 2025

GMT - Greenwich Mean Time

08:20-08:30

Introduction

Sessions: Public Health | Preventive Medicine | Healthcare Innovations | Midwifery | Patient Safety | Digital Health | Primary Care | COVID 19 | Nursing | Internal Medicine | Family Medicine | Women's Health | Psychology and Psychiatric Disorders | Pharmaceuticals | AI in Healthcare

Distinguished Speaker Talks

08:30-08:50

Title: Living Habits and Public Health in Hong Kong: A Survey Study based on the Nine Body Constitutions

Hongyi Sun, *City University of Hong Kong, China*

08:50-09:10

Title: Indicators of Child Malnutrition among Different Social Groups in West Bengal, India: An Analysis Based on National Family Health Survey (NFHS-V)

Eva Ghosh, *Jadavpur University, India*

09:10-09:30

Title: An Optimized Deep Focused U-Net Model for Image Segmentation

Haroon Haider Khan, *COMSATS University, Pakistan*

09:30-09:50

Title: M-IoT Devices Optimisation through TinyML: Challenges, Advances, and Perspectives

Mohamed Maoui, *University of Oum El Bouaghi, Algeria*

09:50-10:10

Title: Ameliorative Effects of SesamumIndicum Aqueous Extract on Letrozole-Induced Polycystic Ovary Syndrome in Adult Female Rats and Formulation of Sesame Syrup

Zeynab Khosrowpour, *Shahid Beheshti University of Medical Sciences, Iran*

10:10-10:30

Title: Criteria for Enhancing Student Wellbeing in Stem Classrooms: ICT and Indigenous Knowledge in South African Higher Education

Nkopodi Nkopodi, *University of South Africa, South Africa*

10:30-10:50	Title: Prevalence and predictors of precancerous cervical lesions among women living with HIV in Libreville, Gabon Mabika Obanda Alfred Keith Felix, <i>Universitaire de Libreville, Gabon</i>
REFRESHMENT BREAK 10:50-11:10	
11:10-11:30	Title: Investigation the Role of Environmental Covariates in Geographical Distribution of Soil Biological Properties in A Semi-Arid Region Ashraf Esmaeilizad, <i>Soil and Water Research Institute Islamic Azad University, Iran</i>
11:30-11:50	Title: A Study on Body Composition Parameters and Biological Parameters of Farm Women working under Hot Climate Surabhi Singh, <i>Sardarkrushinagar Dantiwada Agricultural University, India</i>
11:50-12:10	Title: Intelligent Medical Service Monitoring Health Care System for the Elderly Sahar Ibrahim Ghanem, <i>Institute Pharos University in Alexandria, Egypt</i>
12:10-12:30	Title: Through the Lens of Experience: A Case Series on Pediatric Neuroblastic Tumors M.Dougul Regis, <i>Institute of Child Health and Hospital For Children, Madras Medical College, India</i>
12:30-12:50	Title: Air Pollution-Related Mental Health Burden - Repercussions and Implications for Public Health Ana Rodriguez, <i>Centre for the Study of Population, Economy and Society, Portugal</i>
12:50-13:10	Title: Universal Access to Sexual and Reproductive Care Simona Astorino, <i>Italian Association of Legal Psychology, Italy</i>
LUNCH BREAK 13:10-13:40	
13:40-14:00	Title: Pre-Operative EQ-5D-5L is A Strong Predictor of Meaningful Improvement in Quality of Life Following Primary Ttotal Knee Arthroplasty James Davies, <i>National Orthopaedic Hospital Cappagh, Ireland</i>
14:00-14:20	Title: Enhancing Individual Well-being and Community Engagement through Artistic Interventions in Urban Spaces Pablo Miguel De Souza Sánchez, <i>Universidad Europea de Canarias, Spain</i>

14:20-14:40	Title: The Impact of Loss Function on the Accuracy of Models in Medical Diagnoses Sepideh Etemadi, <i>University of Minnesota Duluth, USA</i>
14:40-15:00	Title: Increasing Volume of Liver Transplants for Alcohol-related Liver Disease May Negatively Influence Transplant Rates for Other Liver Diseases Jennifer L. Dodge, <i>University of Southern California, USA</i>
15:00-15:20	Title: Preparing Elementary Teachers to Support Inclusive Education for Students with Autism Spectrum Disorder: Highlighting the INCLUDE Program Planning Model Goodson Chaidamoyo Dzenga, <i>University of Montana Western, USA</i>
15:20-15:40	Title: Using Machine Learning to Predict Emergence of Disease in Free-Ranging Wildlife to Aid Public Health Efforts Brenda Hanley, <i>Cornell University, USA</i>
15:40-16:00	Title: The Effectiveness of Mind-Body Intervention on Psychological Well-Being During the COVID-19 Pandemic: A Pilot Interventional Study Anne Weisman, <i>Kirk Kerkorian School of Medicine at UNLV, USA</i>
16:00-16:20	Title: Use of Declarative Statements and Strong Recommendation to Increase COVID and Flu Vaccination in A Community Safety-net Primary Care Clinic Jacqueline M. Hirth, <i>Baylor College of Medicine, USA</i>
16:20-16:40	Title: Forgiveness Interventions in Mediating Organizations as Preventive Medicine for Public Mental Health Everett L. Worthington Jr, <i>Virginia Commonwealth University, USA</i>
16:40-17:00	Title: Echoes of the Hills: Challenging Exclusion through Black Storytelling in Appalachian Health and Policy Marcia Dinkins, <i>Founder & Executive Director Black Appalachian Coalition (BLAC), USA</i>
17:00-17:20	Title: U.S. 988 “Care Traffic Control” Technologies in Public Behavioral Health Systems: Driving Performance Outcomes That Matter John Draper, <i>Behavioral Health Link, Inc., USA</i>
17:20-17:40	Title: HL7 FHIR Platform, Scalable, Reliable and Comprehensive of Clinical Databases Analyzed with Machine Learning for ICU Public Healthcare Center Bernardo Chávez Plaza, <i>Hospital El Salvador, Chile</i>

17:40-18:00

Title: Gender Differences in Anxiety and Depression Symptoms in Times of Covid-19: A Review in Professors at A Mexican University

Ernesto Aguayo-Téllez, *Universidad Autónoma de Nuevo León, Mexico*

END OF DAY 2

SCIENTIFIC PROGRAM

DAY 03
SATURDAY

MARCH 22, 2025

GMT - Greenwich Mean Time

08:20-08:30

Introduction

Sessions: Public Health | Preventive Medicine | Healthcare Innovations | Midwifery | Patient Safety | Digital Health | Primary Care | COVID 19 | Nursing | Internal Medicine | Family Medicine | Women's Health | Psychology and Psychiatric Disorders | Pharmaceuticals | AI in Healthcare

Distinguished Speaker Talks

08:30-08:50

Title: A Case of Primary Aldosteronism with Rhabdomyolysis in which the First Symptoms were Thyrotoxicosis and Peripheral Paralysis

Yunuo Zhang, Baotou Medical Collage, China

08:50-09:10

Title: Exploring the Interconnected between Type 2 Diabetes Mellitus and Nonalcoholic Fatty Liver Disease Genetic Correlation and Mendelian Randomization Analysis

Yao Lu, Baotou Medical Collage, China

09:10-09:30

Title: Longitudinal Patterns of Family Expressed Emotion and Their Association with Adolescent Depression Rehabilitation: A Latent Transition Analysis

Lalit Dzifa Kodzo, Zhengzhou University, China

09:30-09:50

Title: Neuroprotective Effect of Bromelain on BDNF-TRKB Signalling Pathway in Chronic Unpredictable Stress Induced Depression Model

Rajeshwari Parasuraman, Saveetha Medical College and Hospital, India

09:50-10:10

Title: E-Health a Big Chance for Sustainable Rural Entrepreneurship

Rakesh Suryadevara, ICFAI Law School, India

10:10-10:30

Title: Prospects for using m-Health Systems in Smart Clothing using Neural Networks and 5G (6G)

Rustam Singatulin, Engineering and Technology Group "Kosh-Kort", Russian Federation, Russia

10:30-10:50	Title: Applied Distance Learning Methods in Disaster Preparedness: A Systematic Review Sarvin Bosak, <i>Dezful University of Medical Sciences, Iran</i>
REFRESHMENT BREAK 10:50-11:10	
11:10-11:30	Title: Ambulatory Electrocardiography in Preventive Medicine and Public Health Empowerment Theeban Raj Shivaraja, <i>Universiti Kebangsaan Malaysia, Malaysia</i>
11:30-11:50	Title: User Experience for Inclusion: Analysis of WCAG 2.2 in Pharmacy App for Visually Impaired Group Shibanee Mishra, <i>School of Planning and Architecture, India</i>
11:50-12:10	Title: Prevalence and Correlates of Generalized Anxiety Disorder and Perceived Stress Among Sudanese Medical Students Danya Mustafa Bakheit Ibrahim, <i>University of Khartoum, Sudan</i>
12:10-12:30	Title: Gestational Dominance and War: What Awaits Ukraine? Gulsym Serikbaivna Manasova, <i>Odessa National Medical University, Ukraine</i>
12:30-12:50	Title: Estimating the Risk of Cancer Incidence and Radiation-Induced Cancer Death of Children Patients Undergoing Digital Radiology X-Ray Examinations Khatereh Shamsi, <i>Babol University of Medical Sciences, Iran</i>
12:50-13:10	Title: Fixation of Depressed Posterolateral Tibial Plateau Fractures Using a Direct Lateral Approach Reza Noktehsanj, <i>Ardabil University of Medical Sciences, Iran</i>
LUNCH BREAK 13:10-13:40	
13:40-14:00	Title: Aerial Spraying and Human Health in Ecuadorian Banana-Growing Areas Mauricio Alfredo Guillen Godoy, <i>Universidad Estatal de Milagro, Ecuador</i>
14:00-14:20	Title: A Rare Cause of Post-Renal Transplant Anemia by Parvovirus-B19: Case Report Mona Aghaei, <i>Islamic Azad University, Iran</i>

14:20-14:40	Title: Multidisciplinary Approach to the Diagnostics and Introduction of Psychosomatic Disorders in Women with Menstrual Dysfunctions Zelenkova-Zakharchuk Tatyana, <i>National Medical Research Center of Endocrinology, Russia</i>
14:40-15:00	Title: Diffusion Tensor Imaging Biomarkers and Clinical Assessments in Amyotrophic Lateral Sclerosis (ALS) Patients: An Exploratory Study Saharnaz Pezeshgi, <i>Neuromuscular Research Center, Shariati Hospital, Iran</i>
15:00-15:20	Title: Studying Ecotoxicology of the Fungal Culture Filtrates from Aspergillus Terreus and Aspergillus Sydowii under Polythene Degradation Process Avinash B. Ade, <i>Savitribai Phule Pune University, India</i>
15:20-15:40	Title: Polyethylene & Polypropylene Degradation using Marine Fungi Rajkumar Kherdekar, <i>Savitribai Phule Pune University, India</i>
END OF DAY 3	

BOOKMARK YOUR DATES

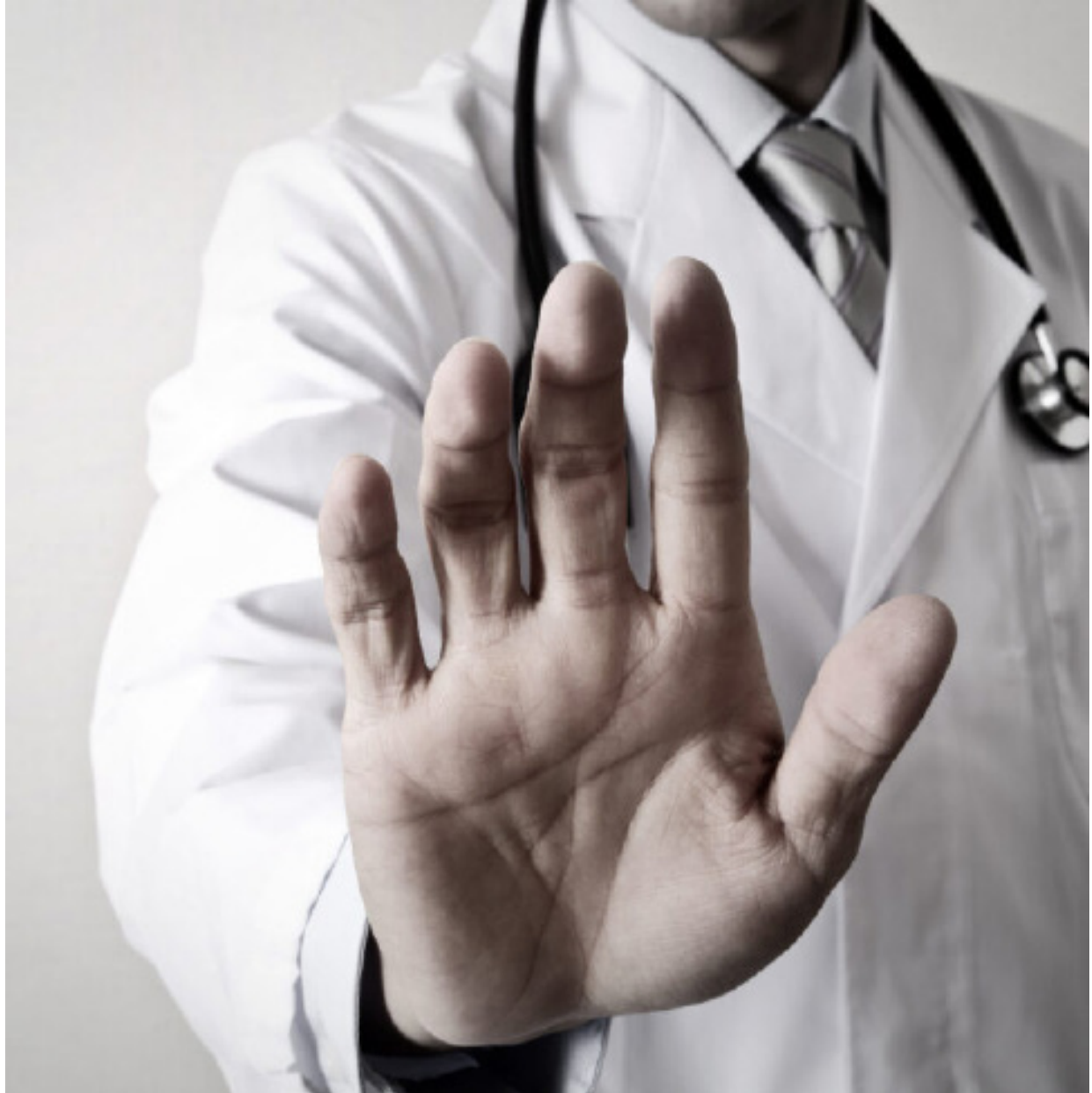
6th International Conference on

**FUTURE OF PREVENTIVE
MEDICINE AND PUBLIC HEALTH**

MARCH 2026 | ROME, ITALY

DAY 01

FUTURE OF PMPH 2025



VIRTUAL EVENT

5th INTERNATIONAL CONFERENCE ON

FUTURE OF PREVENTIVE MEDICINE AND PUBLIC HEALTH

MARCH 20-22, 2025

SPEAKER TALKS

FUTURE OF PREVENTIVE MEDICINE AND PUBLIC HEALTH

March 20-22, 2025



Multiple Stressors Induced Amygdalohippocampal Volume Reduction and Long- Lasting Fear Responses in Adult Male Rats

Rie Ryoke^{1,2}, Teruo Hashimoto^{1,2} and Ryuta Kawashima²

¹Niigata University of Health and Welfare, Japan

²Institute of Development, Aging and Cancer, Tohoku University, Japan

Background: Traumatic events can induce lasting fear and anxiety, key features of posttraumatic stress disorder (PTSD). Animal models, particularly rodent models, offer controlled longitudinal monitoring of PTSD development. This study combines multiple stress (MS) and longitudinal in vivo magnetic resonance imaging (MRI) to investigate long-term anxiety-like behaviors and brain structure in adult male rats.

Methods: Twenty-four male Wistar rats were divided into MS and control groups. The MS group was exposed footshocks and forced swimming, while controls were unstressed. Open field tests were conducted a day after MS and 23 days. Contextual fear conditioning was performed 15 days post-MS, with retention tests at 24 hours, 9 days, and 16 days. MRI scans were conducted before MS induction and after the final retention test, with a 32-day interval. Behavioral data included locomotive behavior in open field tests and freezing responses during retention tests. Voxel-based morphometry (VBM) was used to analyse MRI data.

Results: The MS group exhibited greater freezing responses than controls in all retention tests ($p < .05$). VBM analysis revealed reduced regional gray matter volume (rGMV) in the anterior amygdalohippocampal area of MS group rats. These volume changes were negatively correlated with freezing time in the final retention test (Spearman's $r = -0.52$, $p = .04$, Fig. 1). The MS group also showed altered exploratory behavior in the open field test.

Conclusions: Severe MS induces persistent anxiety-like behaviors and structural changes in the rat brain. Individual variability in the amygdalohippocampal area may relate to long-lasting fear responses post-stress. These findings offer insights into the neurobiological mechanisms of PTSD and highlight potential targets for treatment development.

FUTURE OF PREVENTIVE MEDICINE AND PUBLIC HEALTH

March 20-22, 2025

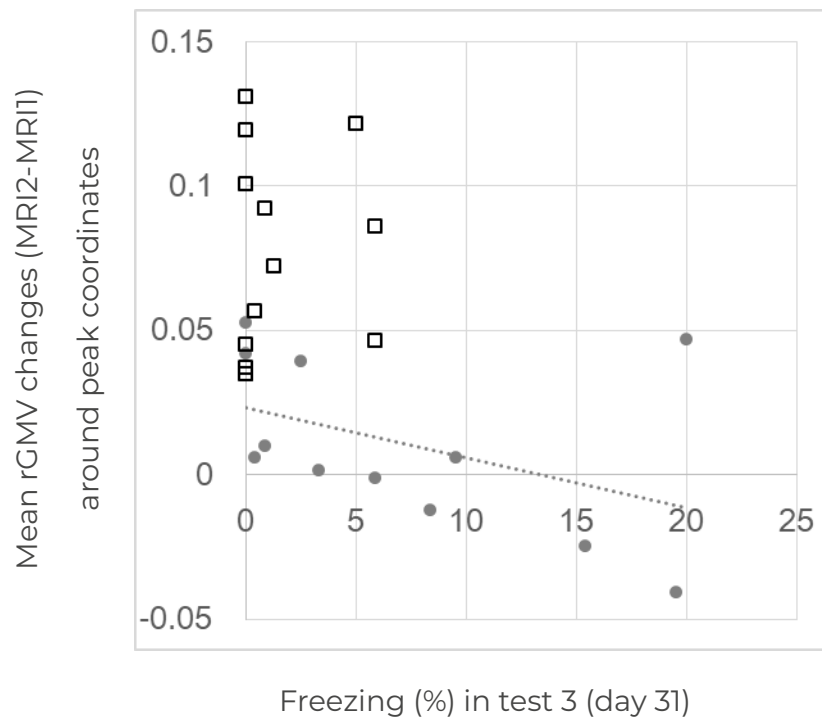


Fig 5. Reduced rGMV with multiple stress associated with freezing behavior. Percent freezing time in the retention test 3 of fear conditioning were negatively associated with rGMV changes in the left amygdalohippocampal area in MS group. MS: multiple stress, rGMV: regional gray matter volume.

Biography

Rie Ryoke is an assistant professor at Niigata University of Health and Welfare, Japan. She received her Bachelor of Integrated Arts and Sciences from the University of Tokushima and her M.S. and Ph.D. in Behavioral Science from the University of Tsukuba. Her research interests encompass emotion, learning, memory, neuroendocrinology, and stress-related psychiatric disorders. Dr. Ryoke has investigated the neural mechanisms underlying the development of posttraumatic stress disorder in rats using behavioral tests and psychopharmacological interventions. At her previous institution, Tohoku University, she studied individual behavioral variations in response to positive and negative stressors in rodents, employing behavioral tests, magnetic resonance imaging, histology, immunoassays, and gene expression assays.

FUTURE OF PREVENTIVE MEDICINE AND PUBLIC HEALTH

March 20-22, 2025



Impact of Fruits and Vegetables Intake on Immune-Mediated Inflammatory Diseases: A Two-Sample Mendelian Randomization Study

Sen Hu¹ and **Qiang Luo²**

¹Henan Provincial People's Hospital, Zhengzhou University People's Hospital, China

²Chongqing Medical University Children's Hospital, China

Background: A balanced diet can prevent diseases and promote physical and mental health. Accumulating evidence shows that the consumption of fruits and vegetables (F Vs) is associated with immune-mediated inflammatory diseases (IMIDs). However, the causal relationship between them remains unclear.

Methods: We comprehensively investigated the association between 30 types of F Vs and IMIDs, using Dietary habits-Target Mendelian Randomization (MR) method. GWAS data for exposure and outcome factors were extracted from the IEU database. Ultimately, Steiger test was used to determine the direction of each SNP.

Results: In IVW analysis, a negative correlation was identified between cauliflower intake and the incidence of psoriasis (OR = 0.993, 95%CI 0.987-0.999, $p = 0.016$). Conversely, apple intake was associated with an increased risk of psoriatic arthritis (OR = 1.864, 95%CI, 1.237-2.809, $p = 0.003$), and onion intake was associated with an increased risk of Crohn's disease (OR = 1.850, 95%CI 1.177-2.910, $p = 0.008$). Additionally, the findings were consistent across a range of alternative MR methods. Sensitivity analyses did not detect any heterogeneity or pleiotropy in the estimated impact of F&Vs on the risk of developing IMIDs (all $p > 0.05$). And Steiger proved that the causal relationship between them are true.

FUTURE OF PREVENTIVE MEDICINE AND PUBLIC HEALTH

March 20-22, 2025

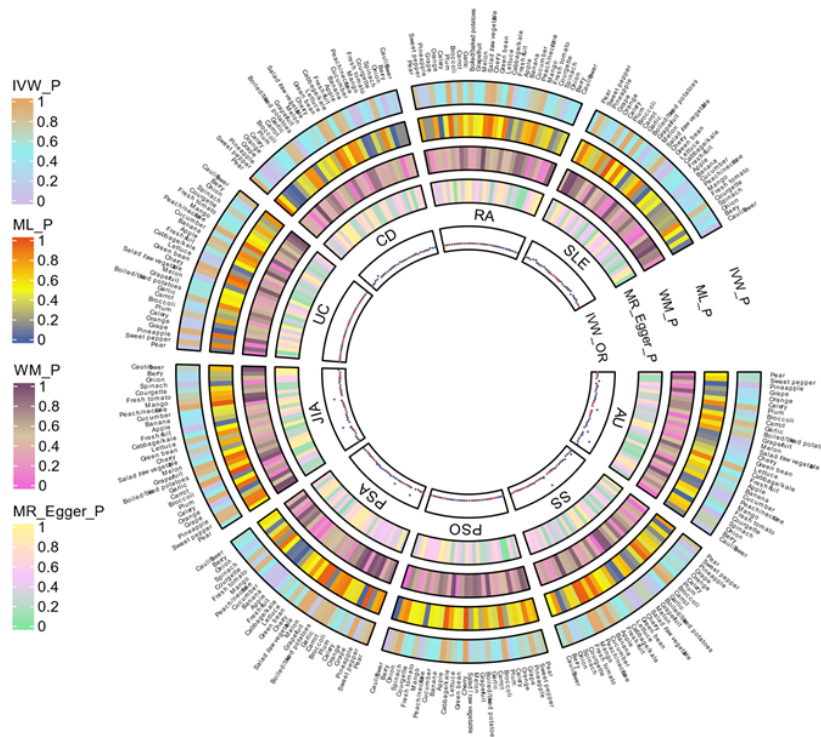


Figure 1. Multiple analysis of intestinal flora and inflammatory skin diseases. IVW, inverse-variance weighted method; WM, weighted median estimator; ML, maximum likelihood; AH, autoimmune hepatitis ; CD, crohn's disease; JIA, juvenile idiopathic arthritis; PsA, psoriasis arthritis; PsO, psoriasis; RA, rheumatoid arthritis; SLE, systemic lupus erythematosus; SS, sjgren's syndrome; UC, ulcerative colitis.

FUTURE OF PREVENTIVE MEDICINE AND PUBLIC HEALTH

March 20-22, 2025

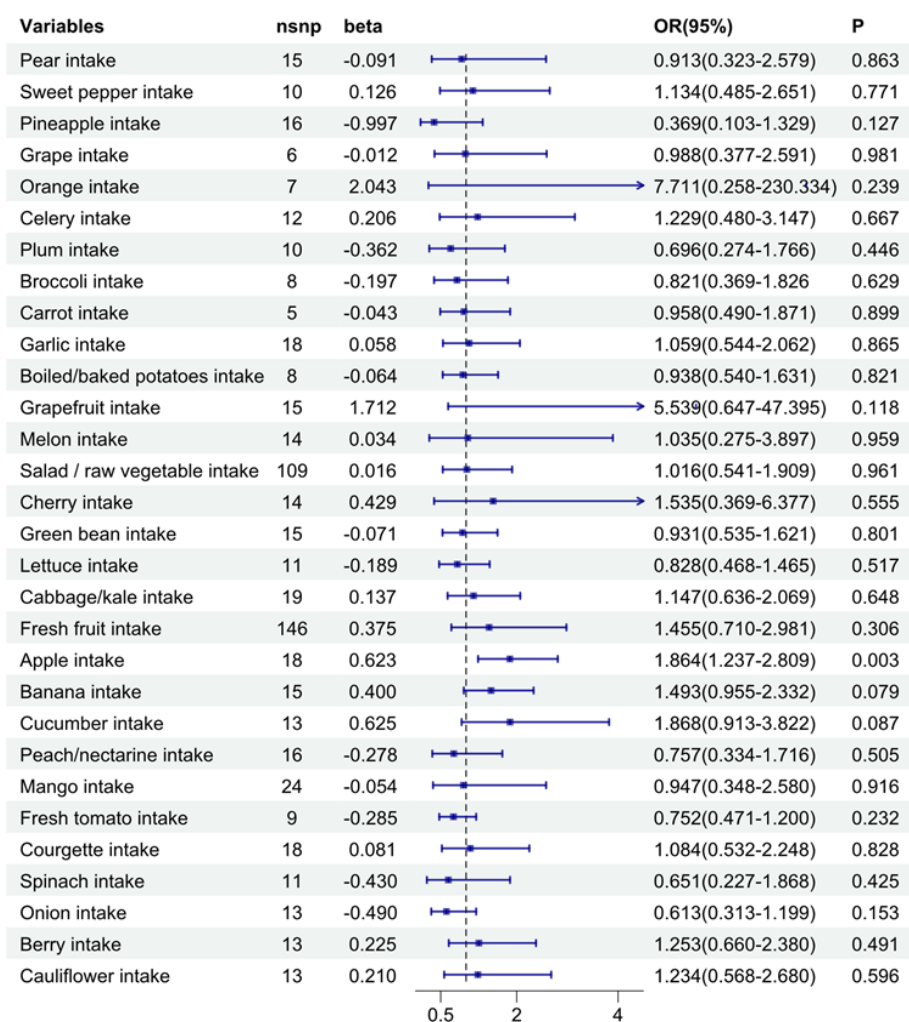


Table 1. MR results for 30 F&Vs causally associated with PSA by IVW. IVW, inverse-variance weighted method; MR, Mendelian randomization; F&Vs, fruits and vegetables. $p < 0.05$ were considered statistically significant.

Conclusion: This is the first Dietary habits-Target MR study to systemically examine causality between commonly consumed F&Vs and IMIDs. In conclusion, our findings showed that the intake of cauliflower alleviated the progression of psoriasis, whereas apple and onion promoted psoriatic arthritis and Crohn's disease, respectively.

Biography

Sen Hu, Henan Provincial People's Hospital/Zhengzhou University People's Hospital, member of the Chinese and Western Medicine Branch of the Chinese Society of Traditional Chinese Medicine Information, deputy leader and secretary-general of the Department of Neurosurgery (Precision Therapy Group of Neuro-tumors) of the Henan Medical Popular Science Association, and secretary-general of the Zhong yuan Neuro-tumor Forum of the World Federation of Neurosurgical Societies (WFNS). He is proficient in R language, Python, and Stata data processing, and is committed to the research of electronic medical record structuring, big data, and data mining.

FUTURE OF PREVENTIVE MEDICINE AND PUBLIC HEALTH

March 20-22, 2025



Significance of Heart Rate Variability (HRV) to Predict Intradialytic Hypotension (IDH) Using Wearable Device in Hemodialysis Patients

Ji Hyun Park

Yeungnam University Medical Center, South Korea

IDH is associated with an elevated risk of adverse cardiovascular outcomes and increased mortality (Kanbay et al., 2020). We utilized the Vital-sign Data Recorder to assess HRV in patients, comparing those who developed IDH with those who did not. A total of 12 hemodialysis sessions were analyzed (n=42). The study evaluated the relationship between HRV and blood pressure (BP) using real time bio-signals from a personal electrocardiogram. While comorbidities and clinical parameters showed no statistical significance between groups, the IDH group exhibited higher ultrafiltration volume (UFV) compared to non-IDH group (p=0.07), suggesting UFV might be related to IDH. HRV was assessed as the ratio of increased or decreased heart rate changes in the continuously accumulated heart rate signals. The mean heart rate variability (mHRV) in the IDH group (average above 80%) was higher than in the non-IDH group (average below 46%). This finding suggests that increased HRV may serve as a precursor compensatory mechanism to increase BP to prevent a drop in BP during dialysis. Patients with higher HRV developed IDH within 5 minutes of heart rate analysis. This study analyzed patients' real time HRV using a wearable device to assess IDH.

Biography

Ji Hyun Park completed her Doctor of Medicine degree from St. George's University School of Medicine and holds a Bachelor of Science degree in Psychology from UC Davis. She is currently undertaking a research year at a university hospital in her hometown in Korea as she prepares to begin her U.S. residency in New York in 2025.

FUTURE OF PREVENTIVE MEDICINE AND PUBLIC HEALTH

March 20-22, 2025



Orthopaedic Patients' Emergency Department Attendance Behavior in Relation to Weather Conditions: Temperature, Rain, Day and Time, and Regional Thursday Effect

Levent Bayam

Medipol University Sefakoy Hospital, Turkey

Aim: Great variation was noticed in emergency department (ED) afflux in relation to daily weather conditions, including difficulties in arranging the correct number of orthopaedic on-calls on the floor. This study aimed to quantify the association between the number of patients referred to the orthopaedic team from the ED and weather conditions, particularly daily temperature and rain.

Methods: Data were obtained from a large state research hospital's ED attendance. Weather information for the local area for the year was obtained from the regional meteorological office.

Data were evaluated using descriptive statistics, with one-way analysis of variance for the relationship between the day of the week and patient numbers, the Pearson test for correlations between daily ED patient flow and daily temperature and the Spearman correlation test for correlations between daily patient flow and daily rain status.

Results: A positive and meaningful correlation existed between daily patient influx and daily temperature, along with a negative correlation between daily patient flow and daily rain. Throughout the year, significantly more patients were referred to the orthopaedic team on Thursdays than on any other day of the week.

Conclusions: Patients tended to visit the ED more on warm days and days without rain. These results may help in organising daily, monthly or seasonal on-call orthopaedic team requirements despite the challenges. Incorporating climate forecasts into planning the on-call service might help alleviate the stress on the team.

FUTURE OF PREVENTIVE MEDICINE AND PUBLIC HEALTH

March 20-22, 2025



Advancements and Emerging Trends in Photobiomodulation Therapy for Enhanced Outcomes in Implantology

Divyabharathi Selvam

SRM Dental College, India

Background: Photobiomodulation therapy (PBMT) has garnered significant attention in recent years for its ability to modulate biological responses, making it a promising adjunct in various dental and implantology procedures. With advancements in laser technology and evidence-based clinical applications, PBMT has demonstrated potential to improve soft tissue healing, osseointegration, and postoperative recovery in implant dentistry.

Aim & Objectives: This presentation will explore the recent advancements and global trends in the use of photobiomodulation therapy, focusing on its application in implantology to optimize patient outcomes.

- To highlight the key mechanisms of photobiomodulation therapy in promoting tissue repair and regeneration.
- To discuss the clinical implications of PBMT in enhancing implant stability and reducing healing time.
- To review current research findings and technological advancements that are driving the integration of PBMT in implantology.

Key Topics to be Covered:

1. Mechanism of action of PBMT in tissue healing.
2. PBMT in pre- and post-implant therapy.
3. Recent innovations in laser devices for PBMT.
4. Evidence-based clinical outcomes and future directions.

FUTURE OF PREVENTIVE MEDICINE AND PUBLIC HEALTH

March 20-22, 2025

Conclusion: PBMT holds immense potential as a non-invasive, innovative approach to improving implant success rates and patient satisfaction. Continued research and technological improvements are expected to further integrate PBMT into routine dental implantology, making it a cornerstone of future clinical practice.

Key Highlights Relevance: PBMT is growing in various fields, including dentistry, orthopedics, dermatology, and neurology. It directly relates to non-invasive preventive care, tissue healing, and pain management, which are critical for improving patient outcomes across medical disciplines. Impact: It offers a futuristic outlook on healthcare innovations, aligning well with the conference's focus on the future of preventive medicine. Its versatility in treating chronic pain, wounds, and post-surgical recovery makes it broadly applicable. Unique: PBMT represents a novel, emerging technology that touches on various health areas (from dentistry to chronic disease management), likely making it more appealing to a wider audience interested in cutting-edge therapies and non-invasive solutions in preventive care.

Biography

Dr. Divyabharathi Selvam is an Assistant Professor in the Department of Prosthodontics at SRM Dental College, Ramapuram, Chennai, India. With a specialization in Oral and Maxillofacial Prosthodontics and Implantology, she has made significant contributions to both clinical practice and research. Dr. Selvam is pursuing her PhD, focusing on photobiomodulation therapy, particularly its application in peri-implant osteoblastic activity and soft tissue healing in diabetic patients. She has authored multiple publications, presented at various international conferences, and earned prestigious awards, including the Dr. Aruna Mehta Research Scholarship Award and the Prostho Star Award. Dr. Selvam is also actively involved in mentoring students and organizing scientific events, reflecting her commitment to innovation and excellence in dental education and healthcare.

FUTURE OF PREVENTIVE MEDICINE AND PUBLIC HEALTH

March 20-22, 2025



A Technology-Driven Framework for Pandemic- Resilient Healthcare: Addressing Data Gaps and Resource Optimization using IoT and AI in Resource- Constrained Regions

Debashis Dev Misra¹, Atlanta Choudhury² and Kandarpa Kumar Sarma²

¹Assam down town University, India

²Gauhati University, India

The COVID-19 pandemic revealed significant weaknesses in healthcare systems, particularly in resource-constrained regions like India, where data-driven decision-making is often hindered by a lack of comprehensive patient data. In Assam, India limited documentation of comorbidities and fatality incidents during the pandemic (2020–2022) has hampered the ability to identify high-risk patients and allocate healthcare resources effectively. Despite advancements in technologies like the Internet of Things (IoT), machine learning (ML), and deep learning (DL), their application in addressing localized healthcare challenges remains underexplored.

This research seeks to address the critical problem of optimizing healthcare delivery in Assam by proposing a robust, technology-driven framework that integrates IoT-enabled data collection, edge computing, and AI-based analytics. Retrospective data from 5329 hospitalized COVID-19 patients, including 554 fatal cases, will be analyzed using advanced ML and DL models to uncover hidden patterns in patient characteristics and comorbidities. These patterns will serve as the basis for predictive tools capable of identifying individuals at high risk of severe outcomes, enabling personalized care and improved resource allocation.

The proposed framework extends beyond risk prediction by incorporating IoT systems for real-time monitoring of patient vitals, adherence to health protocols, and cyber-secure communication for safe data transfer. By addressing the dual challenges of limited data availability and inefficient healthcare resource management, this research aims to transform pandemic preparedness and patient care in Assam. Furthermore, the integration of these technologies will provide a scalable model for other resource-limited regions, enhancing

FUTURE OF PREVENTIVE MEDICINE AND PUBLIC HEALTH

March 20-22, 2025

global resilience against future pandemics.

This study emphasizes the importance of combining localized healthcare insights with advanced technological solutions, paving the way for smarter, more efficient, and equitable healthcare systems.

Biography

Dr. Debashis Dev Misra is currently working as an Associate Professor in the Department of Computer Science and Engineering, at Assam down town University, Guwahati, Assam, India. He obtained a B.E. degree in Computer Science and Engineering (2004) from Dr. Ambedkar Institute of Technology, Visvesvaraya Technological University (VTU), Karnataka, and an M. Tech degree in Computer Science and Engineering (2011) from Rajiv Gandhi University, Itanagar, AP. He completed a Ph.D. in Computer Science and Engineering from Assam Science and Technology University, Guwahati, Assam. He has also worked for more than 4 years as a senior software developer in the IT industry with a reputed MNC based in Bangalore. Dr. Misra is an expert in the field of Computer Networks, Wireless Communication and Artificial Intelligence (AI). He has over 15 years of experience in academia and industry. He has contributed to the development of cutting-edge wireless routing protocols and technologies in the field of wireless communication. Dr. Misra's research in the field of Computer Networks and Wireless Communication has led to notable progress in wireless routing algorithms and bio-inspired algorithms in optimization problems. He has also contributed to the application of AI based algorithms in the field of public health and medicine. He has also published numerous research papers in prestigious journals and international conferences.

FUTURE OF PREVENTIVE MEDICINE AND PUBLIC HEALTH

March 20-22, 2025



Enhancing Employee Promotion Decisions with Simulation Techniques and Artificial Intelligence Driven Models

Loubna BOUHSAIEN, Houssam. MENSOURI and Abdellah. AZMANI

Faculty of Science and Technologies, Intelligent Automation & BioMed Genomics Laboratory,
Abdelmalek Essaadi University, Morocco

This research addresses the challenge of employee promotion within organizations by implementing a comprehensive decision-making framework. The framework combines the Analytical Hierarchy Process, Technique for Order of Preference by Similarity to Ideal Solution, Monte Carlo simulation, and advanced artificial intelligence techniques. The Analytical Hierarchy Process is employed to assess various criteria, such as the reputation and performance of employees, enabling a structured comparison of promotion candidates. Meanwhile, the Technique for Order of Preference by Similarity to Ideal Solution is used to rank the employees in a systematic and consistent manner, ensuring that decisions are made based on objective, predefined criteria. Monte Carlo simulations play a crucial role by modeling a range of potential promotion scenarios, generating a realistic dataset that allow for predictive analysis. This helps in understanding the possible outcomes of promotion decisions under different conditions, such as varying organizational goals or market factors. Several machine learning models were used to identify the most suitable employee for promotion, with Random Forest and XGBoost demonstrating the highest accuracy, achieving near-perfect results on both the validation and test datasets. These models are capable of handling large, complex datasets and provide high accuracy, offering insights that are not only precise but also interpretable. Deep learning further enrich the framework by uncovering intricate, non-linear patterns that might be overlooked by traditional methods. This enables a deeper understanding of the factors influencing promotion decisions. This integrated approach leads to promotion strategies that are more fair, flexible, and efficient, enabling human resources departments to make well-informed, data-driven decisions that support strategic workforce planning and enhance organizational success.

FUTURE OF PREVENTIVE MEDICINE AND PUBLIC HEALTH

March 20-22, 2025

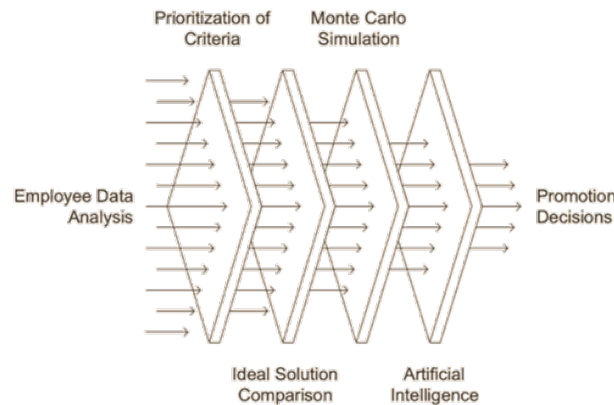


Figure 1. Data Driven Employee Promotion Framework

Biography

Loubna Bouhsaien is a statistical engineer and Ph.D. candidate specializing in artificial intelligence and data science, with a focus on applications in human resources management. She graduated from the Faculty of Sciences and Technologies of Tangier, Abdelmalek Essaâdi University, in 2022. Loubna's research explores innovative ways to utilize data-driven methodologies to address organizational challenges, including machine learning, predictive analytics, employee behavior modeling, and risk assessment. Her work bridges the gap between advanced analytics and practical solutions, enabling businesses to make informed decisions and optimize resource allocation.

FUTURE OF PREVENTIVE MEDICINE AND PUBLIC HEALTH

March 20-22, 2025



Role of Forensic Doctor In Promoting Public Health: A Look at The Management of Violence Against Women and Children

Hafsa HAJJI and Fadila AIT BOUGHIMA

Department of Forensic Medicine, Ibn Sina University Hospital Center, Morocco

Introduction: Morocco has signed and ratified the Convention on the Elimination of all forms of Discrimination Against Women (CEDAW). Statistics have shown high rates of women and children victims of violence, and this is why, with preventive purposes, new laws and new recommendations have emerged. Our objective is to study the transversal role of the forensic doctor in the sphere of public health, with particular emphasis on his role in matters of violence against women and children

Materials and Methods: A retrospective study of data of victims (women and children) consulting in our department at the Ibn Sina University Hospital in Rabat in Morocco. We have studied the different areas of intervention of the forensic doctor in those cases.

Results and discussion: The results of data from our study show an increasing trend in the number of victims who consult our department over the years. This can be explained by the lack of prior knowledge of the hospital structures established for the purpose of caring for these victims. Once these structures were known, an influx of victims was noticed. Violence against women and children is framed as a public health problem. In order to fight against this scourge, several mechanisms are operating, including the forensic doctor who plays several roles such as the interview, the medico-legal examination and interpretation as well as the drafting of the medico-legal report. Also, by reporting the case of violence to the authorities and participating in national statistics.

Conclusion: The forensic doctor intervenes on several axes of the promotion of public health concerning the scourge of women and children victims of violence. The strengthening of the national legal arsenal is a factor promoting the notification of cases of violence and the promotion of the fight against this scourge.

FUTURE OF PREVENTIVE MEDICINE AND PUBLIC HEALTH

March 20-22, 2025

Biography

Hafsa HAJJI is a medical doctor and began working as a resident doctor in forensic medicine department from 2022. Having worked on the Moroccan-Mauritanian borders, she accumulated experience which she is gradually developing in the forensic medicine department in Rabat. She recently published an article on sexual violence against minors in the journal of forensic medicine.

FUTURE OF PREVENTIVE MEDICINE AND PUBLIC HEALTH

March 20-22, 2025



Analysis of the Evolution of Trends in Cannabis Research

Hanane ABBOU^{1,2} and Rachid EL JAOUDI^{2,3}

¹Mohammed VI University of Sciences and Health, Casablanca – Morocco

²Mohammed VI Center for Research and Innovation, Rabat – Morocco

³Biotechnology lab (MedBiotech), Bioinova Research Center, Medical and Pharmacy School, Mohammed V University in Rabat, Morocco

This study presents a bibliometric analysis of trends in Minor Cannabinoids research, focusing on the development of the field over recent decades. Using data retrieved from Scopus with the search query (TITLE-ABS-KEY("minor cannabinoids" OR "cannabigerol" OR "CBG" OR "cannabinol" OR "CBN" OR "cannabichromene" OR "CBC" OR "tetrahydrocannabivarin" OR "THCV" OR "cannabidiolic acid" OR "CBDA" OR "cannabielsoin" OR "CBE" OR "cannabifuran" OR "CBF" OR "dehydrocannabifuran" OR "DCBF" OR "CBFD" OR "cannabicyclol" OR "CBL-C5" OR "cannabicyclic acid" OR "CBLA-C5 A" OR "cannabicyclovarin" OR "CBLV-C3" OR "cannabitriol" OR "cannabitrin" OR "CBT" OR "cannabitriolvarin" OR "CBTV" OR "cannabinodivarin" OR "CBV" OR "CBVD" OR "cannabirpsol" OR "CBR") AND TITLE-ABS-KEY(cannabinoid*OR"phytocannabinoid*"OR"endocannabinoid*"OR"cannabinoidsystem" OR "cannabinoid receptors" OR "CB1" OR "CB2") AND NOT TITLE-ABS-KEY("cannabidiol" OR "CBD" OR "tetrahydrocannabinol" OR "THC") AND (LIMIT-TO(DOCTYPE, "ar") OR LIMIT-TO(DOCTYPE, "re"))), an initial total of 501 articles was identified. These articles were then subjected to a PRISMA selection process to eliminate non-topical articles, duplicates, errata, and retraction announcements, ensuring a refined dataset for analysis.

The final dataset included a comprehensive range of articles covering diverse aspects of the research field, from its medical applications to extraction and bioavailability issues. The Bibliometrix R package identified key trends, including keyword co-occurrences, citation networks, and author collaborations. An additional Natural Language Processing analysis was employed to identify themes and research hotspots.

FUTURE OF PREVENTIVE MEDICINE AND PUBLIC HEALTH

March 20-22, 2025

Results indicated a marked increase in Minor Cannabinoids-related publications over the past decade, driven by rising interest in medicinal Cannabis, cannabinoid research, and policy reform. Key thematic clusters were identified, including research on pharmacology, and the therapeutic potential of these cannabinoids. The analysis also highlighted emerging research areas such as the anti-tumor and anti-inflammatory effects of Minor Cannabinoids.

This bibliometric study provides valuable insights into the research landscape, guiding future research efforts and supporting informed decision-making in both academic and regulatory contexts by identifying key areas of interest and underexplored topics. It demonstrates how bibliometric tools and NLP-based algorithms can map the development of a rapidly evolving field such as Cannabis research.

Biography

She is a PhD candidate in Medical Biotechnology at Mohammed VI University of Health Sciences, specializing in bioinformatics. She is also a research associate at the Mohammed VI Center for Research and Innovation.

Her experience includes internships at the Center for Poison Control and Pharmacovigilance of Morocco and the Laboratory of Physiology and Pathophysiology at the University of Rabat.

She has led projects such as the Mutual Laboratory Network and has presented her research at national and international congresses, including the Pharmacovigilance Congress (2023 and 2024) and the IST 22nd World Congress in Singapore (2024).

FUTURE OF PREVENTIVE MEDICINE AND PUBLIC HEALTH

March 20-22, 2025



The Factor Structure and Measurement Invariance of Self-Assessment of Nursing Informatics Competency Scale (SANICS)

Elif Sarac¹ and Esra Yildiz²

¹The Ministry of National Defense, Turkey

²Faculty of Nursing, Ataturk University, Turkey

Background: Nursing informatics is a scientific discipline that needs to be integrated into nursing care. Having an increased theoretical understanding and competency of informatics for nurses is useful for exploiting information technology in contemporary healthcare services.

Objective: The objective of this study is to examine the factor structure, internal consistency reliability, and responsiveness of an instrument related to the informatics competency of nurses.

Methods: This is a methodological study conducted in a university hospital and 190 nurses participated in present study. The Self-Assessment of Nursing Informatics Competency Scale-18 is a questionnaire to measure informatics competence in nursing practice.

Results: Exploratory analysis with varimax rotation extracted three factors comprising 18 items that explained 62.1% of the variance: applied computer skills ($\alpha = .91$), role ($\alpha = .67$), and basic computer skills ($\alpha = .77$).

Conclusion: The SANICS-TR questionnaire is well grounded in the theoretical framework of informatics competence in nursing practice.

FUTURE OF PREVENTIVE MEDICINE AND PUBLIC HEALTH

March 20-22, 2025

Items	Component		
	1	2	3
s17	0.021		
s15	0.389		
s18	0.178		
s14	0.386		
s16	0.278		
s11	0.187		
s13	0.42		
s12	0.5		
s10	0.357		
s8	0.781		
s9	0.614		
s7	0.79		
s5		0.633	
s6		0.76	
s2			0.149
s4			0.098
s1			0.04
s3			0.262
% of Variance	42.58	14	5.56

Biography

She is a public health professional with two years of experience and has worked for over 20 years in various areas of health services. Her research interests include occupational health, medical informatics, methodological studies, and mental health. She is a member of Cost Action-CUPID-CA21123 (Cancer-Understanding Prevention in Intellectual Disabilities) and FOSTREN-Cost Action-C19133 (Fostering and Strengthening Approaches to Reducing Coercion in European Mental Health Services).

She has published articles related to these topics and serves as a reviewer on the editorial boards of national and international journals, including *Health Science Report* and *World Journal of Clinical Case*.

She will be presenting her doctoral thesis on medical informatics, a methodological study focused on developing a scale for nursing informatics. Given the growing significance of informatics in advancing technology and medicine, her work contributes meaningfully to the fields of science and nursing.

FUTURE OF PREVENTIVE MEDICINE AND PUBLIC HEALTH

March 20-22, 2025



Trans-Duodenal Migration of Gossypiboma after Open Cholecystectomy - A Case Report from Pakistan

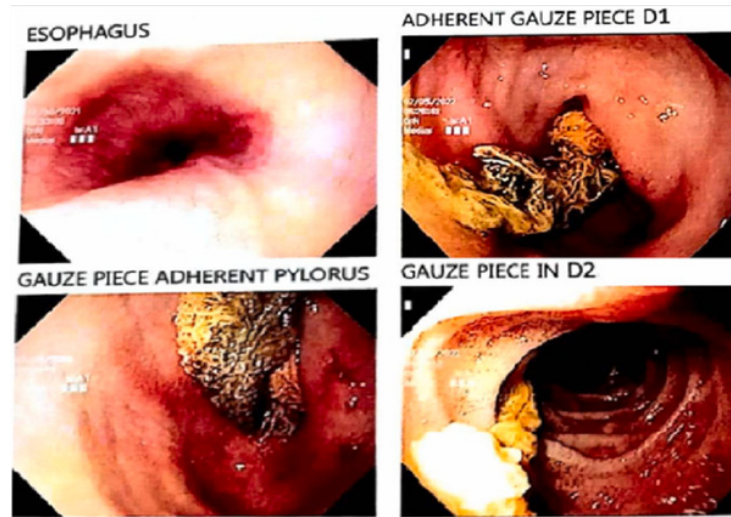
Erum Anwar and Sidra Waqar Qureshi

Department of General Surgery, Dr. Ruth. K. M. Pfau Civil Hospital Karachi, Dow University of Health Sciences, Pakistan

Gossypiboma refers to the soft surgical items inadvertently left in the body cavity at the end of a surgical procedure, leading to increased morbidity and mortality risk. Usually associated with the need for re-do surgery, longer hospital stays, or untimely emergency re-admissions, it is imperative that preventive methods must be undertaken, with strict adherence to the WHO's Surgical Safety Checklist in order to eliminate such unacceptable and indefensible mistakes of health care system. We present a case of a 38 year old woman with a central abdominal pain for 1 week. She had a history of open cholecystectomy ten months back. Her endoscopy showed an adherent gauze piece in the first part of duodenum extending upwards into the pylorus and downwards into the second part of duodenum which was retrieved endoscopically. Gossypiboma is an uncommon yet serious cause of morbidity among post-operative patients. Prompt diagnosis leading to early definitive treatment can help prevent disastrous consequences due to pathological responses initiated against the foreign object. Whenever possible, minimally invasive means may be undertaken as the initial management option, with surgical backup available if needed. Implementation of WHO surgical safety checklist protocols can help minimize the occurrence of such incidents, and prevent this complication that serves as a surgeon's nightmare.

FUTURE OF PREVENTIVE MEDICINE AND PUBLIC HEALTH

March 20-22, 2025



Biography

Dr. Erum Anwar is a dedicated and compassionate resident surgeon in General Surgery at Dr. Ruth K.M. Pfau Civil Hospital Karachi, affiliated with Dow University of Health Sciences. With a strong academic foundation in medicine, holding an MBBS and MRCS, she aims to excel in minimally invasive surgery in her career.

FUTURE OF PREVENTIVE MEDICINE AND PUBLIC HEALTH

March 20-22, 2025



Development of Valid and Reliable Questionnaire to Evaluate Knowledge, Attitude, and Practices (KAP) of Lifestyle Medicine Domains

Nesrain Mubarak Alhamedi⁵, Abeer Salman Alzaben¹, Mohammed Almansour², Hayat Saleh Alzahrani³, Nouf Adnan Alrumaihi⁴, Nawaf Abdulaziz Albuhayjan⁶ and Sadeem Abdulaziz Aljammaz⁷

¹Department of Health Sciences, College of Health and Rehabilitation Sciences, Princess Nourah Bint Abdulrahman University, Saudi Arabia

²Department of Medical Education, College of Medicine, King Saud University, Saudi Arabia

³Department of Family and Community Medicine, College of Medicine, Princess Nourah Bint Abdulrahman University, Saudi Arabia

⁴Academic Affairs, Saudi Commission for Health Specialty, Saudi Arabia

⁵Department of Family Medicine, King Abdulaziz University Hospital, Saudi Arabia

⁶College of Medicine, King Saud University, Saudi Arabia

⁷Department of Community Health Sciences, College of Applied Medical Sciences, King Saud University, Saudi Arabia

Lifestyle medicine (LM) should be incorporated as part of routine clinical work and medical education programs.

Objective: To develop and test the validity and reliability of a questionnaire that measures the level of knowledge, attitude, and practice (KAP) of LM domains among medical trainees through practicing physicians.

Methods: The KAP questionnaire sections covered the nine domains of LM. The validation process included face and content validity. A total of 151 individuals from the medical field residing in Saudi Arabia were recruited through a convenient sampling technique to participate in the study. Item response theory (IRT) was applied to validate the knowledge domain, while exploratory factor analysis (EFA) was used to assess attitude and practice. Cronbach's alpha was performed to test the reliability of the three sections.

Results: The questionnaire contained 37 items of knowledge, 45 attitudes, and 28 practice

FUTURE OF PREVENTIVE MEDICINE AND PUBLIC HEALTH

March 20-22, 2025

items. According to the IRT analysis, 27 items of knowledge were within the acceptable range of difficulty and discrimination. The EFA analysis resulted in 6 factors, including all the items in the attitude domain, and 4 factors, for a total of 27 items in the practice domain, with satisfactory factor loading (>0.4). The Cronbach's alpha for the three domains was very high (≥ 0.88).

Conclusions: The KAP questionnaire for LM is valid and reliable across a spectrum, from medical trainees to practicing physicians. This tool could serve as an instrument to evaluate and develop adequate educational programs for medical doctors

Biography

Nesrain Alhamedi, acting as Family Medicine Consultant at King Abdulaziz University Hospital, Jeddah, Saudi Arabia since 2016. Also, certified as lifestyle medicine consultant. Recently accomplished the medical education master to empower her research and teaching skills certified as International breastfeeding consultant, smoking cessation trainer, Life coach and EQ assessor. Had many researches about obesity, fatty liver, lifestyle medicine domains and breastfeeding knowledge and practice shared in many international conferences as oral presentations.

FUTURE OF PREVENTIVE MEDICINE AND PUBLIC HEALTH

March 20-22, 2025



In Vitro Anti-Leukemic Effects of Wharton's Jelly-Derived Mesenchymal Stem Cells: A Potential Therapeutic Approach

Mediha Suleymanoglu¹, Ayse Erol Bozkurt¹, Figen Abatay Sel¹, Isa Aykut Ozdemir², Fatma Savran Oguz¹, D.Serap Kuruca³, Zerrin Aktas⁴, Zeynep Karakas⁵ and M.Oral Oncul⁶

¹Faculty of Medicine, Department of Medical Biology, Istanbul University,Turkey

²Sadi Konuk Education and Research Hospital, University of Health Sciences,Turkey

³Faculty of Medicine, Department of Physiology, Istanbul University,Turkey

⁴Faculty of Medicine, Department of Microbiology, Istanbul University,Turkey

⁵Faculty of Medicine, Department of Pediatric Hematology, Istanbul University,Turkey

⁶Faculty of Medicine, Department of Infectious Diseases and Clinical Microbiology, Istanbul University,Turkey

Leukemia, a group of malignancies that affect the blood and bone marrow, posing significant treatment challenges due to its heterogeneous nature and resistance to conventional therapies. Mesenchymal stem cells (MSCs) have garnered attention for their self-renewal and multipotent capabilities, positioning them as promising candidates for cell-based therapies, particularly in oncology. This study aims to investigate the *in vitro* anti-leukemic effects of WJ-MSCs on the K562 and HL-60 cell lines, contributing to the understanding of their therapeutic potential.

WJ-MSCs were isolated from human umbilical cord tissue and cultured under standard conditions. Characterization of the cells was performed using flow cytometry to confirm their MSC phenotype. For the experimental setup, WJ-MSCs and leukemic cells were co-cultured in a direct system at a ratio of 1:5 (leukemic cells: WJ-MSCs). HUVEC cells were included as a control non-cancerous cell line. The apoptotic effects of WJ-MSCs on the cell lines were evaluated using the Annexin V/PI apoptosis assay.

The co-culture of WJ-MSCs with the leukemic cell lines resulted in significant anti-leukemic effects characterized by increased apoptosis rates. Both K562 and HL-60 cells exhibited

FUTURE OF PREVENTIVE MEDICINE AND PUBLIC HEALTH

March 20-22, 2025

enhanced apoptosis when treated with WJ-MSCs compared to the control groups lacking WJ-MSCs. In contrast, HUVEC cells displayed low levels of apoptosis, indicating a selective cytotoxic effect of WJ-MSCs on leukemic cells.

The findings of this study align with previous research indicating that MSCs can inhibit tumor growth in both hematopoietic and non-hematopoietic malignancies. These results underscore the potential of WJ-MSCs as a therapeutic strategy against leukemia, providing new insights into their role in tumor suppression. Given these promising in vitro results, WJ-MSCs warrant further investigation for clinical applications aimed at leukemia treatment, potentially offering new avenues for patient management.

Biography

She completed her BSc and MSc in Biology and Molecular Biology at Ataturk University and Yildiz Technical University, respectively. She earned her PhD in Molecular Medicine from the Aziz Sancar Institute of Experimental Medicine, Istanbul University.

As a Visiting Research Fellow at the Centre for Cancer Cell Biology and Drug Discovery, Griffith University, Australia, she conducted research within the scope of TUBITAK-International Postdoctoral Research Fellowship.

Her research interests include cancer biology, protein purification and characterization, chemical carcinogenesis, anti-cancer agents, drug development, drug detoxification mechanisms, multidrug resistance, and stem cell research. She specializes in Cord Blood Stem Cells, Mesenchymal Stem Cells, Cancer Stem Cells, immunotherapies, cell therapies, cord blood banking, and stem cell transplantation, focusing on their expansion and homing for clinical applications.

She has published 20 scientific articles (SCI and SCI-Exp), with her work receiving over 300 citations and contributing to an H-index of 8 (Google Scholar: 9 as of 10/09/2024).

Currently, she is a lecturer at Istanbul Faculty of Medicine.

FUTURE OF PREVENTIVE MEDICINE AND PUBLIC HEALTH

March 20-22, 2025



Bacterial Genomes are Internally Formatted

Korotkov E.V

Institute of Bioengineering, Research Center of Biotechnology of the Russian Academy of Sciences,
Russia

Motivation and Aim: The goal was to try to find dispersed repeats in the bacterial genome. It is known that the bacterial genome is packaged into a nucleoid through the interaction of DNA with certain proteins. Due to this packaging, it can be assumed that weakly similar families of dispersed repeats may exist in the bacterial genome, which could not be detected by previously developed computer methods. Therefore, we decided to look for dispersed repeats in bacterial genomes in the range $1.0 \leq x \leq 1.7$, where x is the average number of mutations per nucleotide between any two repeats from a family.

Methods and Algorithms: We have developed a de novo method for the identification of dispersed repeats based on the use of random position-weight matrices (PWMs) and an iterative procedure (IP) [1]. The created algorithm (IP method) allows detection of dispersed repeats for which the average number of substitutions between any two repeats per nucleotide (x) is less than or equal to 1.7. IP method made it possible to detect families of dispersed repeats in bacterial genomes which have not been previously reported. The IP method uses positional weight matrices, dynamic programming and an iterative procedure. Z , which is approximately an argument for a normal distribution, will be used as an estimate of statistical significance.

Results: We applied this method to find dispersed repeats in the genomes of E.coli and 42 bacteria from other bacterial phyla and could identify repeat families comprising from 1.0×10^3 to 1.4×10^4 , depending on the species. Each bacteria contains only one family of dispersed repeats with lengths from 440 to 580 bases. The repeats found occupy from 30 to 60% of the bacterial genome, and more than 90% of the repeats occur in the coding

FUTURE OF PREVENTIVE MEDICINE AND PUBLIC HEALTH

March 20-22, 2025

sequences of the genome. They are superimposed on the coding region as a motif. Such extensive repeat family could not be detected in the analyzed genomes by using the RED, RECON, or Repeat_masker programs but only by the IP method, which could find de novo repeat families with $x \leq 1.7$, whereas all other programs could do it with $x \leq 1.0$.

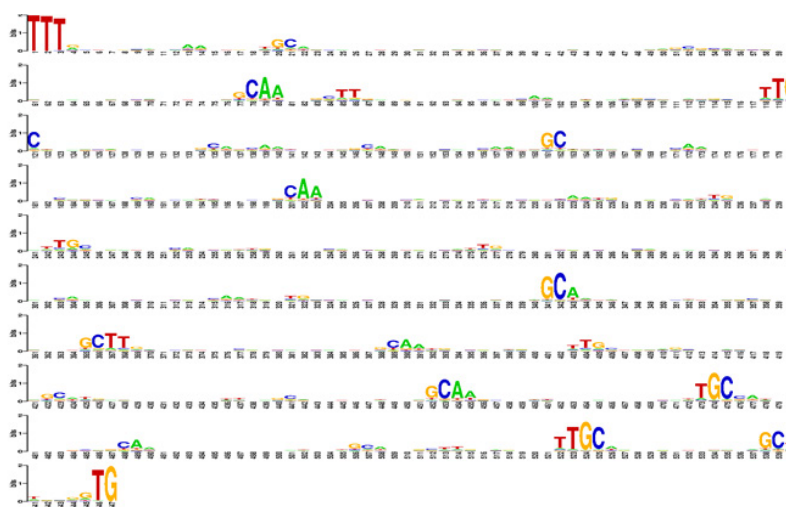


Figure 1. Consensus sequence for the dispersed repeat family from the *Clorobium chlorochromatii* genome constructed using Weblogo [2]

Results: We applied this method to find dispersed repeats in the genomes of E.coli and 42 bacteria from other bacterial phyla and could identify repeat families comprising from 1.0×10^3 to 1.4×10^4 , depending on the species. Each bacteria contains only one family of dispersed repeats with lengths from 440 to 580 bases. The repeats found occupy from 30 to 60% of the bacterial genome, and more than 90% of the repeats occur in the coding sequences of the genome. They are superimposed on the coding region as a motif. Such extensive repeat family could not be detected in the analyzed genomes by using the RED, RECON, or Repeat_masker programs but only by the IP method, which could find de novo repeat families with $x \leq 1.7$, whereas all other programs could do it with $x \leq 1.0$.

In Figure 1 we show the consensus sequence that was constructed using the WebLogo program [2] for a family of repeats from the *Clorobium chlorochromatii* genome. The figure shows that dispersed repeats of this family diverged greatly from each other. However, one can notice a fairly large number of short regions of 2-5 bases in length, which are almost identical in all repeats. The existence of such repeats shows that bacterial genomes are marked up like a computer hard drive. This markup could be involved in the creation of the liquid crystal structure within bacterial DNA through interactions between repeats within a family and some proteins [3].

Acknowledgements: The study is supported by RNF grant 24-24-00031\

FUTURE OF PREVENTIVE MEDICINE AND PUBLIC HEALTH

March 20-22, 2025



Repair of Critical Sized Defects with Rat Synovial Membrane Derived Stem Cells Seeded on “Collagen, Polyhydroxybutyrate, Carbon Nanotubes” Composite Scaffold in A Rat Model

**Najmeh Sarafraz², Farin Kiany¹, Nader Tanideh³, Hossein Bordbar⁴, Azadeh Andisheh-Tadbir⁵, Shahrokh Zare³, Nima Farshidfar³
and Moein Zarei⁶**

¹Department of Periodontics, Oral and Dental Disease Research Center, School of Dentistry, Shiraz University of Medical Sciences, Iran

²Department of Periodontology, School of Dentistry, Rafsanjan University of Medical Sciences, Iran

³Stem Cells Technology Research Center, Shiraz University of Medical Sciences, Iran

⁴Histomorphometry and Stereology Research Center, Shiraz University of Medical Sciences, Iran

⁵Department of Oral and Maxillofacial Pathology, School of Dentistry, Shiraz University of Medical Sciences, Iran

⁶Department of Polymer and Biomaterials Science, West Pomeranian University of Technology, Poland

The poor structural stability of collagen (COL) upon hydration poses a significant challenge in tissue engineering (TE). To overcome this limitation, the incorporation of hydrophobic polymers such as poly(3-hydroxybutyrate) (PHB), and nanomaterials such as carbon nanotubes (CNTs) has been explored. In this study, we investigated the physical, chemical, and biological characteristics of COL-based scaffolds modified with PHB and CNTs for bone tissue engineering (BTE) applications. The tensile strength analysis revealed a substantial improvement in the ultimate tensile strength with the addition of 10 % PHB and 4 % CNTs. Scanning electron microscopy (SEM) images depicted a denser and more compact structure resulting from the presence of PHB and CNTs, enhancing the scaffold's mechanical properties. Fourier-transform infrared spectroscopy (FTIR) confirmed the successful incorporation of PHB and CNTs into the composite scaffold, maintaining the chemical integrity of COL. Stereological studies also conducted in a rat model with induced critical-sized bone defects in the mandibular bone further emphasize the substantial increase in bone formation and reduction in defect volume achieved by the scaffold loaded with stem

FUTURE OF PREVENTIVE MEDICINE AND PUBLIC HEALTH

March 20-22, 2025

cells. These findings underscore the promising approach to enhance bone healing, using COL-based scaffolds loaded with stem cells, and the favorable results obtained in this study can contribute to the advancement of BTE strategies.

Biography

She enrolled in dental school in 2010 and completed her studies in 2016. In the same year, she began her periodontics residency, which she successfully completed in 2020.

She graduated as the top-ranking student in her class and received the prestigious award at the 4th Student Festival of the Shiraz University Alumni Association in June 2016.

Her primary field of interest includes Guided Bone Regeneration (GBR), Guided Tissue Regeneration (GTR), and scaffold research, with her residency thesis focusing on innovative scaffold designs.

She has hands-on experience with animal research, having served as a surgeon at Shiraz Animal House for various studies.

She has authored seven research articles, accumulating over 124 citations, contributing to an H-index of 5.

Since 2021, she has supervised more than 10 student theses and authored a book titled "Practical Guide to Medicinal Herbs in Dentistry," focusing on herbal medicine.

She was recognized as a member of the talented student group at her university.

Since September 2023, she has been serving as an Educational Assistant at Rafsanjan Dental School.

FUTURE OF PREVENTIVE MEDICINE AND PUBLIC HEALTH

March 20-22, 2025



Policy Alignment and Health Service Delivery: A Case Study on Mining Communities in Papua New Guinea

Dora Kuir-Ayius

University of Papua New Guinea, Papua New Guinea

Policy development is central in the context of the social world. It is what shapes the interactions between those with the resources and a mandate to use them for particular purposes, and those without, but in need of them. In complex situations such as around large-scale mining operations, there can be several actors with policy on particular issues, and frameworks that determine how decisions are made, that may not always align. This study aimed to identify the challenges that prevent the delivery and/or maintenance of health services to these communities and seek alternative ways to overcome these barriers in mine-impacted communities. The research investigated the interface between the delivery of health services, the strength of various community capitals, and the building of community resilience. If health services can be improved or sustained through a combination of effective policy driven actions and community initiatives - community resilience should be improved, and this in turn will build stronger, more sustainable communities. This means these communities will continue to thrive long after the mine has gone.

A mixed method was applied to collect data for this study. This presentation draws largely on the findings from the qualitative research methods of data collection used: document analysis, semi-structured interviews and purposive observation. The results illustrated three main issues with the policy environment around the mines: (1) the lack of alignment in the National Health Policy and the Memorandum of Agreement, (2) the lack of specificity in the MoAs' goals, and (3) inconsistencies in the formulation of MoAs. This presentation discusses how these issues detract on the building of resilience in mine-affected communities. It also deliberates on how the interconnectedness that can provide new ways of approaching the building of resilience for these communities.

FUTURE OF PREVENTIVE MEDICINE AND PUBLIC HEALTH

March 20-22, 2025

Biography

Dora KUIR-AYIUS is a senior lecturer in Social work within the School of Humanities and Social Sciences, University of Papua New Guinea. She attained her PhD in International Development Studies from Massey University, New Zealand, master's in social work from La Trobe University, Australia, and Postgrad. Diploma in Education, and Bachelor of Arts in Social Work from University of Papua New Guinea. Her PhD thesis titled 'Building Community Resilience in Mine-Impacted Communities: A Study on Delivery of Health Services in PNG' focused on building resilience in mining communities through effective application of community capitals. Dora has conducted research and analysed data on various issues including gender based violence, child protection, biodiversity conservation, socioeconomic impact on road usage. She is also involved in research around impacts of climate change on families. She specialises in building resilience through building community capitals to achieve sustainable communities.

FUTURE OF PREVENTIVE MEDICINE AND PUBLIC HEALTH

March 20-22, 2025



Leveraging a Permutation-Based Approach to Analyze AIS Treatment Practices and Outcomes

**Barzizza E.¹, Maccarone M.C.², Biancato A.³, Caregnato A.³, Ceccato R.¹,
Contessa P.², Fontana R.³, Masiero S.^{2,3} and Salmaso L.¹**

¹Department of Management Engineering, University of Padova, Italy

²Department of Neuroscience, Rehabilitation Unit, University of Padova, Italy

³Physical Medicine and Rehabilitation School, University of Padova, Italy

Background: Adolescent Idiopathic Scoliosis (AIS) is a lateral curvature of the spine measuring at least 10 Cobb degrees. Conservative treatment, typically involving braces, is critical in managing AIS. Compliance with this treatment can be influenced by various factors, including the widespread disruptions in services during the COVID-19 pandemic. This study examines the pandemic's potential effects on AIS treatment practices and outcomes.

Materials and Methods: We retrospectively analyzed 30 AIS patients assessed before, during, and after the COVID-19 pandemic. Data spanning six years were categorized into three timeframes: pre-pandemic (2018–2019), pandemic (2020–2021), and post-pandemic (2022–2023). Variables included Cobb's angle, brace prescription rates, prescribed brace wear time, actual compliance, and sports activity involvement. Statistical analyses to evaluate differences across the three periods were performed using the Non Parametric Combination (NPC) methodology, a permutation-based, distribution-free technique. NPC is particularly suited for small sample sizes, heterogeneous data types, and paired samples, as in this study. Notably, in a multivariate context with potentially dependent outcomes, NPC accounts for these dependencies, ensuring the relationships among variables are preserved. Unlike traditional methods that often assume independence among variables, NPC appears especially a valuable tool for analyzing multivariate AIS dataset where interdependencies among outcomes like brace compliance, Cobb's angle, and sports participation can influence results.

FUTURE OF PREVENTIVE MEDICINE AND PUBLIC HEALTH

March 20-22, 2025

Results: During the pandemic, brace prescriptions increased, while prescribed brace wear time declined post-pandemic ($p = 0.03$). Brace wear compliance trended downward across periods, though differences were not statistically significant. Sports activity involvement significantly decreased during the pandemic ($p = 0.04$) and remained lower post-pandemic compared to pre-pandemic ($p = 0.01$).

Conclusion: The pandemic impacted AIS management, increasing brace prescriptions but reducing brace wear compliance and sports participation. Addressing these challenges requires innovative strategies, including telemedicine and home-based rehabilitation, to support effective AIS treatment during future disruptions.

Biography

Barzizza Elena has a Ph.D. in Data Science within the PhD course in Management Engineering at the University of Padova, where her research focused on the development and application of advanced methodologies in Biostatistics, Big Data Analysis, Machine Learning, and Non-Parametric Statistics. Currently, she is a research fellow at the University of Padua, where she continues to explore these fields with a particular emphasis, but not limited to, the context of biostatistics and industrial and management systems.

FUTURE OF PREVENTIVE MEDICINE AND PUBLIC HEALTH

March 20-22, 2025



Transforming Healthcare through Adaptive user Interfaces and AI-Driven Solutions

Randy Lin

Algoma University, Canada

The integration of Large Language Models (LLMs), such as GPT-4, is reshaping preventive medicine and public health by creating adaptive, personalized, and accessible healthcare solutions. Central to these advancements is the Adaptive User Interface Framework (AUIF), which serves as the foundation for multiple innovations. AUIF leverages LLMs to adjust healthcare user interfaces in real time, enhancing patient engagement by personalizing content, simplifying medical information, and addressing cultural and accessibility needs.

Building on the AUIF, two major developments in telehealth are transforming patient care. First, emotion-sensitive telehealth systems use LLMs to detect patient emotions in real time, adapting virtual interactions and creating calming environments to reduce anxiety. Second, dynamic content personalization enables telehealth platforms to adjust information and interface elements based on patient needs, improving health literacy and adherence to preventive care.

The second set of innovations focuses on multimodal-based technologies. For underserved populations, LLM-powered voice systems provide healthcare access through traditional telephone lines, eliminating the need for internet connectivity. This allows patients in remote areas to book appointments and receive information via voice commands. For individuals with visual impairments, vision-enabled navigation systems guide users through complex indoor spaces, such as hospitals, by processing real-time visual data and providing audio cues, enhancing independence and accessibility.

The AUIF's adaptability ensures that healthcare systems can be tailored to meet the diverse needs of various populations. Some solutions intersect multiple themes. For example, the voice-driven system not only enhances accessibility for rural communities but also

FUTURE OF PREVENTIVE MEDICINE AND PUBLIC HEALTH

March 20-22, 2025

leverages adaptive interfaces to personalize user interactions. Additionally, the GPT-based solution for small clinics addresses the digital struggles faced by resource-limited healthcare providers, offering cost-effective, AI-driven automation for appointment scheduling and administrative tasks.

These innovations collectively demonstrate how AI-driven adaptive systems can make healthcare more inclusive, scalable, and effective for underserved populations and small healthcare providers alike.

Biography

Dr. Lin joined the School of Computer Science & Technology at our Brampton campus as a full-time faculty member in April 2023, bringing with him a rich background in AI, healthcare technology, and a deep commitment to community engagement. He received his Ph.D. from the University of Saskatchewan in 2023, where he notably collaborated with multiple Indigenous communities. Prior to joining Algoma, he was an Assistant Professor at Thompson Rivers University and also gained significant industry experience as a professional engineer. Dr. Lin's research interests encompass AI in healthcare and adaptive interface design. He is currently collaborating with healthcare providers in Northern Ontario, aiming to improve healthcare delivery quality and efficiency. Eager to share his expertise and passion for AI, Dr. Lin is looking forward to fostering cutting-edge projects with his colleagues and students and inspiring them to explore careers in this dynamic field.

FUTURE OF PREVENTIVE MEDICINE AND PUBLIC HEALTH

March 20-22, 2025



Antibacterial Effect of Ozonated Solutions on Enterococcus Faecalis and Pseudomonas Aeruginosa

Hernán Freddy Ortega Cruz and Estefany Vanessa Suxo Nina

National University of the Altiplano, Puno-Perú

Caries is a disease of the hard tissues of the teeth which worldwide reaches high incidence rates; when it is not treated on time, the contamination of the canal system, in direct relation to its chronicity, reaches the dentinal ducts, varying its microbiota between aerobic and anaerobic, depending on the depth, which complicates its neutralization. Within endodontic treatment techniques, one of the main objectives is septic neutralization, for which an ideal substance is still being sought, with a broad spectrum, low toxicity, and free of side effects. Ozone, which is an allotropic form of oxygen, due to its high oxidative capacity stands out as a powerful microbicide, being able to eliminate bacteria, fungi, and viruses effectively; however, its gaseous condition, instability, and high toxicity to respiratory system cells make its use difficult in the dental clinic, which is why ozonated substances such as water, oils and during the SarsCoV-2 pandemic, ozonated serums stood out, which by chemical alteration or simple affinity serve as a vehicle for transporting ozone. To find a substance that would allow us to use ozone in the disinfection of ducts, safely and conveniently, we subjected to ozonation different vehicles for use in intra-duct medication, using as a reference frequent bacteria that are difficult to eliminate from the teeth duct system, such as *Pseudomonas aeruginosa* (aerobic) and *Enterococcus faecalis* (facultative anaerobic). After a sequence of tests, both in vitro and in vivo, we found that ozonized propylene glycol, potentiated with camphorated paramonochlorophenol and activated with ultrasound, is an alternative to septic neutralization of the canal system during endodontic treatment, in addition to its storage capacity for more than six months.

FUTURE OF PREVENTIVE MEDICINE AND PUBLIC HEALTH

March 20-22, 2025

Biography

Freddy was born and did his basic education in the city of Puno-Peru, on the shores of the highest navigable lake in the world "Lake Titicaca", "Dental Surgeon" by the Catholic University of "Santa Maria", "A Master in Endodontics" by the Universidad Estadual Paulista (Unesp) Sao Paulo-Brazil, completed studies of "Doctorate in Public Health" at the National University of San Agustin Arequipa-Peru and a diplomaed in Ozone Therapy in EDE International Mexico. Professor of Endodontics and Pas Director of the Professional School of Dentistry at the National University of the Altiplano Puno-Peru.

FUTURE OF PREVENTIVE MEDICINE AND PUBLIC HEALTH

March 20-22, 2025



A Cross-Disciplinary vApproach to Healthcare Forecasting: Machine Learning and Statistics in U.S. Expenditure Analysis

John Wang

Montclair State University, USA

The U.S. healthcare system faces persistent, escalating challenges that demand urgent attention and substantial reform. Drivers such as population growth, an aging demographic, high administrative costs, and increased service utilization contribute to a system that, despite substantially higher spending than other developed countries, yields subpar outcomes—evidenced by lower life expectancy. This misalignment underscores the need for a comprehensive restructuring aimed at optimizing efficiency and enhancing healthcare outcomes. This study employs advanced machine learning and traditional forecasting to analyze escalating healthcare spending as a share of GDP, underscoring the critical role of data analytics in informing policies to address this pressing issue.

Mitigating healthcare expenditure is crucial due to its extensive societal impact. High costs place a significant financial burden on individuals, stifle economic growth, increase poverty rates, reduce life expectancy, and lower quality of life. Addressing these challenges calls for a multi-pronged strategy, including prioritizing preventive care, enhancing care delivery efficiency, adopting universal health insurance to reduce administrative expenses, developing cost-effective pharmaceuticals, investing in advanced technology, fostering competition, expanding telehealth, and improving access to affordable care. Expanding healthcare access could substantially contribute to poverty alleviation and overall health improvement.

Achieving sustainable reductions in healthcare expenditure necessitates a balanced approach that integrates government policy reforms with private sector innovation. A one-size-fits-all solution is impractical; the most impactful strategy likely involves a nuanced combination of targeted measures. Given the urgency of this issue, swift, well-coordinated

FUTURE OF PREVENTIVE MEDICINE AND PUBLIC HEALTH

March 20-22, 2025

action is critical to ensure the long-term well-being and economic resilience of the United States. Navigating this complex landscape requires sustained cross-disciplinary research and international collaboration to foster a resilient healthcare system equipped to meet future challenges.

Biography

John Wang, a professor in the Department of Information Management and Business Analytics at Montclair State University, USA, completed his PhD in Operations Research at Temple University after receiving a scholarship to study in the USA. Recognized for his extraordinary contributions, he received two special range adjustments in 2006 and 2009 beyond his role as a tenured full professor. With over 100 refereed papers and seventeen books, Dr. Wang has also developed computer software programs based on his research findings. Serving as Editor-in-Chief for 11 Scopus-indexed journals and overseeing multiple encyclopedias, including those on Data Science, Machine Learning, Business Analytics, and Optimization, Dr. Wang's research focus aligns with the synergy of operations research, data mining, and cybernetics.

FUTURE OF PREVENTIVE MEDICINE AND PUBLIC HEALTH

March 20-22, 2025



Biological Age and its Relationship with Mortality of Elderly People with COVID-19 in a Public Hospital in Northeastern Brazil

Isaura Romero Peixoto^{1,2}, Alicia Rafaela Martinez Accioly^{1,3}, Silvana Maria de Moraes Campos⁴, Eduarda Erika Ursulino Mattos⁴ and e Elias Germano de Oliveira Júnior⁴

¹Clinics Hospital of Pernambuco, Federal University of Pernambuco, Brazil

²Post-Graduate Program in Tropical Medicine, Federal University of Pernambuco, Brazil

³Post-Graduate Program in Neuropsychiatry and Behavioral Sciences, Universidade Federal de Pernambuco, Brazil

⁴Faculty of Medical Sciences in Jaboatao, Undergraduate in Medicine at Afya, Brazil

Objective: To estimate the biological age of elderly people hospitalized with a confirmed diagnosis of COVID-19, and its relationship with mortality.

Methods: A retrospective and quantitative cohort study, carried out in a public hospital in the city of Recife-PE, from April 2020 to April 2021, with 115 elderly people of both sexes. The biological age of the participants was estimated by a calculator that uses nine laboratory blood tests and mortality was analyzed.

Results: Of the 115 elderly people hospitalized in a public referral hospital for COVID-19, the predominant gender was male, age ≥ 70 years, black/brown skin color, illiterate/low education, with a partner. Arterial hypertension and diabetes were the most common comorbidities in the study population. Regarding ICU admission, use of mechanical ventilation, length of ICU stay and mortality, there was a significant association with premature aging (p-value = 0.009, 0.009, 0.042 and 0.009 respectively).

Conclusion: Biological Age was able to predict clinical outcomes, proving to be superior to Chronological Age.

FUTURE OF PREVENTIVE MEDICINE AND PUBLIC HEALTH

March 20-22, 2025

Table 3 – ICU admission, use of invasive mechanical ventilation assistance, Hospitalization time, death and premature aging in elderly people hospitalized with COVID-19.

Variable	Yes n (%)	No n (%)	PR	CI 95% PR	p-value
ICU admission					
Yes	58 (96,7)	2 (3,3)	1,18	1,03 – 1,35	0,009 *
No	45 (81,8)	10 (18,2)	1,00	---	
Use of mechanical ventilation					
Yes	75 (94,9)	4 (5,1)	1,22	1,02 – 1,46	0,009 **
No	28 (77,8)	8 (22,2)	1,00	---	
Hospitalization time	Mediana	Mediana			
	(P25; P75)	(P25; P75)			
Death					
Yes	37 (100,0)	0 (0,0)	1,18	1,08 – 1,30	0,009 **
No	66 (84,6)	12 (15,4)	1,00	---	

(*) Chi-square (**) Fisher's exact (***) Mann-Whitney

Biography

- Graduated in Medicine from University Federal of Pernambuco (UFPE)
- Medical Residency in clinical area by University of Pernambuco (UPE)
- Post-Graduation in Cardiology from UPE
- Title of Specialist in Adult Intensive Care by the Brazilian Society of Intensive Care
- Specialization in Palliative Care and Geriatrics from the University of Brasilia
- Master in Medicine from UFPE
- PhD in Tropical Medicine from UFPE
- Preceptor in Medicine at UFPE
- Teacher in Medicine at Afya faculty of medical sciences of Jaboatão

FUTURE OF PREVENTIVE MEDICINE AND PUBLIC HEALTH

March 20-22, 2025



The Role of Imaging in the Diagnosis of Three Endemic Diseases of the Southern Cone Leishmaniasis, Dengue, and Chikungunya

Galeano Monica Alicia, Anoni María Clara and Gonseski Vivian Carolina

Garrahan Hospital, Argentina

Neglected diseases such as leishmaniasis, dengue, and chikungunya pose significant public health challenges due to their high prevalence and wide geographic distribution in the Southern Cone region. They are transmitted through insect bites, which serve as natural reservoirs. These diseases affect vulnerable populations in tropical and subtropical regions, exacerbating existing health disparities and hindering socioeconomic development. This calls for immediate visualization to spread knowledge and implement appropriate diagnostic and treatment measures.

This review provides a concise overview of the clinical manifestations, epidemiological context, and imaging findings associated with these diseases. While their imaging findings are not always conclusive, they can be significant in diagnosis and follow-up. The main objective of this work is to share our experience and offer valuable information on the use of imaging for the diagnosis and follow-up of patients suspected of having these diseases. The use of imaging not only facilitates treatment decision-making in endemic areas but also allows referral to more specialized health centers to evaluate possible acute and late complications. In leishmaniasis, although there are no specific imaging findings, ultrasound can play an important role in diagnostic support and patient follow-up. Dengue significantly impacts global public health, for which ultrasound is a valuable diagnostic tool to differentiate mild from cases at risk of poor outcomes. Chikungunya is also a viral disease and has caused epidemics in several countries; ultrasound has proven to be an excellent tool for its diagnosis and follow-up, particularly in the assessment of arthralgia and arthritis with synovitis at any stage of this disease.

FUTURE OF PREVENTIVE MEDICINE AND PUBLIC HEALTH

March 20-22, 2025

Biography

- Medical Doctor. Faculty of Medical Sciences, National University of Córdoba, Argentina. Graduated in 1996
- Pediatric Specialist. University of Buenos Aires. Graduated in 2001
- Pediatric Diagnostic Imaging Specialist. University of Buenos Aires. Graduated in 2004
- Pediatric Diagnostic Imaging Specialist. Ministry of Health of the Nation. Graduated in 2016
- Health Economics and Management Specialist. University ISALUD. Graduated in 2017
- Fellowship in Pediatric Diagnostic Imaging (11/26/2004 -11/01/2006) - Garrahan Academic Unit, School of Medicine, University of Buenos Aires.
- Pediatric Musculoskeletal Radiology Hybrid Fellowship sponsored by the Children's Hospital of Philadelphia, Boston Children's Hospital, National Children's Hospital and the World Federation of Pediatric Diagnostic Imaging. 09/01/2023 – 06/30/2024.
- Teaching Experience: Supervisor of Practical Works since March 1, 2019, at School of Medicine, University of Buenos Aires in Undergraduate Biomedical Imaging.
- Head of Radiology Service: Garrahan Hospital since 5/30/2023.

FUTURE OF PREVENTIVE MEDICINE AND PUBLIC HEALTH

March 20-22, 2025



Current Treatment Strategies for Pulmonary Embolus

Sabah Butty

Department of Radiology and Imaging Sciences, Indiana University Health, USA

To discuss current approaches for pulmonary embolism including patient evaluation, risk factor stratification, and treatment options. Specifically, to discuss advances in recent endovascular technology and their role and advantages over traditional therapy.

Biography

Dr. Sabah David Butty specializes in Radiology & Imaging. Dr. Butty earned his medical degree at Wayne State University School of Medicine. He then completed residencies at Wayne State University and Medical College of Virginia and a fellowship at the University of Virginia.

FUTURE OF PREVENTIVE MEDICINE AND PUBLIC HEALTH

March 20-22, 2025



Quality of Work Life for Health Professions in Colombia's Adult Critical Care

Quiñones-Rozo Laura del Pilar and Canaval-Erazo Gladys Eugenia Justin Z Laferrier

Universidad del Valle, Colombia

Background: Health professionals in Colombian and many parts of the world, in some cases, work in precarious conditions and intend to migrate to other countries in search of better living conditions for themselves and their families, which results in inadequate distribution worldwide and in the quality of care throughout the health system, which can ultimately influence the quality of life of patients in their health-disease processes.

Purpose: Describe in depth what quality of life at work is like for the health workforce in adult critical care (ACC).

Methods: This is an investigation of convergent parallel mixed methods approach that are integrated by means of a matrix in terms of convergence, divergence, and complementarity. Two methods are used: a transversal analytical method in which three instruments were applied to 209 participants to study the relationship between Quality of Life at Work, exposure to psychosocial risks, compassion fatigue and the intention to rotate; other than from the experiences narrated by 10 Human Talent in Health explore organizational practices in critical care.

Results: The dimension of quality of work life with the greatest dissatisfied was the management of free time (77%), the most compromised psychosocial risk was the pace of work (84%). They have high compassion satisfaction (67%) and there is an intention to migrate to another country (66%). The narrative results in discrimination/harassment as normalized practices and faceless spirituality. The integration of mixed methods shows convergence between the use of the instrument that measures quality of life at work and the narratives of the participants, complementarity with the other instruments, and

FUTURE OF PREVENTIVE MEDICINE AND PUBLIC HEALTH

March 20-22, 2025

divergence regarding the intention to rotate to another health institution.

Conclusion: The positive trend that converges with the two approaches is that of safety at work and well-being achieved through work, embodied in the constant updating of technology and care protocols, experience time, balance between salary and work effort, staffing and supplies, and disconnection with work.

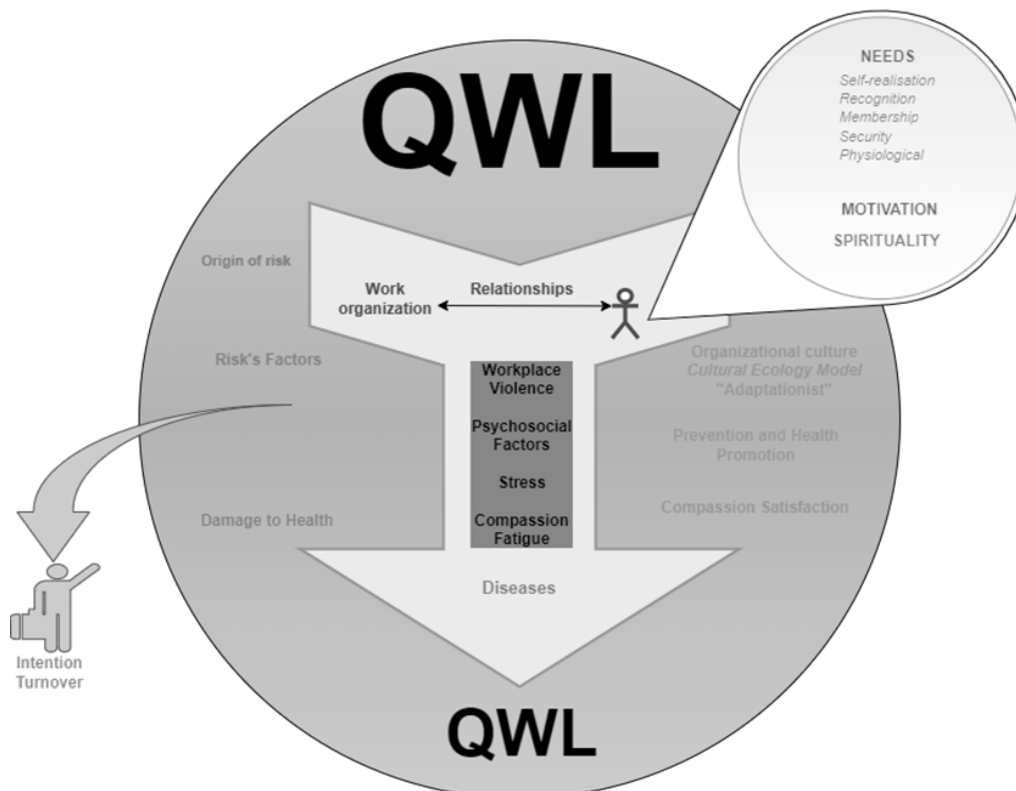


Fig.1 Comprehensive model of the QWL of the HWF in the ACCs. Own elaboration

Biography

Nurse, master in cardiovascular care and PhD in Health. With experience in the healthcare area, university teaching, administration and research. Editor and advisor in the creation of new undergraduate and graduate programs.

FUTURE OF PREVENTIVE MEDICINE AND PUBLIC HEALTH

March 20-22, 2025



Drug Delivery Applications of Advanced Chlorin e6 Nanoemulsions: Ex Vivo Biosafety and Antitumor Efficacy

**Stéphanie R. do Amaral¹, Felipe Falcão Haddad², Ana Luísa Rodriguez Gini²,
Cauê Benito Scarim² and Fernando L. Primo¹**

¹Department of Bioprocess and Biotechnology Engineering, School of Pharmaceutical Sciences, São Paulo State University (UNESP), Brazil

²Department of Drugs and Medicines, School of Pharmaceutical Sciences, São Paulo State University (UNESP), Brazil

Photodynamic Therapy (PDT) consists in an approved modality for cancer treatment. In this instance, the photosensitizer represents a key factor inside the efficacy process of PDT. Chlorin e6 (Ce6) is a second-generation photosensitizer, approved by the FDA with the most desired clinical properties for PDT applications, presenting high reactive oxygen species (ROS) generation and anticancer proved properties. The selectivity connected to Ce6 is based in the ability to activate in tumor sites thought light exposure, reducing side effects. However, it presents limitations related to hydrophobicity leading to poor biodistribution inside therapies. The present work developed an innovative nanoemulsion, incorporating Ce6 (Ce6/NE) using low energy method to overcome such limitations. A comprehensive study of physicochemical properties, stability, fluorescence characteristics, in vivo and ex vivo biocompatibility and ex vivo efficacy was established. The nanoemulsions showed desired particle size and stability over six months, with no spectroscopic or photophysical alterations. Uptake studies demonstrated the internalization of Ce6/NE in monolayer, with biocompatibility in the lowest concentrations. HET-CAM assay however, revealed a higher biocompatibility range, also indicating Ce6/NE potential for cancer treatment through antiangiogenic studies. These findings highlight the use of a new promising photosensitizer for PDT, modulated with nanotechnology providing low toxicity, higher biodisponibility and site-specific delivery.

FUTURE OF PREVENTIVE MEDICINE AND PUBLIC HEALTH

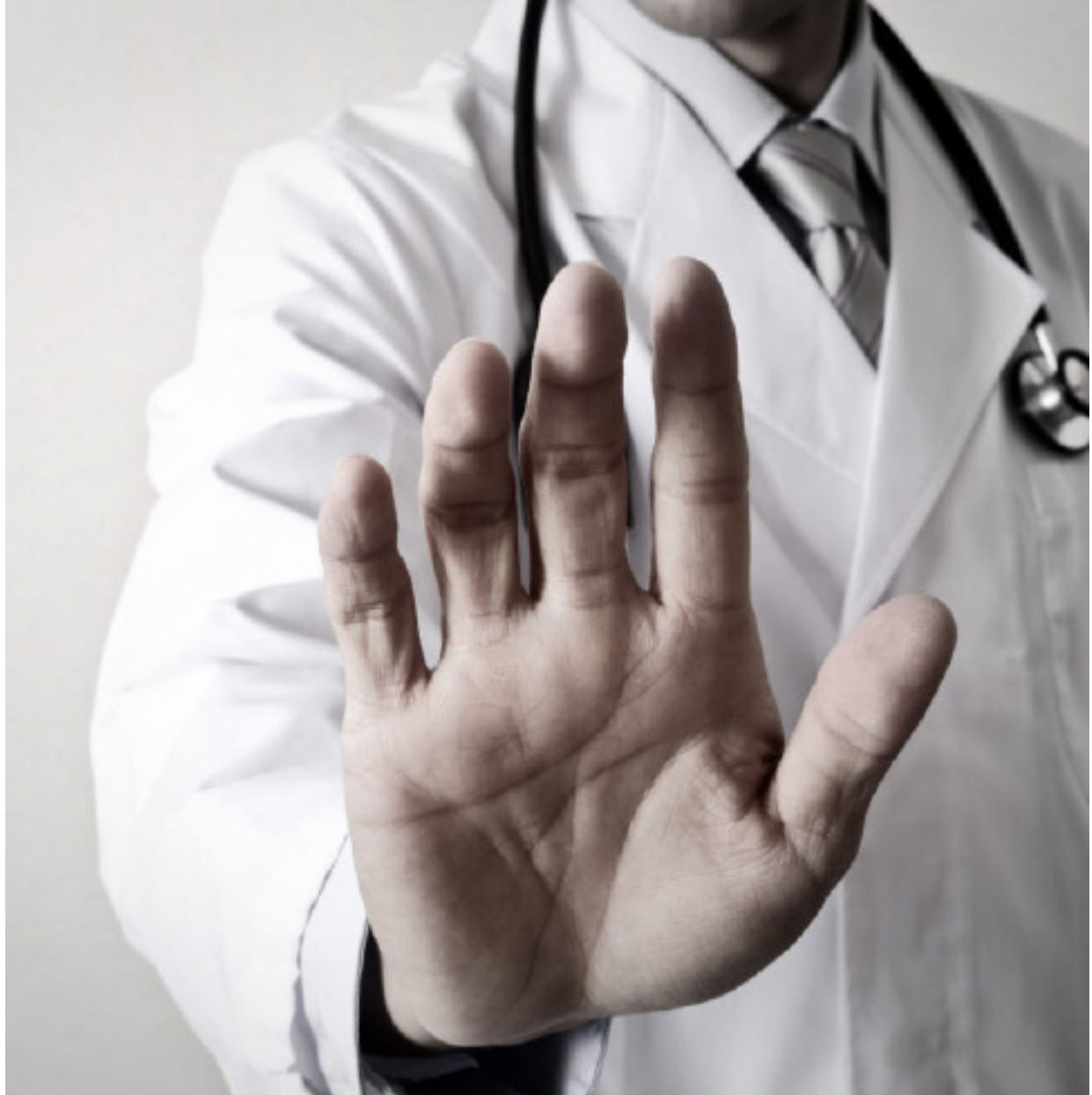
March 20-22, 2025

Biography

Master of Sciences and Bachelor's degree in Bioprocess and Biotechnology Engineering from São Paulo State University (UNESP). Current PhD student in the Pharmaceutical Sciences program - School of Pharmaceutical Sciences (UNESP) - Department of Bioprocess Engineering and Biotechnology, in Tissue Engineering applied to Photodynamic Therapy under the supervision of Prof. Dr. Fernando Lucas Primo in collaboration with Professor Liam Grover (University of Birmingham – HTI). Extensive experience in nanotechnology, nanomedicine and photobioprocesses, applied to the development and analysis of advanced nanomaterials for cancer treatment in PDT field.

DAY 02

FUTURE OF PMPH 2025



VIRTUAL EVENT

5th INTERNATIONAL CONFERENCE ON

FUTURE OF PREVENTIVE MEDICINE AND PUBLIC HEALTH

MARCH 20-22, 2025

SPEAKER TALKS

FUTURE OF PREVENTIVE MEDICINE AND PUBLIC HEALTH

March 20-22, 2025



Living Habits and Public Health in Hong Kong: A Survey Study based on the Nine Body Constitutions

Hongyi Sun

Department of Systems Engineering, City University of Hong Kong, China

Habit refers to a settled or regular tendency or practice, especially one that is hard to give up. Typical examples include smoking, drinking wine, tea and soup, preference of certain meat or food, doing exercise, meeting friends and certain type of diet etc. This paper reports the survey research on the impact of living habits on public health based on a recent Chinese medicine theory of 9 types of body constitutions, named, neutral, qi deficiency, yang deficiency, yin deficiency, blood stasis, phlegm & dampness, damp-heat, qi stagnation and special constitution. Three sets of hypotheses were proposed based on literature.

- H1: Living habits influence public health (either positive or negative).
- H2: Living habits influence body constitutions (styles)
- H3: Body constitutions influences health.

A survey was conducted and collected feedback from 1200 Hong Kong citizens. First of all, the nine types of body constitutions were validated with the 1200 set of Hong Kong data. However, and a few questions were deleted which implies that Hong Kong people's living habit are somehow different to other regions of China. It was the first time such an empirical study was conducted in Hong Kong.

Second, it was found that some living habits do have significant relationships with some of the nice types of body constitution. That means living habits may be one of the factors that form certain type of body constitutions.

Third, it was also found that body constitutions have certain relationship with some diseases. Finally a set of suggestions for public health were proposed, including healthy living

FUTURE OF PREVENTIVE MEDICINE AND PUBLIC HEALTH

March 20-22, 2025

habits and unhealthy living habit as well as corresponding measures for different type of body constitutions, such as different soups, different tea, wine, exercise in addition to see traditional Chinese doctors for acupuncture, massage or herbs prescription.

Biography

Prof SUN Hongyi holds a Bachelor degree in Computer Science from Harbin University of Science and Technology in 1983, a Master's degree in Management Engineering from the Harbin Institute of Technology (HIT) in 1986, both in China, and a Ph.D. in Technology Management from Aalborg University in Denmark in 1993. He has been working for 25 years in the Department of Systems Engineering, City University of Hong Kong. His teaching and research areas include the management of technological innovation, manufacturing/operations strategy, quality management, innovation education and public health. Prof SUN resides on the editorial board of TECHNOVATION, the International Journal of Learning and Changes and International Journal of Quality and Reliability Management (IJQRM). Prof Sun has published about 110 papers in international journals with a google citation of 7100 and H-index of 46. He was listed in the top 2% full career mostly cited scientists by Stanford.

FUTURE OF PREVENTIVE MEDICINE AND PUBLIC HEALTH

March 20-22, 2025



Indicators of Child Malnutrition among Different Social Groups in West Bengal, India: An Analysis Based on National Family Health Survey (NFHS-V)

Eva Ghosh¹ and Sushil Kr. Halder²

¹PhD Research Scholar, Department of Economics, Jadavpur University, India

²Professor, Department of Economics, Jadavpur University, India

An attempt has been made here to examine the probable indicators associated with the child underweight belonging to the age group 0-5 years across different socio-ethnic groups in West Bengal, India using National Family Health Survey NFHS-V (2019-2021) data. Multilevel logistic regression models are employed to examine the direct and joint effects of child background such as gender, birth weight etc., maternal characteristics such as mothers' education, BMI, Anemia status etc., and socioeconomic characteristics like wealth class, caste etc. on the underweight children. We find that indicators from different axes such as gender, birth weight, place of delivery, mother's education, mother's BMI level, household wealth quintiles and social class significantly impact the probability of being underweight among children. The findings of the interactive variables suggest that female children belonging to the poorest of the poor families and disadvantaged groups residing in rural areas exhibit a higher probability of being underweight. The interactive and joint effects results suggest implementing disaggregated public health policies. We recommend integrating the existing health policies to the poverty eradication programme to obtain a socially desirable result of nutritional equity among the children.

Biography

Ms. Eva Ghosh has completed her M.Phil Degree from Economics Department, Jadavpur University in 2021 and started studying as Ph.D Research Scholar of Economics in Jadavpur University in 2022. The title of her Ph.D Thesis is Child Malnutrition in India with Special Reference to West Bengal: A Socio-Economic Analysis Based on National Family Health Survey (NFHS) Data. She has credited one published article from reputed journal like Child Indicators Research (Springer publication) and one book chapter (Health and Demography in Northeast India: A Regional Perspective, October, 2023). She has presented her research papers in various seminars and conferences organized by different academic institutions like the Department of Economics, Banaras Hindu University-2024, Department of Economics, Jadavpur University-2024, and Indian Association for the Study of Population (NIT Rourkela-2023).

FUTURE OF PREVENTIVE MEDICINE AND PUBLIC HEALTH

March 20-22, 2025



An Optimized Deep Focused U-Net Model for Image Segmentation

Haroon Haider and Majid Iqbal

COMSATS University, Pakistan

Issues with class imbalance pose a significant challenge in medical segmentation, with lesions often occupying a considerably smaller volume (hard objects) relative to the background (easy objects). Medical image segmentation tasks require the model to pay attention on specific parts of the image rather than the entire image. Models based on CNN and its variants like U-Net have shown promising results in this regard. However, they often suffer from unstable gradient during the training process.

We propose an optimized deep focused U-Net (DF U-Net) model along with a novel learnable optimized focal loss (LOF) function. The DF U-Net is integrated with a novel block that comprises of five subblocks: efficient channel attention, squeeze and excitation, stochastic depth, residual block and dense block, collectively known as (ESSRD) in the decoder layers. This block helps to make the model more robust by improving gradient information flow thus mitigating the vanishing gradient problem throughout the network. As each layer has direct access to gradient from the loss function, it leads to better training of deeper networks with reduced overfitting. The proposed LOF loss optimizes itself during the training of the model and converges to optimal values within few epochs. LOF loss function when embedded with the existing state-of-the-art models, successfully enhanced the prediction of true positive as the loss function is improved throughout each training cycle. The model was successful in detecting the minute polyps which were overlooked by the other state-of-the-art models. We evaluated DF U-Net using four medical imaging data sets: DRIVE, BUS2017, CVC-Clinic and Kvasir-SEG. During the training process, DF U-Net significantly reduced the convergence time by sharply minimizing the loss to 0.001% and achieved an accuracy of 99.5%. The DFU-Net can be investigated on other segmentation tasks like road and face detection.

FUTURE OF PREVENTIVE MEDICINE AND PUBLIC HEALTH

March 20-22, 2025

Biography

Haroon Haider Khan PhD (COMSATS UNIVERSITY Islamabad, Pakistan), Dean Computer Science department Roots IVY College affiliated with University of Bedfordshire UK. His primary scope of research is in Deep Learning and Machine learning algorithms. He is also a speaker at international forums and a member of review committee of various international journals.

Has to his credit a total of 20-year experience of teaching and as a visiting Professor in Higher Education Commission recognized universities like International Islamic University and University of Lahore. Also works in the capacity of an independent consultant and CEO of software firm HPsoft which provides IT solutions to small and medium sized businesses.

FUTURE OF PREVENTIVE MEDICINE AND PUBLIC HEALTH

March 20-22, 2025



M-IoT Devices Optimisation through TinyML: Challenges, Advances, and Perspectives

Mohamed Maoui and Rohallah Benaboud

Department of Mathematics and Computer Sciences, Research Laboratory on Computer Science's
Complex Systems (ReLa(CS)2), University of Oum El Bouaghi, Algeria

The Internet of Things (IoT) is central to the rapid transformation of the healthcare sector, enabling major advances in patient care and monitoring. A key sub-discipline, called the 'Medical Internet of Things' (M-IoT) or 'Health Internet of Things' (H-IoT), focuses specifically on improving medical practices through the integration of connected devices. A fundamental aspect of these devices is the collection and processing of data, which, due to its sheer volume and the requirement for reliable predictions, is often transferred to the cloud for further processing. However, this approach can lead to latency and raise confidentiality and security concerns.

To address these concerns, a new paradigm has emerged: Tiny Machine Learning (TinyML). By integrating Machine Learning (ML) models directly into microcontrollers (MCUs), TinyML extends the capabilities of Artificial Intelligence (AI) by making it ubiquitous and accessible. TinyML makes it possible to design autonomous devices capable of collecting, processing and generating alerts without having to transmit data to remote servers. This approach is particularly relevant for healthcare applications at the edge, where ML models can be embedded in wearable devices, offering efficient and responsive solutions.

In light of these advances, this presentation provides a detailed overview and in-depth analysis of ML algorithms that can be embedded in M-IoT devices. It explores their compatibility with the constraints of MCUs and their application in various fields of connected health, while highlighting their advantages, their potential for use, as well as possible avenues for improvement.

FUTURE OF PREVENTIVE MEDICINE AND PUBLIC HEALTH

March 20-22, 2025

Biography

Mohamed Maoui is a research associate at the ReLa(CS)2 (Research Laboratory on Computer Science's Complex Systems) Laboratory at the University of Oum El Bouaghi, Algeria, where he is part of the DISE (Distributed-Intelligent Systems Engineering) research team. He earned his bachelor's and master's degrees in computer systems from the University of Tizi Ouzou, Algeria. His research interests span across networking, distributed systems, embedded systems, IoT, and artificial intelligence. Additionally, he is a Cisco instructor.

FUTURE OF PREVENTIVE MEDICINE AND PUBLIC HEALTH

March 20-22, 2025



Ameliorative Effects of Sesamum Indicum Aqueous Extract on Letrozole-Induced Polycystic Ovary Syndrome in Adult Female Rats and Formulation of Sesame Syrup

Zeynab Khosrowpour¹, Shamim Sahranavard¹, Fatemeh Jafari¹, Mojgan Tansaz², Shirin Fahimi^{1,3} and Mehrdad Faizi⁴

¹Department of Traditional Pharmacy, Traditional Medicine and Materia Medica Research Center
School of Traditional Medicine, Shahid Beheshti University of Medical Sciences, Iran

²Department of Traditional Medicine, School of Traditional Medicine, Shahid Beheshti University of
Medical Sciences, Iran

³Faculty of Pharmacy and Pharmaceutical Sciences, Department of Traditional Pharmacy and Persian
Medicine, Tehran Medical Sciences, Islamic Azad University, Iran

⁴Department of Pharmacology and Toxicology, School of Pharmacy, Shahid Beheshti University of
Medical Sciences, Iran

Background and Aim: Polycystic ovary syndrome (PCOS) is one of the most common hormonal disorders affecting women of reproductive age. The present study was to examine the effect of *Sesamum indicum* L. aqueous extract as in the treatment of PCOS in female rats and formulate an appropriate medicinal syrup from it.

Experimental procedure: 42 adult female rats were divided randomly into six groups; the control group received carboxy methyl cellulose 1% as a vehicle and the five other groups first received letrozole orally at 1 mg/kg for 21 days and next were administered by *S. indicum* aqueous extract (100,200,400 mg/kg), metformin (200 mg/kg) and distilled water 28 days after PCOS induction. Physical parameters (body weight, estrous cycle determination, ovary weight), steroidal hormone profile, and histopathology of ovary were studied. Fifteen different formulations were made with different percentages of additive components. Quality control tests were performed on the selected formulation.

Results: After 21 days of letrozole administration, induction of PCOS was confirmed by the irregularities in estrous cycles and an increase in LH and testosterone levels. The aqueous extracts of *S. indicum* and metformin increased the percentage of the rats with regular

FUTURE OF PREVENTIVE MEDICINE AND PUBLIC HEALTH

March 20-22, 2025

estrus cyclicity compared to the PCOS group. In the S.indicum and metformin receiving groups, LH levels and LH/FSH ratio were significantly reduced in all doses compared to the PCOS group. S.indicum extract (400 mg/kg) treatment significantly declined testosterone levels whereas increased estradiol levels compared to PCOS group. Histological studies of metformin and S.indicum receiving groups exhibited normal follicular development with fewer and smaller cystic follicles compared to the PCOS group

Conclusion: It can be concluded that Sesamum indicum aqueous extract can improve some symptoms of PCOS because of its phytochemical contents such as β -sitosterol, campesterol, and stigmasterol, and sesquiterpenes with phytoestrogenic, androgenic and anti-inflammatory effects.

Biography

Dr. Zeynab Khosrowpour is dedicated pharmacist with a Ph.D. in traditional pharmacy from Shahid Beheshti Medical Science University in Tehran, Iran. Over a decade of pharmacy experience has allowed me to engage with patients dealing with polycystic ovary syndrome, sparking my interest in exploring alternative approaches. Her research focuses on potent plant-based remedies for this condition, drawing from Iranian traditional medicine. This work has broadened her understanding of herbal medicine and drives her commitment to advancing holistic healthcare solutions that bridge traditional and modern medicine.

FUTURE OF PREVENTIVE MEDICINE AND PUBLIC HEALTH

March 20-22, 2025



Criteria for Enhancing Student Wellbeing in Stem Classrooms: ICT and Indigenous Knowledge in South African Higher Education

Nkopodi Nkopodi, Marija Jakovljevic and Patricia Photo

University of South Africa, South Africa

This study explores the integration of Information and Communication Technology (ICT) and Indigenous Knowledge Systems (IKS) to enhance student well-being in STEM classrooms within South African higher education. South Africa has long struggled with low enrolment and poor performance in STEM subjects, impaired by inadequate teacher training, teaching methodologies, and psychological factors such as anxiety. The COVID-19 pandemic has further emphasized the need for resourcefulness in education, highlighting the potential benefits of technology and indigenous knowledge in mitigating these challenges. The researchers investigate the synergy between ICT and IKS in reducing stress and anxiety among STEM students and educators. The study employs a critical reflective approach to analyze existing literature and derive a preliminary framework. This framework includes criteria for integrating IKS into STEM curricula, strategies for using ICT and IKS synergistically, and professional development for STEM teachers in the era of decolonization and the Fourth Industrial Revolution (4IR). The study concludes by proposing twelve preliminary criteria for the effective use of ICT and IKS to address psychological challenges in STEM education. These criteria aim to promote a holistic, inclusive, and culturally relevant learning environment that leverages both traditional knowledge and modern technological advancements. However, the study's reliance on theoretical perspectives without empirical testing may affect the validation of the proposed criteria.

FUTURE OF PREVENTIVE MEDICINE AND PUBLIC HEALTH

March 20-22, 2025

Biography

Prof. Nkopodi Nkopodi is a South African academic with long experience in teacher education. He has lectured in Mathematics Education and Science Education at the University of South Africa and the University of the Witwatersrand. Prof. Nkopodi Nkopodi has completed BSc (Unin), BED (Unin) and MSc (Sc Edu) and PhD (Sc Ed) at the University of the Witwatersrand where he became the first person ever to complete MSc (Science Education) with the University. He has published impactful articles and book chapters in both Mathematics Education and Science Education. Prof. Nkopodi Nkopodi was extensively involved in curriculum development in South Africa and served in advisory committees for the Department of Education. He has conducted numerous workshops for practicing science and mathematics teachers across South Africa.

FUTURE OF PREVENTIVE MEDICINE AND PUBLIC HEALTH

March 20-22, 2025



Prevalence and predictors of precancerous cervical lesions among women living with HIV in Libreville, Gabon

Alfred Keith Félix Mabika-Obanda², Nathalie Ambounda-Ledaga¹, Vicky Noel Simo Tekem¹, Euphrem Riveri¹, Christian Mombo², Christian Mangala², Paulin Essone² and Armel Mintsa-Ndong²

¹Laboratoire National de Santé Publique, Libreville, Gabon

²Service de Gynécologie Obstétrique, Centre Hospitalier Universitaire de Libreville, Gabon

Background: HIV-infected women are at an increased risk of developing precancerous cervical lesions (PCL) than non- infected women. In Gabon, no data exists on the prevalence of PCL among women living with HIV. The aim of this study was to assess the prevalence and risk factors associated with the development of PCL among HIV-positive women in Libreville, Gabon.

Methodology: This was a retrospective study carried out within the Gynecology and Obstetrics Department of University Hospital Center of Libreville (CHUL) from January to August 2016. It included women registered at the HIV Clinic of Nkembo, and screened for PCL or cervical cancer (CC). Descriptive statistics were used to characterize sociodemographic data and the prevalence of PCL. The chi square and odd-ratio tests were used to evaluate the associations between PCL, CD4 count, antiretroviral use, age at first sexual intercourse, number of sexual partner tobacco, and contraception use. Results

Results: Among the 115 HIV-positive women recruited, 33 (28.70%; SD $\pm$ 0.45) were diagnosed with PCL. 79.1% of them were on antiretroviral therapy (ART), and the mean CD4 cell count value was 411.74 cells/mm³ (SD $\pm$ 241.77). Being on ART, age, number of sexual partners, contraceptive use and smoking were not risk-factors linked with the development of PCL. CD4 cell count was the only associated risk-factor (p-value: 0.02).

Conclusion: The incidence of PCL among HIV-infected is high in Libreville, Gabon, especially

FUTURE OF PREVENTIVE MEDICINE AND PUBLIC HEALTH

March 20-22, 2025

among those with baseline CD4 counts < 200 cells/mm³. This study recommends screening for cervical cancer for all HIV-infected women.

Biography

Alfred Keith Felix Mabika Obanda is a biologist working at the National Laboratory of Public Health of Gabon since 2018. He is the lead scientist in HPV surveillance and research. He obtained his Masters degree at American University, Washington, D.C. and is currently finishing his doctoral studies at the Ecole Doctorale Régionale (EDR) d'Afrique Centrale en Infectiologie Tropicale, Franceville, Gabon. His current focus is on the characterization of the microbiome and immune profile of HIV positive/negative women with and without cervical intraepithelial lesions, which are by human papillomaviruses.

FUTURE OF PREVENTIVE MEDICINE AND PUBLIC HEALTH

March 20-22, 2025



Investigation the Role of Environmental Covariates in Geographical Distribution of Soil Biological Properties in A Semi-Arid Region

**Ashraf Esmaeilizad^{1,2}, Rasoul Shokri¹, Naser Davatgar², Hadi Asadi Rahmani²
and Seyed Roohollah Mousavi³**

¹Department of Microbiology, Biology Research Center, Islamic Azad University, Iran

²Soil and Water Research Institute, Agricultural Research, Education and Extension Organization (AREEO), Iran

³Faculty of Agriculture, Department of Soil Science, University of Tehran, Iran

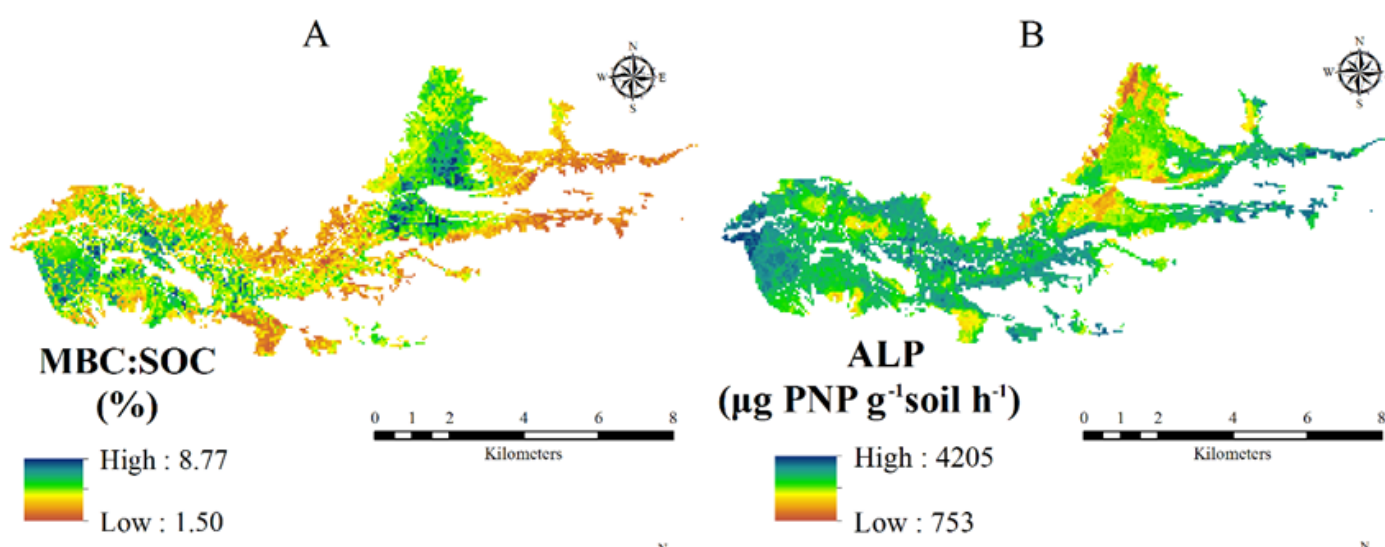
Soil biological properties (SBPSs) are crucial for soil health and mapping these properties can provide insights into soil ecosystems and, conservation strategies and One Health Frameworks and policy conceptions. The objective of this study was to map five important indicators of SBPSs, namely urease (Ur), acid phosphatase (ACP), alkaline phosphatase enzyme (ALP) activity, metabolic quotient (qCO_2), and soil microbial biomass to soil organic carbon ratio (MBC: SOC) using machine learning algorithms (MLA) and to identify the most important driving factors of these properties. The study was conducted in Honam sub-basin, Lorestan, Iran. 90 soil surface samples were collected and analyzed in the laboratory. 60 soil and environmental covariates, including soil, topography, and remote sensing data (RS), were used to represent influencing factors. Two state-of-the-art MLAs, Random Forest (RF) and Extreme Gradient Boosting (XGBoost) trees, were used to predict SBPSs. The results showed that 30 soil and environmental covariates were selected as relevant factors. Both RF and XGBoost models performed well and achieved acceptable accuracy (as measured by R^2 value). XGBoost outperformed RF on qCO_2 ($R^2 = 0.61$), ALP ($R^2 = 0.73$) and Ur ($R^2 = 0.75$), while RF performed better on ACP ($R^2 = 0.65$) and the MBC: SOC ($R^2 = 0.81$).

FUTURE OF PREVENTIVE MEDICINE AND PUBLIC HEALTH

March 20-22, 2025

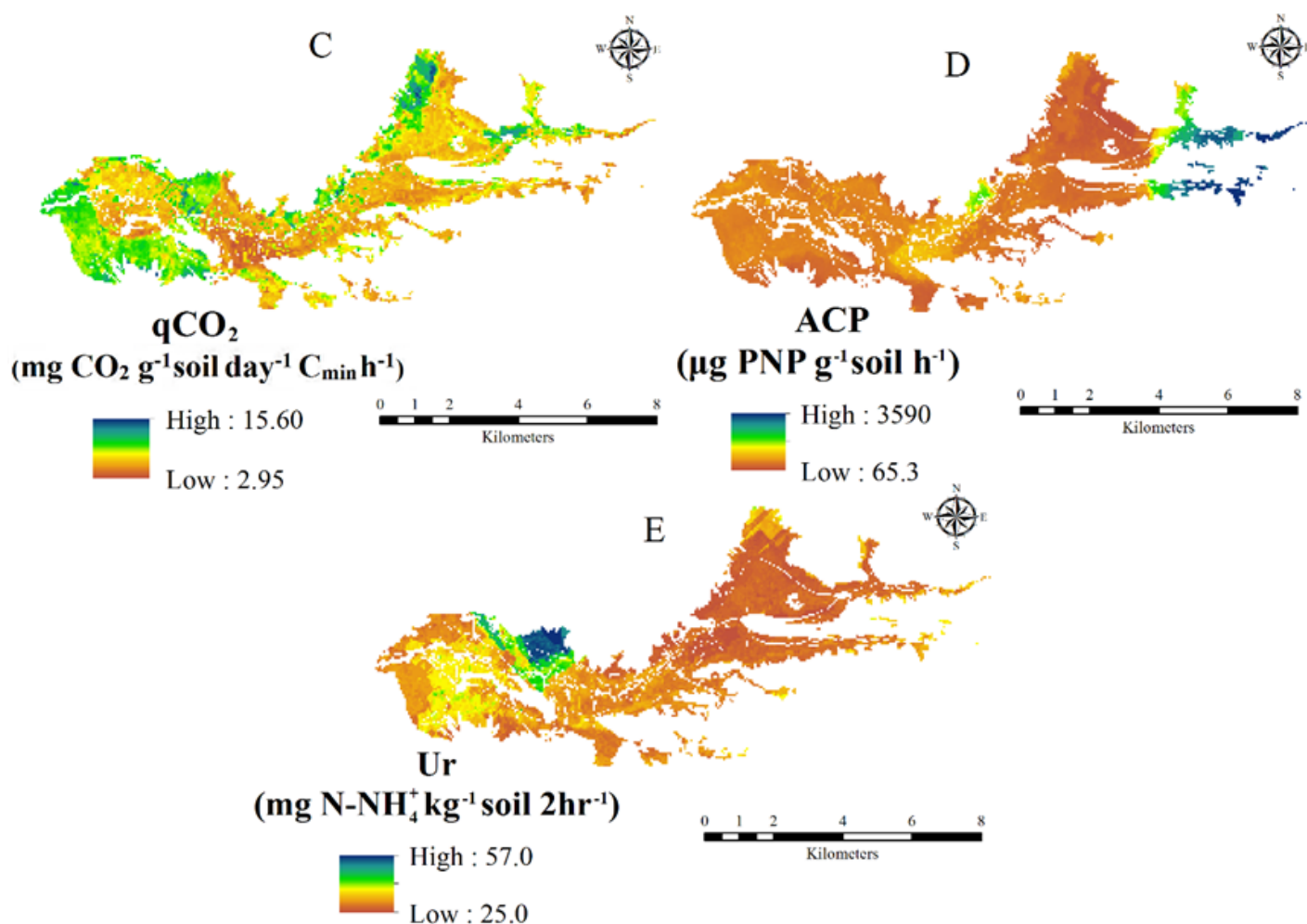
Validation results for the SBPSs prediction at the surface depths (30 cm) by RF and XGboost ML models										
SBF	RF					XGboost				
	R ²	CCC	RMSE	nRMSE	Bias	R ²	CCC	RMSE	nRMSE	Bias
Ur (mg N-NH ₄ ⁺ kg ⁻¹ soil 2hr ⁻¹)	0.6	0.72	4.5	0.12	1.85	0.75	0.83	3.2	0.1	1.64
ACP (μg PNP g ⁻¹ soil h ⁻¹)	0.65	0.7	527	0.56	35	0.51	0.61	545	0.58	40
ALP (μg PNP g ⁻¹ soil h ⁻¹)	0.68	0.73	957	0.32	54.5	0.73	0.78	843	0.28	44
qCO ₂ (mg CO ₂ g ⁻¹ soil day ⁻¹ Cmin h ⁻¹)	0.5	0.45	4.31	0.54	-1.6	0.61	0.76	3.97	0.5	-0.04
MBC:SOC (%)	0.81	0.72	1.63	0.36	0.06	0.66	0.7	1.87	0.41	-0.1
Ur: Urease, ACP: Acid phosphatase, ALP: Alkaline Phosphatase, qCO ₂ : Metabolic quotient, MBS: SOC: Microbial biomass: soil organic carbon. RF: random forest, XGboost: eXtreme Gradient Boosting										

Relative importance analysis showed that ACP and Ur were most strongly associated with the soil variables at 79% and 42%, respectively. ALP and qCO₂ were strongly correlated with topographic attributes at 56% and 52%, respectively. MBS: SOC was about 40% associated with the RS indices. These results highlight the potential of targeted strategies for effective management and protection of soil ecosystem leading to improved soil health and ecosystem function. Further research should focus on developing methods that encompass a broader range of indices that influence soil microbial activity and diversity that leads us to One Health concept in drylands.



FUTURE OF PREVENTIVE MEDICINE AND PUBLIC HEALTH

March 20-22, 2025



Spatial prediction maps of SBPSs by the best ML model. A: microbial biomass: soil organic carbon, B: Alkaline Phosphatase, C: metabolic quotient, D: Acid phosphatase, E: Urease. Here (A and D by RF model, and B, C, E: by XGboost model)

Biography

She, Ashraf Esmaeilizad, holds an M.Sc. and Ph.D. in Microbiology from Islamic Azad University, Iran, and is an established researcher in the Department of Soil Biology and Biotechnology at the Soil and Water Research Institute of Iran (SWIR) since 2004.

She has worked extensively on biofertilizers as novel tools for agriculture and soil fertility management, with a particular focus on mycorrhizal fungi and root-plant symbiosis. Her research also extends to soil biodiversity, especially after completing a training course on the Management and Application of Microbial Data Resources at the World Data Centre for Microorganisms (WDCM) in China in 2016.

In her Ph.D. thesis (2018), she pioneered biological quality indices for soils through an interdisciplinary approach, emphasizing soil health and microbiological properties, a field she continues to explore. She is dedicated to furthering research on soil health and its connection to human, plant, and animal health.

FUTURE OF PREVENTIVE MEDICINE AND PUBLIC HEALTH

March 20-22, 2025



A Study on Body Composition Parameters and Biological Parameters of Farm Women working under Hot Climate

Surabhi Singh and M.K. Chaudhary

Sardarkrushinagar Dantiwada Agricultural University, India

Considering that climate change and global warming can exacerbate the temperature and directly or indirectly can increase heat related illness, the present research was planned with the objectives (i) to assess body composition parameters of farm women working at farm in summer season and (ii) to assess relationship between biological parameters of farm women while working at farm in summer season with environmental factors and their body composition parameters. Multistage random sampling method was used. The total sample of the study was 80 farm women who were involved in agriculture, animal husbandry or horticulture activities. Multiple regression analysis was done to know any effect of body composition parameters of farm women and environmental parameters on their biological parameters while working outdoors in summer season. Direct association was found between aural temperature of farm women and air temperature at their field. Age of farm women was found directly associated with high oral temperature working at farm. It can be inferred that oral temperature of older farmwomen increases more under the condition of heat stress. Mean skin surface temperature of farm women was found associated with their mass body fat, soft lean mass and air temperature. If the MBF, SLM and air temperature is high, it will significantly affect the mean skin temperature of farm women while working outdoors in hot climate. Heart rate was found associated with height and air velocity. It can be summed up that body composition parameters and environmental parameters affect the health of farm women. Performing heavy agricultural activities under high temperature leads to adverse health condition.

FUTURE OF PREVENTIVE MEDICINE AND PUBLIC HEALTH

March 20-22, 2025

Biography

Dr Surabhi Singh is working as an Assistant Professor and Head in the department of Resource Management and Consumer Science in Sardar krushinagar Dantiwada Agricultural University, Gujarat, India. She has more than sixteen years of experience in teaching and Research. Her areas of interest are Occupational Health and Safety and Ergonomics. She has more than twenty five research papers in peer reviewed international journals. She has presented more ten research papers in national and international conferences. She has also presented lead papers in conferences. More than five departmental and funded research projects have been completed by her.

FUTURE OF PREVENTIVE MEDICINE AND PUBLIC HEALTH

March 20-22, 2025



Intelligent Medical Service Monitoring Health Care System for the Elderly

Sahar I Ghanem

Faculty of Computer Science and Artificial Intelligence, Department of Artificial Intelligence, Pharos University Alexandria (PUA), Egypt

The growing elderly population presents significant challenges to healthcare and social care systems, driving increased attention to ambient assisted living from both researchers and businesses. This study proposes a Smart Healthcare Monitoring System (SW-SHMS) specifically designed to address these challenges by enabling remote real-time monitoring of senior individuals. The system leverages wearable sensors to collect physiological data, which is then transmitted to the cloud for analysis using advanced machine learning models.

The proposed feedforward neural network model demonstrates exceptional performance in health condition detection, achieving a detection accuracy of 97.64% for diabetes, significantly surpassing KNN (78.57%) and Naive Bayes (76.46%). Additionally, the model achieves an impressive 99.67% accuracy in diagnosing cardiovascular illnesses, outperforming KNN (83.77%) and Naive Bayes (82.56%). These results highlight the system's potential to enhance clinical decision-making and enable early medical intervention, thereby improving health outcomes.

The SW-SHMS includes a user-friendly smartphone application tailored for senior citizens, offering features such as automated medication monitoring, emergency alerts, and real-time notifications to healthcare providers. Comprehensive simulations validate the system's efficiency in data collection and processing, with low latency and minimal packet loss ensuring reliable operation.

This innovative system not only supports healthcare providers in managing the growing demand for elderly care but also aids in reducing healthcare costs while maintaining high

FUTURE OF PREVENTIVE MEDICINE AND PUBLIC HEALTH

March 20-22, 2025

service quality. By integrating cutting-edge technologies, SW-SHMS provides a scalable, efficient, and effective solution to enhance the quality of life and medical care for the elderly population.

Biography

Dr. Sahar Ghanem is an Assistant Professor in the Artificial Intelligence Department at the Faculty of Computer Science and Artificial Intelligence, Pharos University in Alexandria (PUA), Egypt. She earned her Ph.D. in Computer and Systems Engineering from Alexandria University in 2020, with research focusing on parallel approaches in bioinformatics and genomic interaction analysis using high-performance computing.

With extensive teaching experience, Dr. Ghanem has delivered courses on artificial intelligence, neural networks, deep learning, and natural language processing. She has supervised several innovative projects, including applications of augmented reality and object detection systems.

Her research interests include deep learning applications in healthcare, parallel computing, and intelligent systems. Dr. Ghanem has published extensively in reputable conferences, highlighting advancements in healthcare monitoring and crop recommendation systems through augmented reality and machine learning. She is also actively involved in curriculum development and quality assurance initiatives, contributing to enhancing academic standards and technological integration in education.

FUTURE OF PREVENTIVE MEDICINE AND PUBLIC HEALTH

March 20-22, 2025



Through the Lens of Experience :A Case Series on Pediatric Neuroblastic Tumors

M.Dougul Regis¹, K.Chandramouleeswari², K.Bargavi³ and Senathipathy Ramakrishnan³

¹Assistant Professor, Department of Pathology, Institute of Child health and Hospital for Children, Madras Medical College, India

²Professor and Head of Department, Department of Pathology, Institute of Child Health and Hospital for Children, Madras Medical College, India

³Department of Pathology, Institute of Child Health and Hospital for Children, Madras Medical College, India

Introduction: Neuroblastic tumors are among the most common extracranial malignancies in children and are the third most common cancer in early childhood. In India, the expected annual number of cases is approximately 3000; however, only 1000 cases are diagnosed each year. On average, 7 cases of neuroblastic tumors are reported annually in our institution. Most cases are diagnosed between 18 and 22 months of age. This case series presents five neuroblastic tumor cases at a quaternary care institute, highlighting the challenges in diagnosis and tumor workup, with a focus on the potential use of additional and alternative resources in resource-poor settings.

Objectives:

1. To explore the clinical presentation, demographic features of neuroblastic tumors in five pediatric patients treated at our institute
2. To enlighten on the various histomorphological spectrum of neuroblastic tumors
3. To emphasize on the role of cytogenetics and molecular diagnostic techniques in ascertaining the prognosis of neuroblastoma
4. Summarize on the treatment and follow up of patients with neuroblastoma

FUTURE OF PREVENTIVE MEDICINE AND PUBLIC HEALTH

March 20-22, 2025

Methods: This case series is a compilation of 5 cases of neuroblastic tumors with various clinical presentation .The clinical data was collected from the medical record department and the clinical presentation ,demographic details and investigations were tabulated .The histomorphologic features were collected from records and photography of slides were taken from sections cut in paraffin blocks .Immunohistochemistry markers and its expression on tumor cells were studied .The details of N myc expression were compiled .

Scope: Managing neuroblastic tumors involves a multidisciplinary team approach, starting with the clinician in identifying the symptoms; working with the radiologist and pathologist in the diagnosis; and with the oncologist, surgeon and radiation oncologist in choosing the best multimodal therapy to improve outcomes for patients affected by neuroblastoma.

Results and Discussion: In this case series, children aged 3 months to 5.5 years were diagnosed with neuroblastic tumors. Radiological findings in all the patients revealed a calcified mass originating from either the abdomen (adrenal glands) or thorax (paravertebral areas). The abdomen was the most frequently affected site(65%), with tumors often crossing the midline, The clinical presentation varies widely depending on the tumor's location, the child's age, the presence of metastatic disease, metabolic disturbances, or paraneoplastic syndromes.

Table 1: Comparison of demographic, clinical and investigative features of the five presenting cases.

Clinical features	Patient 1	Patient 2	Patient 3	Patient 4	Patient 5
Age	21 months	9 months	2.5 years	3 months	5.5 years
Sex	Male	Female	Female	Female	Female
Initial symptoms at presentation	Weakness to lower limbs, dribbling of urine and constipation	Respiratory distress, recurrent lower respiratory infections	Weakness to lower limbs	Right renal pyelectasis in antenatal scan	Incidental finding during workup for tuft of hair-sacral region
Physical examination findings	Both lower limb tone and power decreased. Shifting trachea to right side.	Normal at present	Both lower limb tone and power decreased. Other motor and sensory components, cerebellar signs were intact.	Normal	Tuft of hair-lumbosacral region
Imaging findings					
Location of mass	Left posterior mediastinum with intraspinal extension	Left posterior mediastinum	Left adrenal area	Right adrenal area	Left paravertebral/ adrenal area

FUTURE OF PREVENTIVE MEDICINE AND PUBLIC HEALTH

March 20-22, 2025

Size of mass	8.1 x 6.2 x 7cm	4.5 x 2.5 x 2cm	3 x 3 x 2cm	2 X 1.7 X 1.6cm	3.9x2.2x6.2cm
MRI/CT/ PET-CT/USG features	Heterogenously enhancing soft tissue mass in post mediastinum with small haemorrhagic component in the centre and multiple tiny specks of calcifications. Intraspinal extension into the epidural space (T2-T7) with anterior displacement and compression of the dorsal cord with edema. Subcentimetric left supraclavicular node with minimal metabolically activity suspicious for nodal metastases.	Left paravertebral soft tissue mass in the posterior mediastinum with specks of internal calcification and an aberrant arterial twig from descending thoracic aorta.	Mild thinning of the posterior body of corpus callosum in the brain. Diffuse subcutaneous edema in right foot and ankle. Heterogeneously enhancing soft tissue mass with calcification in the left suprarenal region indenting the upper pole of left kidney with few subcentrimetric lymph nodes partially compressing the left renal vessels.	USG (1 week) demonstrated right adrenal mass with hemorrhagic changes whereas MRI showed a well-defined heterodense mass lesion suggesting adrenal NB or hemorrhagic cyst.	Well defined heterogeneously enhancing soft tissue mass lesion in left paravertebral region (D11-L2) with calcification suggestive of NB. Type-1 split cord with incomplete bony septum (L1-L2) with tethering of cord and thin filum terminal lipoma at S1-S2. Vertebral segmentation-fusion anomalies (C5-D1) with fusion of vertebral bodies and posterior elements and right hemivertebra seen between C5-C6. Right spren-gel shoulder with omovertebral bone.
Pre-op diagnosis	Ganglioneuromatoma (in view of small hemorrhagic component)	Paravertebral mass	Adrenal tumor	NB	NB
Differentials	Schwannoma, neurofibroma	Pulmonary sequestration, NB	NB, Malignant adrenal lesion, Pheochromocytoma	Adrenal hemorrhagic cyst	-
BM aspiration/biopsy	Normal	Normal	Normal	Normal	Normal
24 hours urinary VMA	-	-	#REF!	+	-
N-MYC amplification	-	-	- a	+	NA
Risk stratification	Intermediate	Low	Intermediate	High	Low
Sr. Ferritin (ng/mL)	92	NA	NA	122	54

FUTURE OF PREVENTIVE MEDICINE AND PUBLIC HEALTH

March 20-22, 2025

Sr. LDH (U/L)	526 (increased)	NA	NA	335	236
Final diagnosis	NB - undifferentiated subtype	NB - poorly differentiated subtype	NB - differentiating subtype (with Opsoclonus myoclonus ataxia syndrome)	Ganglioneuroma - intermixed	Ganglioneuroma (with Sprengel deformity, diastematomyelia with Klippel-Feil syndrome)

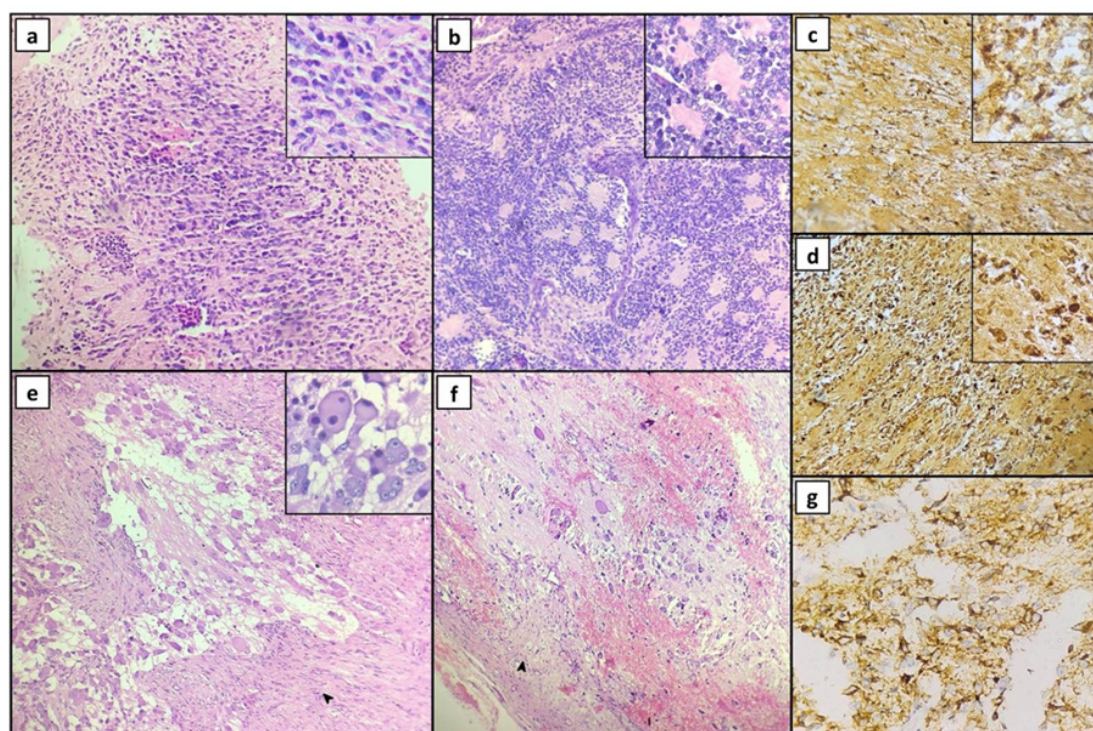


Fig. 1 (Original) Histopathology of neuroblastic tumors received. (a) Undifferentiated neuroblastoma showing small round blue cells. (b) Poorly differentiating subtype with Homer-Wright pseudorosettes surrounding eosinophilic neuropil. Immunohistochemistry showing diffuse strong positivity for (c) synaptophysin and (d) neuron specific enolase in tumor cells of differentiating subtype (100X). Mature ganglion cells and Schwannian stroma (arrowhead) in (e) Ganglioneuroma and (f) differentiating subtype with areas of hemorrhage (H&E, 100X). (g) Immunohistochemistry showing focal positivity for chromogranin (400X). Insert: Representative features and staining patterns in 400X magnification

Conclusion: The initial clinical presentation is not always what it seems to be and is often misleading. Understanding this is necessary, as they have presentations varying from respiratory infection to constipation, failure to thrive, paraplegia, congenital lesions, suspicion from antenatal scans and incidental findings. Radio-logical findings such as calcification and hemorrhagic changes should raise suspicion for the diagnosis of neuroblastic tumors.

FUTURE OF PREVENTIVE MEDICINE AND PUBLIC HEALTH

March 20-22, 2025

Biography

She is Dr. M. Dougul Regis, an Assistant Professor of Pathology at the Institute of Child Health and Hospital for Children in Chennai.

She completed her MBBS at Stanley Medical College in 2005. Following her undergraduate studies, she pursued a Diploma in Clinical Pathology at the prestigious Madras Medical College, graduating in 2011. From 2014 to 2017, she completed her M.D. in Pathology at Madras Medical College, after which she was appointed as an Assistant Professor at Stanley Medical College. She worked there for four years before transitioning to her current role.

She has a strong interest in pediatric pathology and enjoys working with pediatric patients. Her academic contributions include nine publications in various international and national journals. Notably, she received the prestigious ASIA RESEARCH AWARD for Excellence in Pathology for her publication on pancytopenia in IJRMS.

In addition to her clinical and research work, she has a great passion for teaching undergraduate and postgraduate students, actively contributing to medical education at her institute.

FUTURE OF PREVENTIVE MEDICINE AND PUBLIC HEALTH

March 20-22, 2025



Air Pollution-Related Mental Health Burden - Repercussions and Implications for Public Health

Ana Rodriguez

Centre for the Study of Population, Economy and Society, Portugal

Environmental risks have motivated several epidemiological studies due to the impact observed in human health. When it comes to inhaled pollutants, the consequences are transversal to physical and mental health diseases. Particulate Matter (PM) aerosols, mainly ultrafine particles and PM coarse, have been linked to unwanted outcomes concerning psychiatric disorders. Therefore, the way in which PM interacts with physiological processes will be explored, emphasizing the role of public health in preventing and minimizing nefarious effects. From the measurements of urban atmospheric concentrations of PM, as well as the values registered for closed environments, the health risks for individuals exposed to harmful levels of air pollution are highlighted, referring to mortality, physical diseases, and mental health illnesses. The latter are addressed to a greater extent revealing considerable effects for intervals that might range from days to months and years.

Evidence-based knowledge has identified subgroups of the population with increased vulnerability to experience these adversities. As the development of air contamination-related psychiatric symptomatology is not yet comprehensively elucidated, a theoretical background anchored in previous research findings is proposed to explain this phenomenon. Finally, considerations will be made on public health initiatives that could be implemented by individuals, communities, healthcare systems and societies. Interventional research within this field reporting feasible strategies to decontaminate the air is discussed. In addition, practical applications are drawn on the basis of predicted effectiveness, in terms of benefits in reducing psychiatric morbi-mortality.

FUTURE OF PREVENTIVE MEDICINE AND PUBLIC HEALTH

March 20-22, 2025

Keywords: Particulate Matter; Air Pollution; Environment and Public Health; Mental Disorders; Preventive Psychiatry; Air Pollutants.

Biography

Ana Rodriguez holds a PhD in Health Sciences and is currently a member of the Centre for the Study of Population, Economy and Society developing research activities within the field of health-related outcomes, including indicators of physical and psychiatric illnesses. In previous research, it was assessed how the conditions of the surroundings could contribute to individuals' perceptions of their quality of life, being determined by environmental hazards, apart from the resources available and barriers in daily life. More recently, wildfires as closely related to meteorological conditions favoured by climate change were the focus of a research addressing, among other challenges, the risks of atmospheric pollution originated by ambient air toxicity on mental health. Special areas of interest are also humanitarian studies, clinical trials and community health.

FUTURE OF PREVENTIVE MEDICINE AND PUBLIC HEALTH

March 20-22, 2025



Universal Access to Sexual and Reproductive Care

Simona Astorino¹ and Stefano Eleuteri²

¹Italian Association of Legal Psychology, Italy

²Sapienza University of Rome, Italy

Sexual and Reproductive Rights are an essential pillar of overall health and well being. They are deeply influenced by cultural norms, values, attitudes, and the broader economic, social, legal, and political landscape. Even in Western societies, which are often seen as more progressive in these matters, sexuality remains a taboo subject, even among healthcare professionals and policymakers. This cultural and institutional hesitation leads to a lack of access to adequate information and services, which directly impacts sexual and reproductive health. Reproductive rights are particularly crucial for marginalized communities, including women, especially those with disabilities and from social or ethnic minorities, LGBTIQ+ individuals, and people with disabilities. Women, for instance, frequently bear the consequences of limited access to information and services regarding contraception and abortion. The absence of adequate support in these areas often leads to unplanned pregnancies, unsafe abortions, and increased health risks. The complexity of human sexuality and reproductive health calls for comprehensive and intersectional approaches that include education, accessible healthcare, and policy changes. Preventive strategies should address economic disparities, gender-based inequalities, and social risk behaviors to create a framework that supports diverse individuals in making informed choices about their bodies and their reproductive health. A significant step toward improving sexual and reproductive rights involves breaking the silence surrounding these issues. Open dialogue, sex education, and destigmatization efforts can play a vital role in ensuring that people receive the necessary information and support. Additionally, policymakers must commit to inclusive policies that protect and promote these rights for all individuals, irrespective of gender identity, socioeconomic status, or cultural background. In conclusion, societies

FUTURE OF PREVENTIVE MEDICINE AND PUBLIC HEALTH

March 20-22, 2025

must strive to eliminate barriers to access and ensure that every individual has the right to make informed decisions about their body and reproductive health. This can be achieved through a combination of education, healthcare accessibility, legal protections, and cultural shifts toward greater acceptance and understanding.

Biography

Simona Astorino is a clinical psychologist, expert in legal psychology and health emergencies and specializing in psychotherapy. In 2023, she completed an internship at the Institute of Clinical Sexology in Rome and subsequently at the Italian Association of Legal Psychology (AIPG). She has actively participated in seminars and research projects and is involved in social volunteering by collaborating with organizations such as ADMO, FIDAS / AVIS and Rom Altruista. Last November, she took part as a speaker at the XXIII National Congress of Legal Psychology at the University of "Studi G. D'Annunzio" Chieti - Pescara. Furthermore, she contributed to the writing of a chapter of a book entitled "Universal Access to Sexual and Reproductive Care" published by Springer Nature. She is an active member of the Italian Association of Legal Psychology and of the European Institute of Psycho traumatology and Stress Management. Currently, he deals with technical consultancy and appraisals in contexts such as child custody and assessment of testimony.

FUTURE OF PREVENTIVE MEDICINE AND PUBLIC HEALTH

March 20-22, 2025



Pre-operative EQ-5D-5L is a Strong Predictor of Meaningful Improvement in Quality of life Following Primary Total Knee Arthroplasty

James Davies, Fergus J.McCabe, Ciara Doran and James P.Cashman

Department of Orthopaedic Surgery, National Orthopaedic Hospital Cappagh, Ireland

Introduction: Predicting which patients will get meaningful benefit from total knee arthroplasty remains a challenge. Our aim was to assess if pre-operative quality of life (EuroQol5-Dimension, 5-Level instrument; EQ-5D-5L) can predict the likelihood of a patient achieving post-operative improvement in patient-reported outcome measures (PROMS) following total knee arthroplasty to a level of minimum clinically-important difference (MCID).

Materials and Methods: This was a retrospective analysis of a prospective cohort of total knee arthroplasty patients. EQ-5D-5L and Oxford Knee Scores (OKS) were recorded pre-operatively, 6 months and 2 years post-operatively. The primary outcome measure was achievement of MCID in EQ-5D-5L at 2 years. Multivariable analysis through multiple logistic regression was performed to assess for independent predictors of MCID in EQ-5D-5L, OKS and re-operation at 2 years.

Results: 400 patients were included, with 57% female and a mean age of 66 years. Pre-operative EQ-5D-5L was the only strong predictor of post-operative EQ-5D-5L MCID (OR: 0.016, CI: 0.004 to 0.06), when adjusted for age, gender, BMI, ASA, smoking status and surgeon grade. The optimal pre-operative EQ-5D-5L threshold was found to be 0.53 by Youden's index, with a sensitivity of 70% and specificity of 73%.

Conclusions: Pre-operative quality of life as measured by EQ-5D-5L is a strong independent predictor of reaching MCID in EQ-5D-5L following total knee arthroplasty. Those with worse

FUTURE OF PREVENTIVE MEDICINE AND PUBLIC HEALTH

March 20-22, 2025

EQ-5D-5L are more likely to gain meaningful benefit from knee arthroplasty.

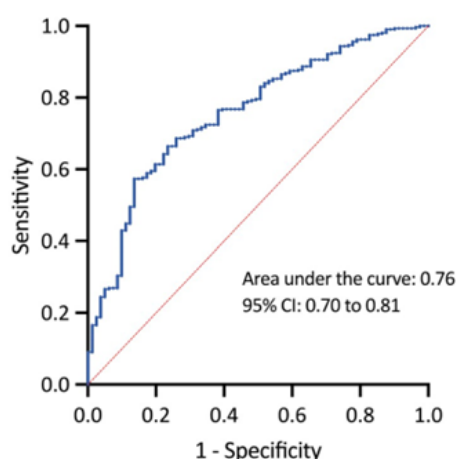


Fig. 2 Receiver operator characteristic curve of pre-operative EQ-5D-5L as a predictor of MCID in 2-year EQ-5D-5L

Table 3 Multivariable analysis for independent predictors of MCID in EQ-5D-5L at 2 years post-operatively

Variable	Odds ratio	95% CI	P value
Pre-operative EQ-5D-5L	0.016	0.004 to 0.06	<0.0001
Age*	0.97	0.94 to 0.999	0.0456
Female gender	0.93	0.54 to 1.62	0.81
Smoking status	0.87	0.32 to 2.85	0.81
ASA	1.4	0.86 to 2.3	0.18
BMI	0.98	0.93 to 1.03	0.40
Surgeon grade	1.20	0.70 to 2.10	0.51

ASA American society of anaesthesiology classification, BMI body mass index

*Not clinically significant

Biography

Dr. James Davies is currently a medical professional at Royal Melbourne Hospital, where they are dedicated in pursuing a career in radiology. With a strong interest in preventative medicine and public health, James has previously conducted research on diabetic retinopathy screening, focusing on early detection and intervention strategies. Additionally, they have explored the reduction of unnecessary follow-up imaging for incidental findings on CT scans, aiming to enhance patient care while optimizing resource use in radiology. James is committed to integrating evidence-based practices in their future work, with the goal of improving health outcomes and promoting proactive health management. Their experience and passion for these fields drive their long-term aspiration to contribute significantly to the evolving landscape of radiology and public health.

FUTURE OF PREVENTIVE MEDICINE AND PUBLIC HEALTH

March 20-22, 2025



Enhancing Individual Well-Being and Community Engagement through Artistic Interventions in Urban Spaces

Pablo Miguel De Souza Sánchez (De Souza Sánchez, P. M.)

Universidad Europea de Canarias, Spain

Art-based initiatives play a crucial role in fostering social cohesion, strengthening local identity, and enhancing well-being. This study explores how artistic interventions in urban environments contribute to preventive public health strategies by promoting social interaction, cultural inclusion, and psychological resilience.

This research aims to analyze the impact of community-driven artistic initiatives on individual well-being and community engagement. It seeks to demonstrate how participatory urban planning, incorporating cultural expressions, strengthens the social fabric and promotes mental health.

A mixed-methods approach was employed, combining quantitative data from large-scale surveys (Redmond et al., 2019) with qualitative case studies of participatory art projects. Examples include The Roof, an ephemeral installation in Tenerife, and interactive public workshops at the La Orotava Science Fair (De Souza, 2024). These projects demonstrate how citizen participation in urban design fosters a sense of place and community belonging.

Findings indicate that art-based urban interventions can act as a form of social prescribing, improving psychological resilience and enhancing public engagement. Quantitative studies (Ma et al., 2023) support the notion that environmental design parameters significantly influence well-being. Participatory art projects empower communities, leading to contextually relevant urban improvements.

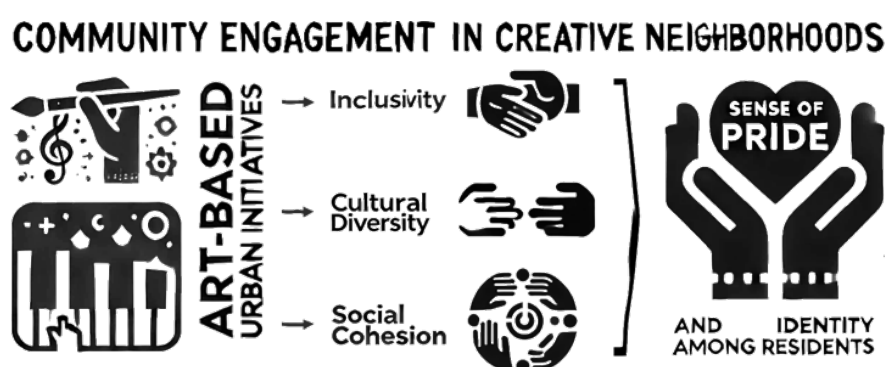
This table summarizes key benefits of artistic interventions:

FUTURE OF PREVENTIVE MEDICINE AND PUBLIC HEALTH

March 20-22, 2025

Artistic Intervention	Community Impact
Public murals & installations	Strengthen local identity & social cohesion
Community workshops	Promote inclusivity & cultural exchange
Ephemeral architecture	Revitalize underutilized urban spaces

Figure 1 illustrates the influence of Art-based urban initiatives:



The integration of artistic practices into urban planning enhances preventive public health by promoting mental well-being, social inclusion, and civic participation. Future urban policies should embrace art as a tool for fostering resilient and engaged communities.

Starting point of this research: De Souza Sánchez, P.M. (2024). Sustainable Urban Innovation: Correlations between Art, Society, and Individuals in fostering Creative Neighborhoods. *Urban Identity Explored: Architecture and Arts in Cities*. Springer.

Biography

He is a PhD Architect with International Mention, holding a Master's degree in Analysis, Theory, and History of Architecture and a Graduate degree in Fine Arts. He is a Professor in Composition, Projects, and Urban Planning at the School of Architecture, Universidad Europea de Canarias.

His doctoral thesis, "The Fold in Architecture," is a historical, critical, conceptual, and experimental study on the application of origami patterns in architecture. With over 15 years of international teaching experience, he is a member of three Research Groups and has contributed to three R+D+I projects (one international and two national).

His primary research interests focus on:

1. Architecture and Design with Origami and Structural Folds
2. Educational Innovation in Architecture
3. Sustainable Urbanism and Cultural Development, particularly how art and culture serve as drivers for urban transformation.

Since 2000, he has worked professionally in architecture, art, and interior design, along with stage art direction and graphic design.

FUTURE OF PREVENTIVE MEDICINE AND PUBLIC HEALTH

March 20-22, 2025



The Impact of Loss Function on the Accuracy of Models in Medical Diagnoses

Sepideh Etemadi¹ and **Mehdi Khashei²**

¹Department of Mechanical and Industrial Engineering, University of Minnesota Duluth, USA

²Department of Industrial and Systems Engineering, Isfahan University of Technology, Iran

Given that the quality of medical diagnosis relies heavily on the accuracy of classification approaches, research focused on developing innovative classification techniques with diverse structures, complexities, and learning algorithms to achieve exceptional accuracy remains a crucial and ongoing area of study. In this context, the researchers investigated how different features impact the performance of classifiers. Despite the theoretical significance of loss functions in influencing diagnostic models, they have received relatively less attention. To address this research gap, this paper explores the effects of various types of loss functions—including linear and nonlinear continuous, linear and nonlinear semi-continuous, and discrete loss functions—on classifier performance. The study investigates various model types and structures, including statistical, shallow intelligent, and deep learning classifiers. It is conducted using 44 benchmark datasets that encompass diverse data characteristics across a wide range of medical fields. These datasets include cancer diagnoses (including Breast, Cervical, and Lung cancers), disease diagnoses (including Diabetes, Hepatitis, Parkinson's, Kidney, Heart, Respiratory, Liver, and Autism diseases), and therapy domains. The analyses conducted in this study have identified that classifiers trained with the discrete loss function, which aligns better with the nature of classification models, demonstrated superior overall performance compared to those using semi-continuous and continuous loss functions. Specifically, semi-continuous and continuous loss functions followed in performance, respectively. These findings underscore the critical role of the loss function in achieving desired accuracy, often surpassing the influence of classifier structure and type. Therefore, the careful selection of the appropriate loss function can significantly reduce modeling costs. As a result, using the discrete loss function in classifier models

FUTURE OF PREVENTIVE MEDICINE AND PUBLIC HEALTH

March 20-22, 2025

significantly enhances the accuracy of disease and cancer diagnosis, improves treatment efficiency, and supports the development of healthcare strategies. Moreover, it establishes a foundation for creating effective plans to identify and capitalize on opportunities while preventing medical errors.

Biography

Sepideh Etemadi received her M.Sc. and Ph.D. degrees in Industrial Engineering from Ferdowsi University of Mashhad and Isfahan University of Technology (IUT) in 2014 and 2022, respectively. She is currently a postdoctoral associate at the Department of Mechanical and Industrial Engineering, University of Minnesota Duluth, USA. Her main research interests include modeling and forecasting, data mining, machine learning, and optimization.

Mehdi Khashei received his M.Sc. and Ph.D. degrees in Systems Engineering and Industrial Engineering from the Isfahan University of Technology in 2005 and 2013, respectively. He is currently an assistant professor at the Department of Industrial and Systems Engineering, Isfahan University of Technology (IUT), Isfahan, Iran. He is the author or co-author of several scientific papers in international journals or communications to conferences with reviewing committees. His main research interests include Artificial Intelligence; Soft Computing; Time Series Forecasting; Classification and Clustering, Soft Intelligent decision-making; and Financial Management and Engineering.

FUTURE OF PREVENTIVE MEDICINE AND PUBLIC HEALTH

March 20-22, 2025



Increasing Volume of Liver Transplants for Alcohol- related Liver Disease May Negatively Influence Transplant Rates for Other Liver Diseases

**Jennifer L. Dodge, Divya Ayyala-Somayajula, Brian H. Horwich, Kali Zhou,
Norah A. Terrault and Liyun Yuan**

Keck School of Medicine, University of Southern California, USA

Background: Indications for liver transplant (LT) continuously evolve, reflecting changing population-level cirrhosis burden, with alcohol-associated liver disease (ALD) rates rising rapidly. As demand exceeds liver organ supply, approximately 20% of patients waiting for LT die. Understanding the impact of changing disease patterns on patient outcomes is critical for informing LT allocation policy.

Objective: Evaluate the association of increasing centre-level LT volume for ALD on transplant rates and mortality among other (non-alcohol) reasons for LT.

Methods: This retrospective cohort study included adults listed for LT from 10-2015 to 12-2021 in the U.S. Organ Procurement and Transplantation Network, and captured organ allocation over two policy Eras (1 and 2, before and after May 14, 2019). Centre-level LT volume for ALD was characterized by tertiles of low to high volume. Waitlist outcomes included LT rates and mortality (death or clinical deterioration). Multivariable competing-risks regression estimated adjusted sub-hazard ratios (sHR) for risk of waitlist outcomes.

Results: 56,596 candidates were listed for LT, with an increasing proportion at high-volume alcohol transplant centres (17% Era 1, 56% Era 2). Focusing on Era 2, 18-month LT rates were lower at high- versus low-volume alcohol transplant centres for liver cancer (low 57%, mid 65%, high 53%, $p<0.001$) and other non-alcohol aetiologies (64%, 64%, 55%, $p<0.001$), but not ALD ($p=0.06$; Figure 1a). 18-month waitlist mortality increased with alcohol transplant volume for liver cancer (low 15%, mid 16%, high 19%; $p=0.03$) and non-alcohol aetiologies (15%, 14%, 18%; $p<0.001$) while similar for ALD ($p=0.76$; Figure 1b). These findings were attenuated in multivariable analysis where elevated mortality risk for high versus low alcohol transplant

FUTURE OF PREVENTIVE MEDICINE AND PUBLIC HEALTH

March 20-22, 2025

volume was not statistically significant in liver cancer (sHR=1.15, 95%CI 0.96-1.38) or non-alcohol aetiologies (sHR=1.13, 95%CI 0.87-1.46). However, the effect among non-alcohol aetiologies was heterogenous with autoimmune-associated liver diseases having elevated risk (sHR=1.57, 1.08-2.27) but not metabolic-associated liver disease (sHR=1.07, 95%CI 0.80-1.42) or viral hepatitis (sHR=0.79, 95% CI 0.54-1.14).

Conclusions: High-volume alcohol transplant centres had lower LT rates for non-alcohol liver diseases but mortality only increased for autoimmune aetiologies, emphasizing the importance of continued monitoring to achieve equitable LT allocation policies.

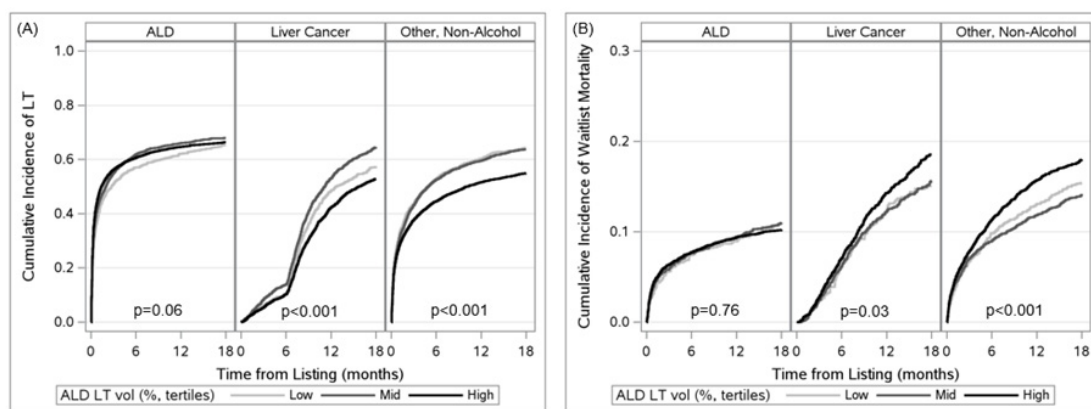


Figure 1. Cumulative incidence of (A) LT and (B) mortality within 18 months of listing for LT.

Biography

Jennifer Dodge is an Associate Professor of Research Medicine at the Keck School of Medicine of the University of Southern California where she holds joint appoints in the Division of Gastrointestinal and Liver Diseases and the Department of Population and Public Health Sciences. She earned her Master of Public Health from the University of Arizona with a concentration in epidemiology while researching hepatitis C transmission in long-term monogamous couples. She continued her research in liver disease at the University of California, San Francisco. Here, she observed first-hand the impact of data-driven policy change on equitable allocation of liver organs for transplantation and continues this research as the epidemiology of liver disease evolves.

FUTURE OF PREVENTIVE MEDICINE AND PUBLIC HEALTH

March 20-22, 2025



Preparing Elementary Teachers to Support Inclusive Education for Students with Autism Spectrum Disorder: Highlighting the INCLUDE Program Planning Model

Goodson Dzenga and Nyasha Dzenga

University of Montana Western, USA

The rising prevalence of autism spectrum disorder (ASD) among children in the United States and globally has raised concerns about educators' preparedness to effectively support these students. Despite the Individuals with Disabilities Education Act (IDEA) mandate for inclusive education, significant research highlights a lack of resources available to educators in mainstream settings for teaching children with ASD. This issue is particularly pronounced globally, where ASD diagnoses are increasing. To address this challenge, this paper introduces the INCLUDE model—an instructional framework designed for novice planners—to help educators effectively support children with ASD in inclusive classroom settings. The objectives of this study are to develop a comprehensive understanding of the INCLUDE model and to evaluate its effectiveness in real-world educational environments. The scope of this research encompasses a broad analysis of current educational practices and resource allocation for ASD, focusing particularly on mainstream educational settings. The methods used in this study involve a synthesis of different program planning models. By implementing the INCLUDE model, schools can create more supportive and adaptive learning environments that cater to the unique needs of students with ASD. The conclusion of this work underscores the importance of equipping educators with the necessary resources and training to foster inclusive education. The INCLUDE model offers a viable solution to bridge the gap between IDEA's inclusive education mandate and the current state of resource availability, ultimately leading to better educational outcomes for students with ASD.

FUTURE OF PREVENTIVE MEDICINE AND PUBLIC HEALTH

March 20-22, 2025

Biography

Dr. Goodson Dzenga, PhD, is an assistant professor at the University of Montana Western. With a Ph.D. in Exceptional Learning and Applied Behavior Analysis specializing in Special Education, he is also a Board-Certified Behavior Analyst (BCBA). Dr. Dzenga serves as the Special Education Coordinator, overseeing the Special Education endorsement program at UMW. In the unique context of rural Montana, Dr. Dzenga's leadership ensures that the Special Education endorsement program addresses the specific needs and challenges of educators and students in rural and remote areas. His research interests primarily revolve around promoting effective communication for children with developmental disabilities and identifying interventions to enhance communication for this population. His focus on applied behavior analysis and effective communication strategies not only benefits his students but also contributes to the broader field of special education through his research and practical applications.

FUTURE OF PREVENTIVE MEDICINE AND PUBLIC HEALTH

March 20-22, 2025



Using Machine Learning to Predict Emergence of Disease in Free-Ranging Wildlife to Aid Public Health Efforts

Brenda Hanley and Krysten Schuler

Wildlife Health Lab, Cornell University, USA

Continued emergence and spread of disease through free-ranging wildlife can negatively impact humans if spillover occurs. Risk factors for diseases in the United States such as chronic wasting disease (CWD) have been investigated at small scales, but we developed a novel tool to predict locations of new disease emergence using a machine learning approach. Specifically, our predictive tool highlights the areas that CWD is likely to emerge in wild cervids, rendering new understanding of risk for surveillance planning and delivering new information to public health departments. While CWD has not spread from host wildlife to humans, this tool constitutes a proof-of-concept that emerging techniques in machine learning can be used to predict emergence of disease in wildlife to fortify efforts to keep the public healthy. The CWD Prediction Web App is at <https://cwd-predict.streamlit.app/> while the publication is at <https://www.nature.com/articles/s41598-024-65002-7>.

Biography

Brenda Hanley is a Research Associate in the Department of Public and Ecosystem Health at Cornell University. She uses mathematical and statistical techniques to adapt or invent analytical tools that enable natural resource professionals to answer emerging questions regarding wildlife populations and their system-scale health. She holds a BA in Geography and Land Studies, BS in Mathematics, MS in Statistical Science, and a PhD in Bioinformatics and Computational Biology.

FUTURE OF PREVENTIVE MEDICINE AND PUBLIC HEALTH

March 20-22, 2025



The Effectiveness of Mind-Body Intervention on Psychological Well- Being During the COVID-19 Pandemic: A Pilot Interventional Study

**Weisman A³, Peterson A¹, Borsellino P¹, Davidson R¹, Ezeanolue E¹, Lagasca G¹,
Diaz JI and Batra K²**

¹Kirk Kerkorian School of Medicine at UNLV, USA

²Assistant Professor and Senior Medical Research Biostatistician, Department of Medical Education,
Kirk Kerkorian School of Medicine at UNLV, USA

³Director of Well-Being & Integrative Medicine and Associate Professor of Medical Education, Kirk
Kerkorian School of Medicine at UNLV, USA

Objectives: To determine if online-guided mind-body medicine training can lead to a significant reduction in levels of stress, anxiety, and depression.

Background: The COVID-19 pandemic led to an upsurge in mental health disorders, with a sizable proportion of people globally experiencing psychological distress. The pandemic highlighted the need for alternative, more accessible access to mental health interventions that can be readily administered remotely. Mind Body Medicine is easily accessible and shown to be an effective mental health intervention making it suitable for this purpose. In this study, we evaluated the effectiveness of a virtual mind-body medicine training course on stress, anxiety, and depression levels.

Methods: An interventional study utilizing a pre-post design was conducted in December 2020 to evaluate the effectiveness of a community-based mind-body intervention in addressing psychological challenges amidst the COVID-19 pandemic. University employees and members of the Las Vegas community were recruited via self-selection and snowball sampling and subjected to online mind-body practice sessions. Measures of psychological well-being, specifically stress, anxiety, and depression levels, were assessed both before and after the intervention using standardized psychometric valid measures, including the Depression, Anxiety, and Stress Scale (DASS-21), the Professional Quality of Life Scale, and the Social Connectedness Scale. Pre and post-test surveys were taken, and univariate and

FUTURE OF PREVENTIVE MEDICINE AND PUBLIC HEALTH

March 20-22, 2025

bivariate analyses were performed. Significance testing was performed using paired t-test and related samples marginal homogeneity test for continuous and categorical outcomes, respectively. A Pearson Correlation test was used to define the relationship between psychological outcomes and professional quality of life.

Results: Post-intervention assessments revealed a statistically significant reduction in stress and depression levels among participants and a statistically significant increase in quality-of-life metrics. Depression, stress, and overall DASS were significantly decreased ($p < 0.001$). Mean scores of professional quality of life improved post-intervention compared to pre-intervention ($p = 0.03$). Depression was moderately correlated with anxiety and stress and weakly correlated with burnout ($p < 0.01$). Depression was negatively and weakly correlated with compassion satisfaction ($p < 0.01$). Burnout was negatively and moderately correlated with compassion satisfaction ($p < 0.01$). However, it was directly and moderately correlated with secondary traumatic stress ($p < 0.01$). A significantly larger proportion of participants reported no depression or stress post-intervention compared with pre-intervention ($p < 0.001$, $p = 0.003$, respectively.) This study suggests that virtual mind-body practices had a pronounced impact on stress and depression levels during the pandemic.

Conclusions: These results support virtual, online-guided mind-body medicine training as an effective intervention to reduce stress and depression symptoms that can be administered virtually.

FUTURE OF PREVENTIVE MEDICINE AND PUBLIC HEALTH

March 20-22, 2025



Use of Declarative Statements and Strong Recommendation to Increase COVID and Flu Vaccination in A Community Safety-Net Primary Care Clinic

Jacqueline M. Hirth, Rashmi Rode, Arindam Sarkar, Judith Gutierrez, Willie Rajvong, Chelsea Mendonca, Justin Nguyen, Jonathan S. Rosen and Roger J. Zoorob

Baylor College of Medicine, USA

Background: Use of a declarative statement followed by strong recommendation is standard care to increase vaccination in the US. While this approach has been recommended by the Centers for Disease Control and Prevention (CDC) to increase low US vaccination rates, training is lacking and it is infrequently used to offer flu and COVID vaccines.

Purpose: We evaluated the effectiveness of using declarative statements and strong recommendation to achieve high vaccination rates at a clinic in northwest Harris County, TX as a quality improvement effort.

Methods: This pilot evaluation of an intervention at one community safety-net clinic in eastern Texas among patients who needed the seasonal flu or COVID vaccine between 12/10/24 through 2/5/25. Two clinicians provided a declarative statement to patients. If patients had not received both vaccines, clinicians delivered a strong recommendation. An independent observer recorded intervention delivery and outcomes. Analyses included calculating unvaccinated patients who received vaccines, refusals, and those who scheduled vaccine appointments for later or wanted more education before deciding.

Results: Of 67 patients, 38 (56.7%) were not flu vaccinated and 60 (89.6%) were not COVID vaccinated. The intervention was delivered to 100%. Thirty-two (84.2%) of the flu unvaccinated received it, 28 (46.7%) of COVID unvaccinated received it, and 21 (35%) scheduled a vaccine appointment. Only 5 refused flu vaccination (13.1%) and 10 refused COVID vaccination (16.7%). All those who refused flu vaccination also refused COVID vaccination. Three patients who did not get the COVID vaccine and 2 who did not get the flu vaccine were given educational

FUTURE OF PREVENTIVE MEDICINE AND PUBLIC HEALTH

March 20-22, 2025

material. Among all patients who received at least 1 flu or COVID vaccine, 12 received at least 1 additional vaccine that was due.

Conclusion: Providing unvaccinated patients with a declarative statement plus a strong recommendation was effective in achieving high flu and COVID vaccination rates.

Biography

Dr. Hirth is an epidemiologist and program evaluator who has contributed to several programs that aim to improve vaccination in Texas, including HPV vaccination. During her career, she conducted, oversaw, or contributed significantly to more than 100 studies or quality improvement projects. Dr. Hirth often uses her expertise in program evaluation and research to contribute to the reduction in health disparities among marginalized populations through primary healthcare initiatives. Dr. Hirth also aims to ensure quality and meaningful research experiences for students and other learners who want to experience hands-on methodology and research development and program implementation.

FUTURE OF PREVENTIVE MEDICINE AND PUBLIC HEALTH

March 20-22, 2025



Forgiveness Interventions in Mediating Organizations as Preventive Medicine for Public Mental Health

Everett L. Worthington, Jr.^{1,2}

¹Virginia Commonwealth University, USA

²Harvard University, School of Public Health, USA

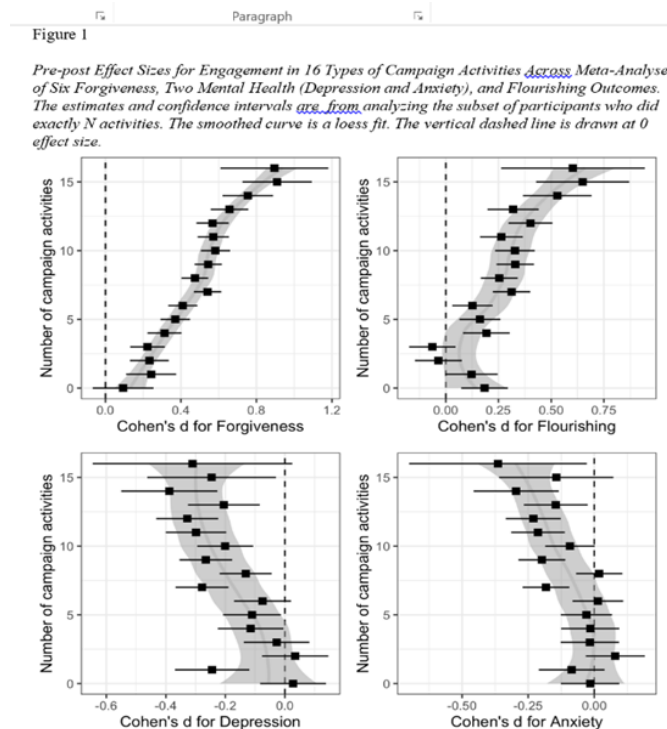
Being unjustly hurt or offended is common. Unforgiveness has been shown to have psychological, relational, physical, and spiritual health sequelae. There are many ways to deal with such injustices. Forgiveness is one. Several evidence-based treatments have been developed to promote forgiveness for those desiring to forgive. REACH Forgiveness is an approach with 32 randomized controlled trials (RCTs) supporting its effectiveness in psychoeducational groups with clinical and non-clinical populations, 7-hour DIY workbooks or internet delivery, and 3.34-hour DIY workbooks. One large multinational RCT (N = 4,598) on the 3.34-hour workbook was conducted in China, Indonesia, Ukraine, Colombia, and South Africa (Ho et al., 2024). That intervention promoted forgiveness (mean effect size, $d = 0.52$), reduced depression ($d = -0.22$) and anxiety ($d = -0.21$) symptoms, and increased flourishing ($d = 0.28$) and trait forgivingness ($d = 0.38$).

Public mental health could be affected by modifying health in mediating organizations such as workplaces, community organizations, universities, and schools. REACH Forgiveness was one of 16 activities offered to students, faculty, and staff in a 4-week campaign to promote forgiveness at a public university in Colombia (Chen et al., 2024).

Of the over 10,000 eligible community participants (student $n = 8,987$), 2,878 completed two assessments. The effects pre-to-post were: for forgiveness, $d = 0.36$; for depression, $d = -0.18$; for anxiety, $d = -0.10$; for flourishing, $d = 0.24$. Engagement mattered. If < 3 activities, no gain in outcomes; after that, gains grew linearly from 4 to 16 activities (see Figure).

FUTURE OF PREVENTIVE MEDICINE AND PUBLIC HEALTH

March 20-22, 2025



If an activity took > 3 (or so) hours, it was rarely used. If it took < 1 hour, it was selected often but had little or no effect. REACH Forgiveness DIY workbooks were used by half of the population.

Our main conclusion was that community-based campaigns for forgiveness are effective and can be made more so by offering activities between 1 and 4 hours long.

Biography

Everett L. Worthington, Jr., Ph.D., is Commonwealth Professor Emeritus working from the Department of Psychology at Virginia Commonwealth University, where he holds an affiliate appointment. He also holds a Faculty Affiliate appointment at the Institute for Quantitative Social Sciences, Faculty of Arts and Sciences, Harvard University (Human Flourishing Program). He continues to be active in research and speaking globally. He is a licensed Clinical Psychologist in Virginia. He has published 48 books and over 500 articles and scholarly chapters, mostly on forgiveness, humility and positive psychology, marriage-and-family topics, and religion and spirituality. He also has developed the REACH Forgiveness model (see www.EvWorthington-forgiveness.com for free resources), supported by over 30 published randomized controlled trials (RCTs). A brief workbook has recently been tested in global grant-funded RCTs in 5 countries (six sites; N = 4,598). He has developed numerous other positive psychological interventions.

FUTURE OF PREVENTIVE MEDICINE AND PUBLIC HEALTH

March 20-22, 2025



Echoes of the Hills: Challenging Exclusion through Black Storytelling in Appalachian Health and Policy

Marcia Dinkins

Founder & Executive Director Black Appalachian Coalition (BLAC), USA

This study investigates how Black storytelling in Appalachia challenges the exclusion and whitewashing of Black experiences in public health and policymaking. It explores the role of storytelling as a tool for addressing health disparities, environmental injustice, and systemic inequities that disproportionately impact Black Appalachian communities. The primary objective is to highlight how these narratives can reshape public health strategies and influence policy reform to be more inclusive and equitable.

Focusing on marginalized Black communities in Appalachia, the research employs a mixed-methods approach that combines narrative storytelling, focus groups, and public health data analysis. Through interviews and storytelling sessions, participants share personal experiences related to environmental health, mental wellness, and access to healthcare. These stories are analyzed for recurring themes of exclusion, resilience, and the fight for recognition in health and policy discussions.

The findings show that Black storytelling disrupts mainstream, whitewashed narratives that often ignore the unique struggles of Black Appalachians. These stories not only reveal the health and environmental challenges faced by these communities but also emphasize their resilience and agency. Policymakers and healthcare professionals who engaged with the stories reported greater awareness of the need for culturally sensitive and inclusive health interventions that understand and intersect with environmental health and harms.

In conclusion, Black storytelling in Appalachia serves as a powerful mechanism for reclaiming spaces of exclusion in both public health and policymaking. By amplifying marginalized voices, these narratives push for more equitable policy changes and health outcomes, making the case for sustained integration of storytelling into both health and policy strategies in Appalachian communities.

FUTURE OF PREVENTIVE MEDICINE AND PUBLIC HEALTH

March 20-22, 2025

Biography

Bishop Marcia Dinkins, PhD in Leadership and Sustainability and Doctorate of Ministry, is a visionary leader focused on environmental justice, racial equity, and community healing. As the founder and executive director of the Black Appalachian Coalition, she uses storytelling to amplify the voices of Black communities in Appalachia, addressing systemic inequities in public health, environmental challenges, and economic justice.

An ordained bishop, Dinkins has spearheaded initiatives to combat environmental racism and promote policy reform, emphasizing equitable access to healthcare. Her unique approach blends faith, advocacy, and cultural storytelling, ensuring Black Appalachians, particularly women, are included in health and policy discussions.

With over two decades of experience, Bishop Dinkins is a sought-after speaker and consultant, known for her ability to lead with compassion, resilience, and a commitment to community-driven change. She continues to empower marginalized communities through her leadership and advocacy.

FUTURE OF PREVENTIVE MEDICINE AND PUBLIC HEALTH

March 20-22, 2025



U.S. 988 “Care Traffic Control” Technologies in Public Behavioral Health Systems: Driving Performance Outcomes That Matter

John Draper

President of Research and Development, Behavioral Health Link, Inc., USA

Data showing that the U.S. National Suicide Prevention Lifeline could reduce distress and suicidality led the federal government to establish a three-digit code in 2022--988—as a means for easily accessing this public health service. With suicide rates continuing to rise across the U.S., how will regional health officials investing in 988 care systems show it’s making a difference? This presentation will review how the U.S. envisions 988’s potential transformation of community crisis care systems, and how services and technologies must seamlessly interface to assure that anyone in crisis, anywhere at any time has “someone to talk to, someone to respond and a safe place to go.”

Dr. Draper will illustrate how “care traffic control technologies” are being used across various state and county crisis systems to better assure efficient, effective coordination of care between crisis contact centers, mobile crisis teams, and crisis receiving facilities. The presentation will show data on how these technologies are effectively reducing gaps in care and wait times, as well as unnecessary encounters with law enforcement and emergency department visits for people in behavioral health crisis. Dr. Draper will also review how these technologies can collect and report on data most essential for determining 988’s impact on public health, such as: how services are reducing suicidality and emotional distress in the people they serve; and/or how they are successfully connecting them to care that supports their longer-term recovery.

FUTURE OF PREVENTIVE MEDICINE AND PUBLIC HEALTH

March 20-22, 2025

Biography

Dr. Draper has 35 years of experience in crisis intervention and suicide prevention work and is considered an international expert in behavioral health crisis services. After leading a Brooklyn-based mobile crisis team and establishing New York City's first crisis hotline network, he led the SAMHSA-funded National Suicide Prevention Lifeline (now the 988 Suicide and Crisis Lifeline) as its Executive Director for 18 years. During his years at the Lifeline, Dr. Draper worked alongside a team of independent evaluators and a committee of experts to develop and implement evidence-informed national standards for suicide risk assessment and intervention across the Lifeline network. Shortly after leading the launch of 988 in 2022, Dr. Draper joined Behavioral Health Link as President of Research and Development, where he is continuing his long history of applying research, data and technologies to improve the quality of crisis care systems in communities across the country.

FUTURE OF PREVENTIVE MEDICINE AND PUBLIC HEALTH

March 20-22, 2025



HL7 FHIR Platform, Scalable, Reliable and Comprehensive of Clinical Databases Analyzed with Machine Learning for ICU Public Healthcare Center

Bernardo Chávez Plaza^{1,2}, Jaime Briggs Luque², Luis Chicuy Godoy², Boris Cuevas Figueroa², Rodrigo Covarrubias Ganderats^{2,3} and Manuel Ramírez Izquierdo^{1,2}

¹ICU, Critical Care Service, Hospital El Salvador, Chile

²Artificial Intelligence Hub in Health, Chile

³Neurosurgery, Navy Hospital, Chile

Hospital facilities today have to deal with exponentially increasing volumes of batch and streaming data, comprising a variety of structured, unstructured, and semi-structured data types, originating from an ever-increasing number of sources and disparate devices located in healthcare facilities, such as intensive care units.

At the same time, doctors demand faster and easier access to reliable and up-to-date data to make accurate decisions. Finding the right data sets and making them available for analysis is often a complicated process that further slows down clinical decisions. That is compounded by regulatory compliance and security controls that must be manually applied at every step of the data lifecycle, from data generation to analytics. Smart UPC is an interoperable solution that has emerged as an architecture for managing data with machine learning (ML) to overcome these challenges.

The layered architecture focuses on making data readily available in a dashboard for Intensive Care Unit users, improving insights based on the use of AI and leveraging automation to simplify administration, the safety and quality of healthcare, complying with cybersecurity requirements and under very strict ethical standards.

Smart UPC, based on a proprietary HL7 FHIR platform offers a unified, scalable, reliable and comprehensive view of ICU clinical data. It is a solution to support applications in decision

FUTURE OF PREVENTIVE MEDICINE AND PUBLIC HEALTH

March 20-22, 2025

making in a complex environment, with high critical demand. should give clear indication of the objectives, scope, results, methods used, and conclusion of your work.

Biography

Bernardo Chávez Plaza is a Neurosurgery, Neurointensive and Neurotrauma subspecialist (more than 25 years of experience). Professor of Intensive Medicine at the west campus of U de Chile, Santiago. MBA in Health Management.

Since 2017, member of the Santiago Artificial Intelligence Hub (HIAS), where they have developed ML projects in neuroimaging and Data Science and Artificial Intelligence protocols applied to the health sector. He has several publications in international journals and is the author of several books.

FUTURE OF PREVENTIVE MEDICINE AND PUBLIC HEALTH

March 20-22, 2025



Gender Differences in Anxiety and Depression Symptoms in Times of Covid-19: A Review in Professors at A Mexican University

Ernesto Aguayo-Téllez², Adelaido García-Andrés¹ and María Elena Ramos-Tovar³

^{1,3}Department of Social Work and Human Development, Universidad Autónoma de Nuevo León, Mexico

²Department of Economics, Universidad Autónoma de Nuevo León, Mexico

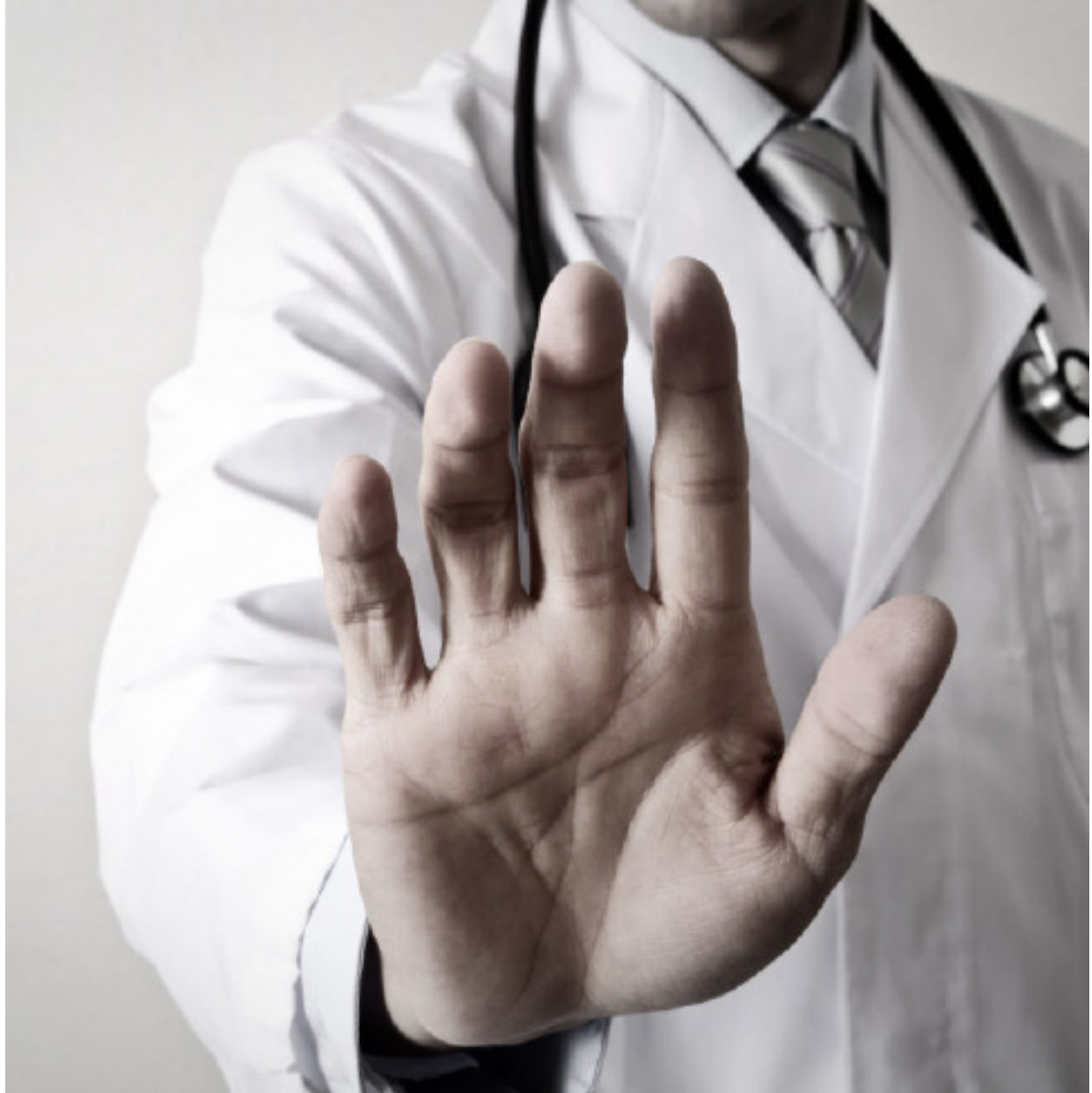
This study examines the influence of the Covid-19 pandemic on anxiety and depression symptoms among college professors, paying special attention to gender-related differences. To do that, we use data from a special survey applied to all professors from one of Mexico's largest universities six months after the start of the Covid-19 pandemic. The survey was applied online obtaining a response rate of 56.5% and a final sample of 2,716 professors. We follow an empirical strategy commonly found in the literature that involves the use of a Negative Binomial Regression Model on two mental health scales: the Hamilton Anxiety Scale and the Zung Depression Scale. Results indicate that professors who used to carry out research activities reported higher levels of anxiety and depression. On the other hand, having a suitable place to work and teach their online classes and been able to balance their family and work activities reduced both levels of anxiety and depression. All estimated coefficients were considerably higher for women than for men. These findings highlight the need for targeted prevention and intervention initiatives to alleviate anxiety and depression among teachers during difficult times.

Biography

Ernesto Aguayo Téllez has a Ph.D. in Economics from Rice University (2005). His areas of specialization are labor economics and development economics. He has postdoctoral studies at Rice University (2005) and the University of California San Diego (2006) and a sabbatical stay at California State University – Dominguez Hills (2019). Dr. Aguayo is full-time professor in the Department of Economics at the Universidad Autónoma de Nuevo León (UANL) in Monterrey, Mexico and member of the Mexican System of Researchers (SNI). Dr. Aguayo has been Director of the Center for Economic Research at UANL (2013) and Graduate Studies Coordinator in the Department of Economics of the UANL (2013-2016 and 2022-present). Dr. Aguayo has published 7 books, 13 book chapters and 25 peer reviewed articles in journals such as World Development, Applied Economics, International Migration Review, Research in Labor Economics and Growth and Change.

DAY 03

FUTURE OF PMPH 2025



VIRTUAL EVENT

5th INTERNATIONAL CONFERENCE ON

FUTURE OF PREVENTIVE MEDICINE AND PUBLIC HEALTH

MARCH 20-23, 2025

SPEAKER TALKS

FUTURE OF PREVENTIVE MEDICINE AND PUBLIC HEALTH

March 20-22, 2025



A case of Primary Aldosteronism with Rhabdomyolysis in which the First Symptoms were Thyrotoxicosis and Peripheral Paralysis

Yunuo Zhang¹, Wenjuan Ni² and Wei Wang²

¹Baotou Medical Collage, China

²Department of Endocrinology, First Affiliated Hospital of Baotou Medical Collage, China

Background: Primary aldosteronism (PA) is a major cause of secondary endocrine hypertension, especially refractory cases. Its diverse clinical manifestations can complicate diagnosis. Rhabdomyolysis (RM) is a syndrome characterized by muscle necrosis and the release of muscle cell contents into the blood circulation. There have been individual reports of RM caused by severe hypokalemia in PA patients in the past; however, whether the occurrence of RM is affected by the regulation of thyroid hormones is unclear. This report reviews atypical and uncommon PA cases to aid in diagnosis and treatment.

Case Description: A 38-year-old male presented with fatigue and bilateral lower extremity pain. He was diagnosed with abnormal thyroid function, hypokalemia, hypertension, and rhabdomyolysis (RM). Further tests revealed an adrenal cortical adenoma (aldosteronism). He also had subacute thyroiditis. After laparoscopic resection of the adenoma (Figure 5), his blood pressure and potassium normalized, and thyroid function improved without additional treatment.

Conclusions: High-risk PA patients should undergo early screening to prevent RM and other complications. For RM patients, radical treatment of the primary disease and symptomatic management are crucial. In RM associated with thyroid dysfunction, identifying the thyroid disorder's etiology guides clinical management. Considering the high prevalence and harmfulness of hyperaldosteronism in today's medicine, it is important for physicians to diagnose and treat them in a timely and correct manner, and early detection and treatment is very beneficial for patients. For doctors, we should probably discover areas that don't receive much attention in the conventional medical treatment process, and enrich the diagnosis experience, so as to propose a more complete treatment idea.

FUTURE OF PREVENTIVE MEDICINE AND PUBLIC HEALTH

March 20-22, 2025

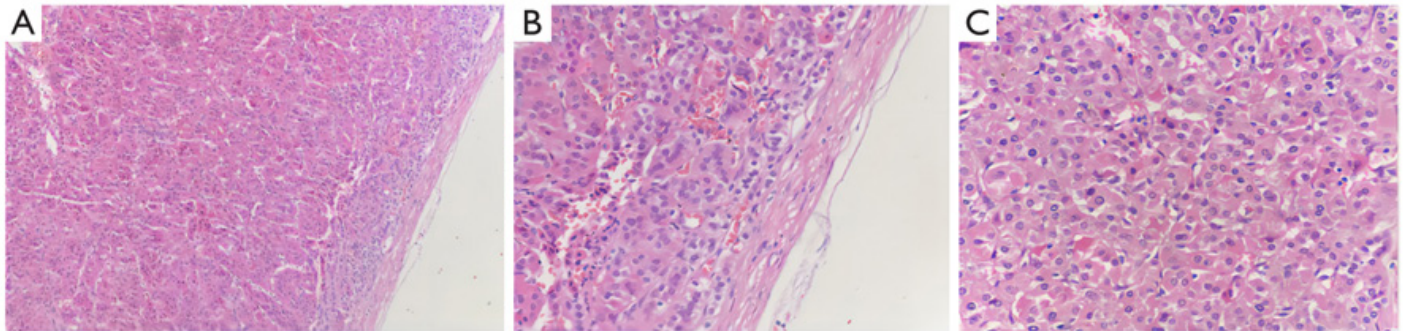


Figure 5 Histopathology.

The right adrenal tissue is consistent with the characteristics of a sebaceous adenoma. Pathological findings equipment parameters: microscope: OLYMPUS BX53; Camera: C3CMOS10000KPA; P/N: CP110000A; acquisition software: Image View Eyepieces 10×. (A) The left adrenal gland tissue meets the characteristics of sebaceous adenoma (HE, ×100). (B) Part of the capsule is complete (HE, ×200). (C) Hyperplastic mass protrudes into the surrounding fat tissue (HE, ×400). HE, hematoxylin and eosin.

Biography

She is a 27-year-old medical student with a deep fascination for endocrine and metabolic diseases. She is passionate about understanding the complexities of endocrine and metabolic disorders and is committed to improving patient outcomes through research in their pathophysiology. Her dedication drives her to explore innovative treatments, and despite the challenges, she remains determined to achieve breakthroughs in the field.

FUTURE OF PREVENTIVE MEDICINE AND PUBLIC HEALTH

March 20-22, 2025



Exploring the Interconnected Between Type 2 Diabetes Mellitus and Nonalcoholic Fatty Liver Disease Genetic Correlation and Mendelian Randomization Analysis

Yao Lu¹, Wenjuan Ni² and Wei Wang²

¹Baotou Medical Collage, Baotou, China

²Department of Endocrinology, First Affiliated Hospital of Baotou Medical Collage, China

Epidemiological and clinical studies have indicated a higher risk of nonalcoholic fatty liver disease (NAFLD) and type 2 diabetes mellitus (T2DM), implying a potentially shared genetic etiology, which is still less explored. Genetic links between T2DM and NAFLD were assessed using linkage disequilibrium score regression and pleiotropic analysis under composite null hypothesis. European GWAS data have identified shared genes, whereas SNP-level pleiotropic analysis under composite null hypothesis has explored pleiotropic loci. generalized gene-set analysis of GWAS data determines pleiotropic pathways and tissue enrichment using eQTL mapping to identify associated genes. Mendelian randomization analysis was used to investigate the causal relationship between NAFLD and T2DM. Linkage disequilibrium score regression analysis revealed a strong genetic correlation between T2DM and NAFLD, and identified 24 pleiotropic loci (Figure 2). These single-nucleotide polymorphisms are primarily involved in biosynthetic regulation, RNA biosynthesis, and pancreatic development. generalized gene-set analysis of GWAS data analysis revealed significant enrichment in multiple brain tissues. Gene mapping using these 3 methods led to the identification of numerous pleiotropic genes, with differences observed in liver and kidney tissues. These genes were mainly enriched in pancreas, brain, and liver tissues. The Mendelian randomization method indicated a significantly positive unidirectional causal relationship between T2DM and NAFLD. Our study identified a shared genetic structure between NAFLD and T2DM, providing new insights into the genetic pathogenesis and mechanisms of NAFLD and T2DM comorbidities.

FUTURE OF PREVENTIVE MEDICINE AND PUBLIC HEALTH

March 20-22, 2025

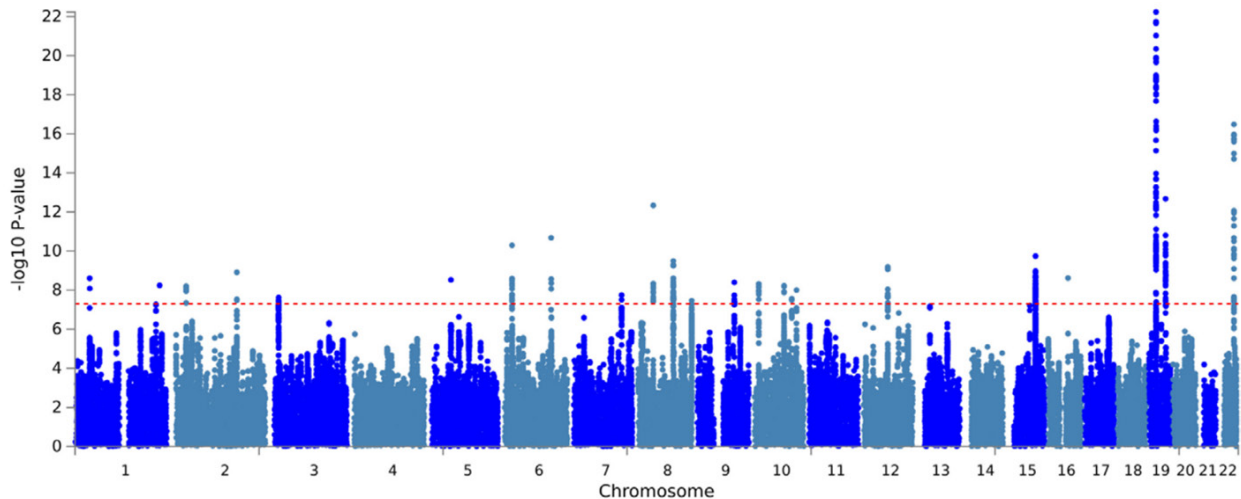


Figure 2. Manhattan map of pleiotropic loci between T2DM and NAFLD. NAFLD = nonalcoholic fatty liver, T2DM = type 2 diabetes mellitus.

Biography

She, Yao Lu, is currently a graduate student in Internal Medicine at Baotou Medical College, Inner Mongolia University of Science and Technology.

Academically, she emphasizes the integration of theory and practice, with a strong focus on innovation and exploration in internal medicine. During her graduate studies, she has actively participated in various research projects, continuously enhancing her experimental and research skills while broadening her knowledge through academic conferences.

Beyond academics, she enjoys taking on challenges and has a wide range of interests. She is adept at balancing academics, work, and personal life. With a commitment to continuous learning and innovation, she strives to make meaningful contributions to both clinical practice and medical research in the future.

FUTURE OF PREVENTIVE MEDICINE AND PUBLIC HEALTH

March 20-22, 2025



Longitudinal Patterns of Family Expressed Emotion and their Association with Adolescent Depression Rehabilitation: A Latent Transition Analysis

KODZO Lalit Dzifa, HUANG Huifang, Wang Mengjia and ZHANG Ruixing

College of Nursing and Health, Zhengzhou University, China

Background: Expressed Emotion (EE) is a widely studied psychosocial concept in psychiatry. High family EE environments are known to negatively impact mental health outcomes, particularly in vulnerable populations like adolescents recovering from depression. The purpose of this study was to investigate the longitudinal patterns of Family Expressed Emotion (FEE) and their association with adolescent depression rehabilitation.

Methods: A sample of depressed adolescents was assessed at four different time points (T1 to T4) post-discharge from a psychiatric inpatient unit. Family-expressed emotion was measured using established scales, and latent transition analysis was employed to examine the transitions between different FEE levels over time. Demographic variables such as gender and left-behind status were also analyzed to determine their impact on FEE.

Results: The study found that the rate of depression relapse among adolescents six months post-discharge was 24.6%. An increasing trend in high FEE was observed from baseline to three months, followed by a slight decrease. The study identified that adolescent depression scores at discharge, female and left-behind adolescents were more likely to be in high-FEE environments. The three-six months post-discharge had the highest likelihood of transitioning from low to high FEE.

Conclusions: The study highlights the significant role of family-expressed emotion in the rehabilitation of depressed adolescents. Parents need education on effectively managing family dynamics, particularly parents and caregivers of "Left-behind" children. The three-month mark, emerging as a critical transition period between the high and low FEE categories, makes this period crucial for targeted interventions to reduce high levels of family-expressed emotions.

FUTURE OF PREVENTIVE MEDICINE AND PUBLIC HEALTH

March 20-22, 2025

Biography

Kodzo Lalit Dzifa is a dedicated mental health nurse and health tutor with extensive experience in psychiatric care and education. Holding a Master's in Public Health from Southern Medical University and pursuing a PhD in Nursing at Zhengzhou University, Dzifa has a robust academic background. With career-spanning roles as a mental health nurse, health tutor, and research assistant, Dzifa volunteers at the Psychological Hospital of Zhengzhou Ninth People's Hospital, working with adolescents on admission, fostering patient engagement, and providing engaging psychosocial activities and education. Her research focuses on adolescent mental health, depression, and psychosocial rehabilitation. Dzifa's dedication to mental health and education extends beyond clinical practice, as she actively engages in research and community initiatives to enhance mental health awareness and support systems.

FUTURE OF PREVENTIVE MEDICINE AND PUBLIC HEALTH

March 20-22, 2025



Neuroprotective Effect of Bromelain on BDNF-TRKB Signalling Pathway in Chronic Unpredictable Stress Induced Depression Model

**Rajeshwari Parasuraman¹, Dheepthi Jayamurali², Niveditha Manoharan² and
Sathyanarayanan Govindarajalu¹**

¹Department of Physiology, Saveetha Medical College and Hospital, SIMATS, India

²Department of Physiology, Dr ALM PG IBMS, University of Madras, India

Background: Bromelain is a mixture of protease enzyme extract from the fruit or stem of pineapple plant. It has wide range of biological actions and it is most commonly used as an anti-inflammatory agent. This study was designed to investigate the antidepressant effect of bromelain on chronic unpredictable stress (CUS) induced depression in rat model by targeting various molecular mechanisms.

Methods: Adult male Wistar albino rats were divided into 5 groups; Control; Bromelain; CUS; CUS + Bromelain, CUS + fluoxetine. Animals of CUS group, CUS + Bromelain group, CUS + Fluoxetine group were exposed to CUS for a period of 30 days. Animals of Bromelain group and CUS + Bromelain group were treated orally with 40mg/kg bw Bromelain whereas positive control group was treated with 10mg/kg bw fluoxetine throughout the period of CUS.

Result: We studied the insilico analysis of antidepressant potential of bromelain by docking with various proteins involved in the pathophysiology of depression. As a result of insilico studies, bromelain showed good binding energy with IL1 β , 5-HT, BDNF, CREB and TrkB. mRNA expression of BDNF, TrkB, AKT, ERK, and IL-1 β were studied by qRT PCR. Gene expression studies showed a significant decrease in BDNF, TrkB, AKT and ERK in chronic unpredictable stress (CUS), whereas there was significant increase in case of bromelain and fluoxetine treated group. Since neuroinflammation is also one of the major concerns in the pathophysiology of depression, proinflammatory cytokines were also studied along with apoptotic markers using ELISA. ELISA results showed a significant increase in inflammatory

FUTURE OF PREVENTIVE MEDICINE AND PUBLIC HEALTH

March 20-22, 2025

cytokines in CUS and it was significantly decreased in case of bromelain and fluoxetine treated group. Similarly there was increased concentration of pro-apoptotic protein in CUS group whereas it was decreased in bromelain and fluoxetine group.

Conclusions: From the results it is clear that bromelain exerts antidepressive effect by preventing neuroinflammation and neurodegeneration and by enhancing the neurogenesis and neuroplasticity.

Biography

Rajeshwari Parasuraman is currently a Tutor in the Department of Physiology at Saveetha Medical College and Hospital. She has completed her Ph.D. from Dr. ALM PG IBMS, University of Madras, and is awaiting her public Viva Voce examination for her Ph.D. thesis.

With 10 years of research experience in Neurophysiology, Stress Physiology, and Endocrine Physiology, she has published five original research articles, two review articles, and three book chapters. She has five years of experience training postgraduate students in research projects and has collaborated on various research projects with the Endocrinology and Genetics departments.

FUTURE OF PREVENTIVE MEDICINE AND PUBLIC HEALTH

March 20-22, 2025



E-Health a Big Chance for Sustainable Rural Entrepreneurship

Rakesh Suryadevara

ICFAI Law School, India

Rural entrepreneurship is essential to changing healthcare delivery and access in underprivileged areas, especially in the field of e-health. This study examines the relationship between technology and rural health, emphasizing the ways in which e-health programs can enable regional business owners to take on healthcare-related challenges.

In rural areas, where access to healthcare is limited and can result in subpar health outcomes, the digital divide frequently makes health disparities worse. E-health provides creative ways to close this gap, including telemedicine, mobile health apps, and electronic health records. Rural business owners can develop long-term business plans that stimulate economic growth and offer healthcare services by utilizing technology.

This study looks at successful e-health initiatives in rural areas, highlighting the ways in which these programs have increased community engagement, improved health literacy, and improved access to care. The incorporation of culturally sensitive practices, community needs assessment, and local partnerships are important elements in these businesses' success.

The study also discusses the difficulties faced by rural e-health entrepreneurs, including financial constraints, technological impediments, and legal restrictions. There is discussion of various approaches to getting past these barriers, such as the value of public-private partnerships, infrastructure spending, and government support.

To sum up, e-health presents a big chance for rural entrepreneurship since it helps communities address healthcare inequities and boost local economies. Through the utilization of technology and the empowerment of local innovators, rural areas can improve health outcomes, stimulate economic growth, and establish robust healthcare systems. In order to fully realize the potential of rural entrepreneurship in the healthcare industry, this paper promotes additional research and funding for e-health initiatives.

FUTURE OF PREVENTIVE MEDICINE AND PUBLIC HEALTH

March 20-22, 2025



Prospects for using M-Health Systems in Smart Clothing using Neural Networks and 5G (6G)

Rustam Singatulin and Nadezda Dyakova

Engineering and technology group "Kosh-Kort", Russian Federation

The active integration of information technologies into healthcare requires significant investment of both financial and multifaceted social resources. The application of Big Data technologies and inclusive m-Health systems will enhance individual health and recreational outcomes and improve overall quality of life, which holds increasing importance in a highly technologically advanced society.

Modern personalized m-Health systems, developed using flexible micro- and nanoelectronics, are sophisticated, highly efficient solutions for health monitoring. The architecture of these systems relies on cutting-edge thin-film technologies, including Atomic Layer Deposition (ALD) or Structural and Functional Microcellular Elements (SFME) coatings on flexible substrates. These coatings, such as organic light-emitting diodes, are managed by a self-learning neural network-based system. A heterogeneous m-Health system integrated with a neural network automatically identifies key classification features of measured physiological parameters, optimizing the diagnostic process. The technology enables both online and offline tracking and visualization of measurement processes. The system outputs a three-dimensional description of the shape and dynamics of an object in a specified format, which can be visualized as a virtual 3D object. Classification features of the measured physiological parameters form a digital profile of the user, providing an additional degree of personalization.

A priority area for m-Health is the development of intermediary systems for personal diagnostics, rehabilitation support, and treatment process adjustment. The integration of m-Health systems with personal biomedical data processing centers opens opportunities for creating global databases that will account for all genetic specifics of patients and

FUTURE OF PREVENTIVE MEDICINE AND PUBLIC HEALTH

March 20-22, 2025

enable oversight of the treatment process itself.

The use of 5G technologies (and future 6G technologies), including mass MIMO data transfer, device-to-device data transfer, network separation, wireless charging in a Wi-Fi environment, human protection from high-frequency electromagnetic fields and potential integration with the Internet of Things, opens up new prospects for using these technologies in smart clothing.

Biography

Dr. Rustam Singatulin, (Ph.D. in archaeology), Professor at the Russian Academy of Natural Sciences, Honorary Doctor of Sciences. Author of more than 150 scientific works, monographs, and patents. His research interests include multispectral photogrammetry, neural networks in humanities and natural sciences, non-invasive technologies in archaeology, geophysics, biology, and medicine, as well as high-performance virtual educational and research systems. For over 20 years, he taught as an Associate Professor at Saratov State University and headed the Laboratory of Information Technologies in Humanities and Natural Sciences. He is a full member of the Russian Academy of Natural Sciences, a research fellow at the Saratov branch of the Institute of History of the Academy of Sciences of the Republic of Tatarstan, and an Honored Worker of Higher Education of the Russian Federation. Currently, Dr. Rustam Singatulin leads the non-profit engineering and technology group "Kosh-Kort," uniting independent researchers in neural network technologies in m-Health and virtual and augmented reality systems.

FUTURE OF PREVENTIVE MEDICINE AND PUBLIC HEALTH

March 20-22, 2025



Applied Distance Learning Methods in Disaster Preparedness: A Systematic Review

**Sarvin Bosak^{1,2}, Ali Namaky³, Hamidreza Aghababaeian^{2,4}, Jafar Bazyar⁵,
Dariush Rokhafroz⁶ and Sadegh Ahmadi-Mazhin⁷**

¹Department of Nursing, School of Nursing and Midwifery, Dezful University of Medical Sciences, Iran

²Center for Climate Change and Health Research (CCCHR), Dezful University of Medical Sciences, Iran

³Department of Medical Education, Virtual School of Medical Education and Management, Shahid Beheshti University of Medical Sciences, Iran

⁴Department of Medical Emergencies, Dezful University of Medical Sciences, Iran

⁵Faculty of Nursing and Midwifery, Department of Nursing, Ilam University of Medical Sciences, Iran

⁶Nursing Care Research Center in Chronic Diseases, School of Nursing and Midwifery, Ahvaz Jundishapur University of Medical Sciences, Iran

⁷Department of Public Health, School of Health, Ahvaz Jundishapur University of Medical Sciences, Iran

Background: Nowadays, accidents and disasters are one of the most important issues facing humans. Training is an important feature in disasters and distance learning is a suitable method for education in every place and at every time.

Aim of this study was determination distance learning methods in disaster preparedness.

Method: This study was conducted to this question: what types of distance learning methods can use in disaster preparedness?". In this study, all published English language papers, with no time limit, were extracted by the end of December 2021 through search in PubMed, Scopus, Google scholar, ISI WOS (Web of Science), and Embase. The primary search used "distance learning", "disaster" and their MeSH terms. Quality appraisal carried out with CASP. Information in the articles including study time, study population, e-learning methods, and type of disasters or emergencies were extracted. Based on the search, 46 studies were carried out between 2002 and 2021.

Results: Results presents at table 1. The most studied target group in the studies was health

FUTURE OF PREVENTIVE MEDICINE AND PUBLIC HEALTH

March 20-22, 2025

professionals and the content of the courses was attributed to disaster preparedness as well as biological disasters. Regarding e-learning methods, the most used method was 'simulation'. At the time of disasters, including pandemics, disruption in education may be long-term and may require overlapping response and recovery periods. virtual education during a disaster may be rejected or endorsed by individuals or groups based on cultural, ideological, or prejudicial issues.

Conclusion: Distance education can be used for effective disaster education in different phases of the disaster cycle, depending on the available facilities and infrastructure.

Row	Author	Year	Study Population	Method	Educational content	Quality
1	A. Appolloni et al[21]	2021	the Italian higher education system	Disaster Medicine Online (DMO) - distance-learning course	COVID-19 outbreak	high
2	V. Abou-Khalil et al[22]	2021	students	mixed-methods study according to the Moore's interaction framework for distance education	emergency online classes in low-resource settings	high
3	V. Cooper et al[23]	2020	university instructors and the practitioners of emergency management	Web-based simulations (WBS)	disaster studies curriculum	high
4	Z. Bojović et al[24]	2020	students and teachers	distance learning model	COVID-19 outbreak	high
5	A. Al Lily et al[25]	2020	Arab culture	Distance education	COVID-19 outbreak	high
6	P. Gawłowski et al[26]	2020	students of emergency medical services as well as professional paramedics	virtual medical simulators	COVID-19 outbreak	medium
7	K. Thompson et al[27]	2020	student	online learning	disaster preparedness	high
8	A. Sindiani et al[28]	2020	undergraduate medical students at the Jordan University of Science & Technology	online learning	COVID-19 outbreak	high

FUTURE OF PREVENTIVE MEDICINE AND PUBLIC HEALTH

March 20-22, 2025

9	F. Ferri et al[29]	2020	First step: international specialists from various sectors Second step: leaders' opinion on the basis of secondary online sources, such as web articles, statistical data and legislation	remote teaching	COVID-19 outbreak	high
10	E. Hussein et al[30]	2020	undergraduate students	online learning	COVID-19 outbreak	medium
11	P. Vollbrecht et al[31]	2020	students and teachers	Virtual learning	COVID-19 outbreak	high
12	N. El-Ghannour et al[32]	2020	neurosurgeons	Virtual learning	COVID-19 outbreak	high
13	A. Shelgikar [33]	2020	sleep medicine educators	distance learning	COVID-19 outbreak	medium
14	M. Dushkevych et al[34]	2020	students	distance learning	outbreak of pandemic	high
15	B. Williamson et al[35]	2020	-	distance education	COVID-19 outbreak	high
16	S. Ahmady et al[36]	2020	students	virtual education	COVID-19 outbreak	high
17	S. Farra et al[37]	2019	newborn intensive care unit (NICU) workers	virtual reality simulation (VRS)	evacuation training	medium
18	T. Najafi Ghezleh et al[2]	2019	emergency nurses	virtual social networks	disaster preparedness	high
19	Z. Edinger et al[38]	2019	disaster responders and critical care transporters	online educational intervention	care for vulnerable groups after disasters and emergencies	high
20	E. McCoy et al[39]	2019	Participants in EMS course	through utilizing telesimulation and wearable/mobile technology	MCI triage course	medium
21	H. Aghababaeian et al [40]	2019	pre-hospital students	Web-based education -Offline audio and video podcasts	Triage	high

FUTURE OF PREVENTIVE MEDICINE AND PUBLIC HEALTH

March 20-22, 2025

22	F. Price et al[41]	2018	health professionals	comparing Virtual Reality to Clinical Simulation in a Mass Casualty Incident	START (Simple Triage and Rapid Treatment) triage	high
23	P. Leszczyński et al[42]	2018	undergraduate students of emergency medicine and nursing	Web-based learning	e-learning course on emergency medicine	high
24	H. Baytiyeh [43]	2018	students and staffs	online education	post-earthquake school closures	high
25	G. Baltos et al[44]	2018	-	distance and technology-based learning	disaster preparedness	high
26	V. Unver et al[4]	2018	senior nursing students	simulation	disaster preparedness	high
27	W. Xu et al[45]	2016	emergency public health personnel	e-learning pilot program	disaster preparedness	high
28	S. Ahmad et al[46]	2015	students	Open and Distance Learning (ODL)	disaster preparedness	medium
29	J. Molka-Danielsen et al[47]	2015	interviews with two representatives of an emergency management training organization in petroleum industry	explore and discuss how a decision-making model can form the basis for a pedagogical	opportunities and challenges for applying virtual reality-based learning environments	high
30	C. Shannon[48]	2015	Baccalaureate nursing students	simulated mass casualty incident	disaster preparedness	medium
31	S. Farra et al[49]	2015	healthcare professionals	Ace Star Model	The Ace Star Model functions as a worthy framework to translate the VRS teaching methodology and ameliorate disaster training of healthcare professionals	high
	H. Aghababaeian et al [50]	2013	pre-hospital staff	Web-based education -Offline educational video presentation	Triage	medium

FUTURE OF PREVENTIVE MEDICINE AND PUBLIC HEALTH

March 20-22, 2025

32	S. Farra et al[51]	2013	nursing students	virtual reality simulation	disaster training	high
33	S. Farra[52]	2012	nursing students	virtual reality simulation	disaster training	high
34	S. Farra et al[53]	2012	healthcare workers	virtual reality simulation	disaster training	medium
35	I. Rendá-Tanali et al[54]	2011	students	online scenario simulation	disaster preparedness	medium
36	D. Roe et al[55]	2010	students	e-learning	potential benefits, pitfalls and barriers to adopting e-learning in emergency medicine	high
37	L. Attack et al[56]	2009	Undergraduate students	eight-week online course	disaster preparedness	high
38	C. Monahan et al[3]	2009	federal, state, and local workers as well as emergency volunteers	Virtual exercises	emergency scenarios ranging from pandemic influenza to bioterrorism and dirty bombs	high
39	P. Youngblood et al[57]	2008	medical students' and resident physicians	comparison of online virtual emergency department (Virtual ED) with High-fidelity patient simulators (PSs)	team training in crisis management	medium
40	E. Macario et al[58]	2007	public health nurses	distance learning	Preparing for pandemic influenza	high
41	L. Casebeer et al[59]	2006	physicians	online bioterrorism continuing medical education (CME)	preparing physicians to better diagnose emerging rare infections	high

FUTURE OF PREVENTIVE MEDICINE AND PUBLIC HEALTH

March 20-22, 2025

42	T. Tern-drup[60]	2005	emergency physi- cians and nurses	Screensavers and Web-based education	competency and aware- ness with regard to re- sponding to incidents of bioterrorism	high
43	T. Haile-Mari- am et al[61]	2005	emergency medical practitioners	Distance-based learn- ing and telecommuni- cations	emergency medicine training	medium
44	A. Lund et al[62]	2002	health care profes- sionals	Disaster Medicine Online	disaster pre- paredness	high
45	R. Gran- lund[63]	2001	-	group distance exer- cise (GDE)	disaster train- ing	high

Biography

Dr. Sarvin (Somaieh) Bosak is assistant professor in medical education. She is faculty members for 14 years also she is researchers at medical education, nursing, health policy and human resources for health. Plus, she is collaborator with secretaries of the Development Council of the Ministry of Health and Medical Education (MOHME) in Iran.

FUTURE OF PREVENTIVE MEDICINE AND PUBLIC HEALTH

March 20-22, 2025



Ambulatory Electrocardiography in Preventive Medicine and Public Health Empowerment

Theeban Raj¹, Kalaivani Chellappan¹ and Rabani Remli²

¹Faculty of Engineering & Built Environment, Universiti Kebangsaan Malaysia, Malaysia

²Faculty of Medicine, Universiti Kebangsaan Malaysia, Malaysia

This study presents a remote ambulatory EEG system designed to improve epilepsy management through preventive healthcare to address public health challenges in remote and underserved areas. The primary objective is to enhance healthcare accessibility and enable early disease intervention by leveraging EEG signal analysis powered by advanced Machine Learning (ML) and Deep Learning (DL) techniques. The system facilitates comprehensive epileptic monitoring and personalized medical recommendations as detailed in Table 1. The framework integrates real-time EEG data acquisition via wearable devices, pre-processing to minimize noise, and Artificial Intelligence driven diagnostic analysis to extract high-precision insights. A cloud-based architecture (Figure 1) ensures scalability and accessibility, while expert verification mechanisms validate diagnostic outputs for clinical reliability. Key methods include signal preprocessing, feature extraction and model training using extensive clinical datasets. The system has been rigorously tested for reliability and scalability in remote healthcare settings, underscoring its potential to address public health challenges in areas with limited medical infrastructure. The system achieved an accuracy of 85% in detecting epileptic discharges, demonstrating its robustness and suitability for real-world applications. By providing continuous health monitoring and expert-verified diagnostics, the remote EEG system supports early intervention, personalized medical recommendations, and scalable public health strategies. In conclusion, the remote ambulatory system offers a transformative approach to preventive medicine, bridging healthcare gaps in remote areas and empowering communities with accessible and reliable healthcare solutions. The proposed framework establishes a strong foundation for future advancements in remote health diagnostics. Future work will focus on expanding its

FUTURE OF PREVENTIVE MEDICINE AND PUBLIC HEALTH

March 20-22, 2025

capabilities to monitor other neurological and physiological conditions, further enhancing its role in global preventive healthcare.

Table 1: Applications of Ambulatory EEG in Epilepsy Management

No.	Application	Description	Key Benefits
1	Remote Monitoring	Continuous EEG monitoring in patients' homes via wearable devices.	Enables personalized treatment plans and reduces hospital visits.
2	Primary Healthcare	Integration in primary healthcare settings for early detection of epileptic activity.	Facilitates early intervention and reduces delays in treatment.
3	Long-Term Monitoring	Extended EEG recording to capture infrequent or nocturnal seizures.	Improves accuracy in diagnosing epilepsy types.
4	Emergency Use	Rapid deployment in emergency settings for seizure assessment.	Provides quick diagnostic insights, enabling timely medical decisions.
5	Post-Surgical Follow-Up	Tracking brain activity after epilepsy surgery.	Assesses surgical outcomes and aids in rehabilitation planning.
6	Clinical Trials and Research	Collecting data for studies on epilepsy and evaluating treatment efficacy.	Advances scientific understanding and innovation in epilepsy care.
7	Mobile/Portable Solutions	Lightweight, portable EEG systems for patients in underserved areas.	Increases accessibility to diagnostic tools in remote regions.
8	Detection of Subclinical Seizures	Identifying non-obvious seizures that may go unnoticed during regular clinical visits.	Supports early diagnosis and prevents seizure progression.
9	Behavioral Correlation	Linking EEG data with behavioral changes (e.g., during suspected seizures).	Provides holistic patient insights for tailored therapies.

FUTURE OF PREVENTIVE MEDICINE AND PUBLIC HEALTH

March 20-22, 2025

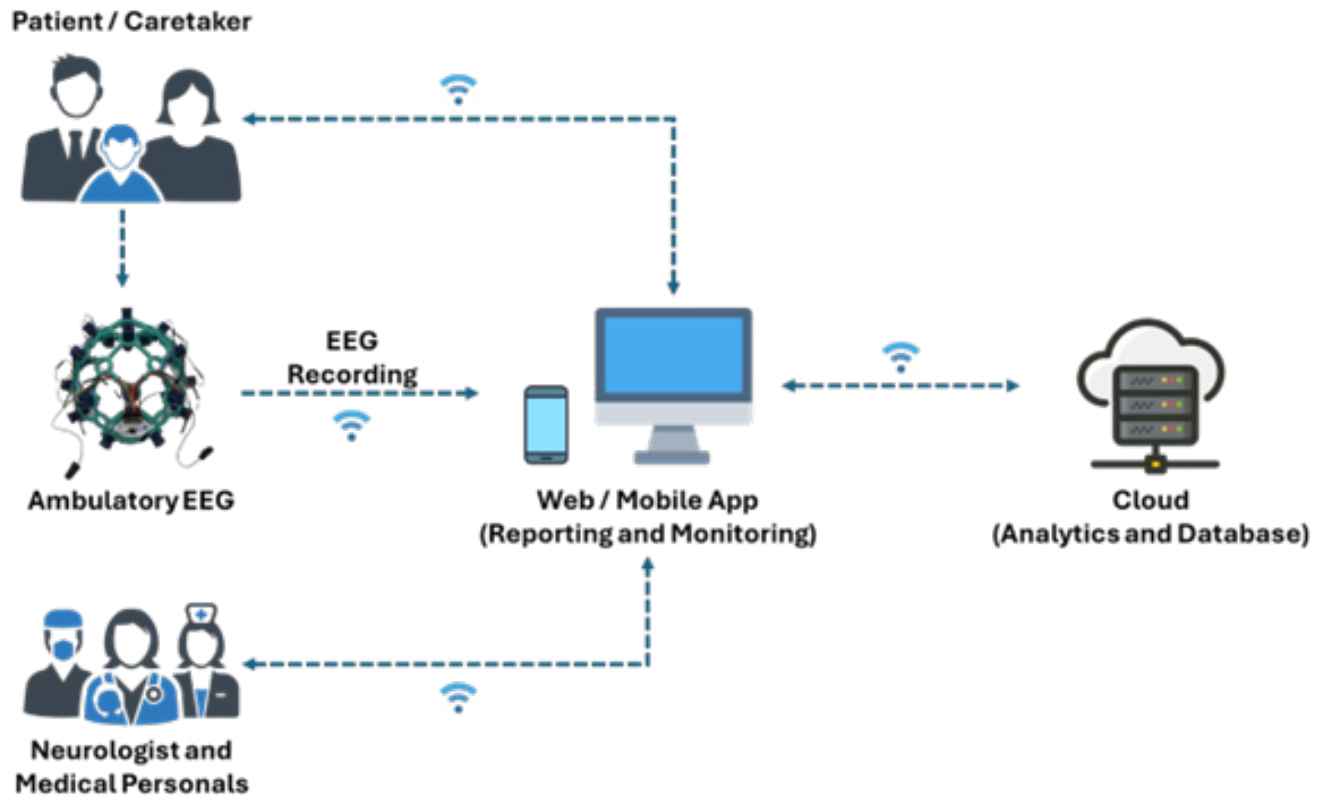


Figure 1: Cloud-based Epilepsy Management Architecture

FUTURE OF PREVENTIVE MEDICINE AND PUBLIC HEALTH

March 20-22, 2025



User Experience for Inclusion: Analysis of WCAG 2.2 in Pharmacy App for Visually Impaired Group

Shibanee Mishra and Shanu Sharma

School of Planning and Architecture, India

The rapid growth of the Indian e-commerce market, particularly since the COVID-19 pandemic, has significantly transformed shopping behaviors. While this digital shift has enhanced convenience for many, it has also highlighted critical accessibility gaps that prevent visually impaired users from fully engaging with e-commerce platforms. Despite global efforts to create inclusive digital experiences, many Indian e-commerce websites fail to provide essential accessibility features such as alternative text for non-text content, keyboard navigation, and screen reader compatibility. These barriers limit independent shopping experiences for users who rely on assistive technologies.

The Web Content Accessibility Guidelines (WCAG) 2.2 offer a structured framework for improving digital accessibility. However, these guidelines primarily focus on compliance rather than optimizing the overall user experience for individuals with visual impairments. While they address fundamental accessibility issues, they often do not account for real-world challenges faced by visually impaired users when navigating complex e-commerce interfaces, especially in pharmacy applications where precision in medication selection is crucial.

This paper examines the limitations of WCAG 2.2 through a detailed literature review, UX audits, and user studies with visually impaired individuals. Our research highlights specific shortcomings in current accessibility standards and emphasizes the need for a more user-centered approach. We propose integrating AI-driven solutions such as intelligent chatbots, image recognition technology, and personalized screen reader enhancements to bridge accessibility gaps in e-commerce. By adopting a holistic framework that includes real-world user testing, iterative design improvements, and emerging technologies, we advocate

FUTURE OF PREVENTIVE MEDICINE AND PUBLIC HEALTH

March 20-22, 2025

for a more inclusive and seamless shopping experience for visually impaired individuals. Our findings contribute to the ongoing discourse on accessibility and offer actionable recommendations for e-commerce platforms aiming to enhance digital inclusivity in the Indian market.

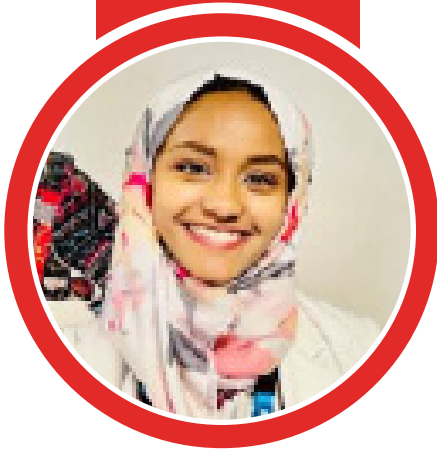
Biography

Shibanee Mishra is a UX Designer at f1studioz, a Bangalore-based design agency, driven by the philosophy: "Be the designer who leaves the world a little more inclusive than you found it." She holds an M.Des in Visual Communication, where her passion for accessibility took shape. Her post-graduation research on e-commerce accessibility for visually impaired users was presented at India HCI 2024 at IIT Bombay and published in Springer Nature.

Beyond research, Shibanee actively integrates accessibility into her UX work, preparing accessibility documentation, implementing WCAG 2.2 guidelines, and improving compliance scores to Level AAA across various projects. With a deep commitment to inclusive design, she strives to make digital experiences more accessible and equitable.

FUTURE OF PREVENTIVE MEDICINE AND PUBLIC HEALTH

March 20-22, 2025



Prevalence and Correlates of Generalized Anxiety Disorder and Perceived Stress Among Sudanese Medical Students

Danya Ibrahim¹, Reem Mohamed Ahmed¹, Ayman Zuhair Mohammad², Basil Ibrahim², Tibyan Mohammed³, Mona Elfadl Mohamed¹, Tibyan Abdelgadir¹, Baraah Mohammed¹, Moneib Ibrahim¹ and Kamil M. A. Shaaban^{2,4}

¹Faculty of Medicine, University of Khartoum, Sudan

²Faculty of Medicine, Department of Psychiatry, University of Khartoum, Sudan

³Faculty of Medicine, Department of Surgery, University of Khartoum, Sudan

⁴Faculty of Medicine, Department of Community Medicine, University of Khartoum, Sudan

Background: Generalized Anxiety Disorder (GAD) causes significant disturbance in an individual's well-being and activity. Whereby, interfering with the dynamic progress in life. Also, anxiety is a product of stress and a major predictor of academic performance. This study aimed to assess the prevalence of Generalized Anxiety Disorder (GAD), measure levels of anxiety and perceived stress, evaluate the academic profile, identify lifestyle characteristics, and explore the relationship between these factors.

Methods: In this cross-sectional study, 340 Sudanese medical students filled out online questionnaires, composed of the sociodemographic and lifestyle characteristics, academic profile, Generalized Anxiety Disorder-2 scale (GAD-2), and Perceived Stress Scale-10 (PSS-10). Descriptive and inferential statistics were applied using Statistical Package for Social Science (SPSS) Version 20.0 for data analysis.

Results: Of 340 medical students, 3.8% of them were diagnosed with GAD, while 29.1% scored ≥ 3 in GAD-2, indicating a possible diagnosis. The study found that 9.7% of the participants used addictive substances, with 42% of them having high GAD-2 scores. Moreover, high anxiety levels were associated with high-stress scores (p -value = 0.000). Also, high GAD-2 scores were significantly associated with students who spent less than 10,000 SDG (18 USD) weekly, spent more time on entertainment using smart devices (p -value = 0.004), and had an unhealthy diet (p -value = 0.004). Low anxiety levels were associated with better sleep

FUTURE OF PREVENTIVE MEDICINE AND PUBLIC HEALTH

March 20-22, 2025

quality (p-value = 0.00), satisfaction with religious practices (p-value = 0.00), and increased leisure/hobby time (p-value = 0.018). High-stress levels were observed in females (p-value = 0.035), those with lower academic performance satisfaction levels, and increased hours of smart device usage for entertainment (p-value = 0.001). Reduced stress levels were associated with being ≥ 23 years old, increased leisure/hobby time (p-value = 0.002), satisfaction with religious practices [$F(3, 166.6) = 10.8$, p-value = 0.00], and having a healthy diet (p-value = 0.006).

Conclusion: The low prevalence of GAD corresponded with previous literature, but 29.1% of medical students had a high probability of having GAD. The study emphasizes on providing accessible mental health services for medical students and interventions addressing modifiable risk factors.

Fig. 1: Prevalence of GAD among Sudanese medical students using the GAD-2 scale

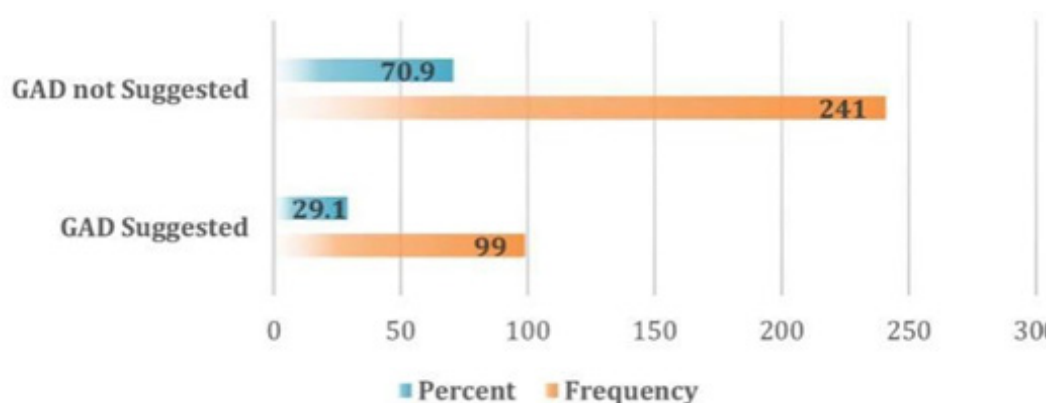
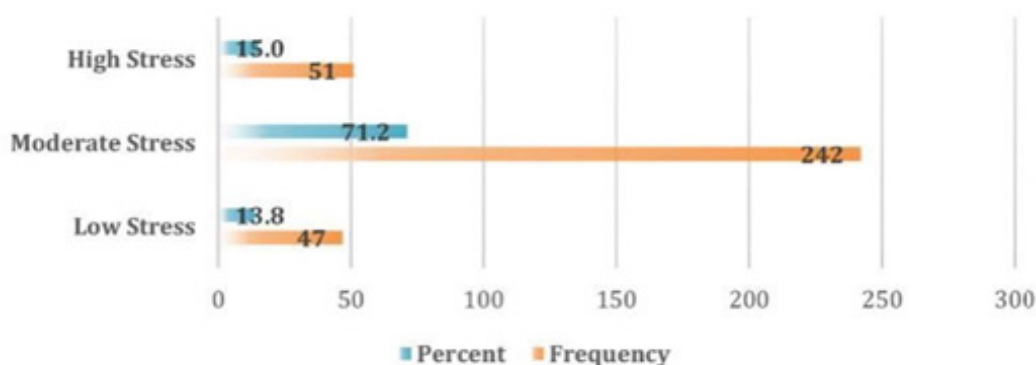


Fig. 2: Levels of perceived stress among the participants



FUTURE OF PREVENTIVE MEDICINE AND PUBLIC HEALTH

March 20-22, 2025

Biography

Dr. Danya is a recent medical graduate with an MBBS degree from Khartoum University, Faculty of Medicine. She is an enthusiastic and skilled researcher with a proven track record in leadership, management, and teamwork. During her time in medical school, she held various roles, including former head of the Research and Surveys Office at the Mental Health Advocacy Student Association (MASA) and chair of MASA's Evaluation Committee. Additionally, Dr. Danya is a student associate of the Royal College of Psychiatrists (RCPsych) and an aspiring psychiatrist. She presented six abstracts at the RCPsych International Congress in 2023 and 2024. Professional and eager to learn, Dr. Danya is dedicated to collaboration and innovation, particularly in the fields of psychiatry, mental health initiatives, and research projects.

FUTURE OF PREVENTIVE MEDICINE AND PUBLIC HEALTH

March 20-22, 2025



Gestational Dominance and War: What Awaits Ukraine?

**Gulsym Manasova^{1,2}, Mykola Shapoval^{1,2}, Igor Shpak^{1,2}, Zhovtenko Olesja¹,
Natalia Kuzmin^{1,2} and Stasii Yana^{1,2}**

¹Odessa National Medical University, Ukraine

²Municipal non-profit enterprise "Maternity Hospital №5" Odessa City Council, Ukraine

Objective: Under the influence of negative pathogenic factors, which certainly include War, changes in the central nervous system of a pregnant woman can lead to a violation of physiological adaptation mechanisms and affect gestational dominance (GD).

Method: On April 7, 2022, the «Renaissance» project was started at the Maternity Hospital No. 5 in Odessa, Ukraine, aimed at providing medical and social support to pregnant and postpartum women. A prospective study of the psychosomatic state of women is being conducted through online surveys using the Dobryakov-Arshavsky questionnaire and the provision of appropriate medical and psychological assistance. As of November 1, 2024, 731 women took part in the project, including 465 (63.6%) pregnant and 266 (36.4%) postpartum women. There were 138 (18.9% - Group I) women living in the active hostilities zone (AHZ), 504 (68.9% - Group II) – outside the AHZ in Ukraine and 89 (12.22% - Group III) – displaced women living outside Ukraine.

Results: The psychological component of the GD in accordance with groups I, II and III was characterized by the prevalence of the optimal (34.7 %, 38.5 % and 35.9 %) or euphoric types (37.7 %, 36.9 % and 33.7 %). Every ninth woman in the groups had a hypogestognosic type (11.6 %, 10.11 % and 13.4 %), the anxious type – in 13.5% of women on average; depressive - in 3%, 1.9% and 3.4%, respectively (Fig. 1).

FUTURE OF PREVENTIVE MEDICINE AND PUBLIC HEALTH

March 20-22, 2025

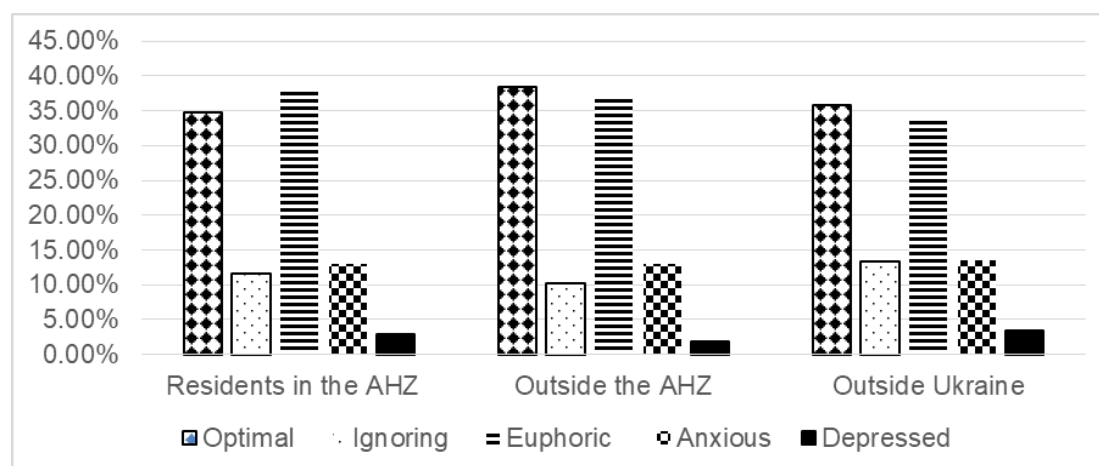


Fig. 1. The nature of gestational dominant in the study participants.

A significant difference was found between the the number of women with a maximum of 9 points on the GD scale (27.6 ± 21.18 , 100.8 ± 84.41 and 17.8 ± 12.6 , respectively, (Tabl.1).

Tabl.1. Psychological component of gestational dominance in groups

Group	Active HZ	Outside AHZ,	Outside Ukraine
Indicators	I gr, n = 138	II gr., n = 504	III gr, n= 89
$\sum X$	138	504	89
Mean	27,6	100,8	17,8
$\sum X^2$	5604	79107	2221
Std.Dev.	21.1849	84.4174	12.6174

Note: $f=3.96962$, $p=.047516$.

70% of women refused psychological help, 70% of women refused psychological help - they cope on their own; 10% received help and are satisfied with the result, 24% received it but want to continue.

Conclusions: Despite the continuation of the War, the nature of the psychological component of GD in Ukrainian women indicates its high priority, faith and attitude to obtain a positive pregnancy experience

Biography

Gulsym Manasova is an Honored Doctor of Ukraine, PhD, MD, and Professor at the Department of Obstetrics and Gynecology at Odessa National Medical University. She has an extensive 38-year career in medicine, including 22 years of scientific and pedagogical experience and 10 years of healthcare organization expertise.

Dr. Manasova has played a significant role in shaping medical practices and policies. She has served as an Expert for the National Health Services of Ukraine in the field of "Pregnancy and Childbirth" from 2022 to 2024. Since 2019, she has been the Chairman of the Presidium of the Odesa Branch of the Association of Obstetricians and Gynecologists of Ukraine, contributing to the advancement of women's health in the country.

FUTURE OF PREVENTIVE MEDICINE AND PUBLIC HEALTH

March 20-22, 2025

Her contributions to academic research and publishing are notable. She is a Member of the Editorial Board of the "Maritime Medicine Bulletin", published by the Ministry of Health of Ukraine, and a Reviewer for "The Journal of Nutritional Biochemistry" for 2023–2024. Additionally, she is a Member of the Academic Council of the Faculty of Postgraduate Education at ONMedU, actively involved in shaping medical education.

Dr. Manasova has an impressive research portfolio, with 160 scientific articles, 6 monographs, 10 methodological recommendations, and 20 invention patents to her name. She is recognized in the scientific community through her ORCID ID (0000-0002-1600-5215), Web of Science Researcher ID (Z-1550-2018), Scopus Author ID (57202890643), and Google Scholar Profile (sFNxJxkAAAAJ&hl=uk).

Her dedication to obstetrics, gynecology, and medical education has significantly impacted the healthcare landscape in Ukraine and beyond.

FUTURE OF PREVENTIVE MEDICINE AND PUBLIC HEALTH

March 20-22, 2025



Estimating the Risk of Cancer Incidence and Radiation- Induced Cancer Death of Children Patients Undergoing Digital Radiology X-Ray Examinations

Khatereh Shamsi² and Behzad Mohsenzadeh¹

¹Department of Biomedical Engineering and Medical Physics, School of Medicine, Shahid Beheshti University of Medical Sciences, Tehran

²Department of Medical Physics, Radiobiology and Radiation Protection, School of Medicine, Babol University of Medical Sciences, Iran

Background: It is generally accepted that children are more sensitive to radiation than adults and have a higher relative risk of cancer. The longer life expectancy after exposure increases the risk of developing radiation-associated malignancies.

Purpose: This study aims to estimate the risk of cancer incidence and radiation-induced cancer death of children patients undergoing digital radiology X-ray examinations.

Material and methods: In this study, data were collected retrospectively from 15 radiography rooms in the major radiology centers in Mazandaran province (Iran). The information of 12 common digital radiography examinations including pelvis (in the anteroposterior projection (AP)), skull (in the two-lateral projection (LAT) and posteroanterior projection (PA)), abdomen (AP), cervical vertebra (AP and LAT), chest (PA and LAT), lumbar vertebra (AP and LAT), thoracic vertebra (AP and LAT) examinations which was recorded from 10 to 15 years old patients. The Entrance Surface Air Kerma (ESAK), Entrance Skin Dose (ESD), and Organ Effective Dose (ED) were measured. Finally, the risk of cancer incidence and Risk of Exposure-Induced cancer Death (REID) values were estimated for these patients.

Results: In total, 1800 (983 females and 817 males) patients (10–15 years old) were included in this study. Across all procedures, the lowest ED belonged to the skull (PA) examination (10.40 μ Sv), and the highest ED belonged to the AP abdominal imaging technique (378.46 μ Sv). The highest ESD was related to the lumbar spine (LAT) projection (3.62 $\pm$ 1.38 mGy)

FUTURE OF PREVENTIVE MEDICINE AND PUBLIC HEALTH

March 20-22, 2025

and the least to the cervical vertebra (AP) view (0.97 ± 0.21). It was also shown that the differences in cancer incidence and radiation-induced cancer death values in male and female patients were not statistically significant.

Conclusion: The result showed that ESDs are influenced by various factors that affect patients' dose distributions, so through the optimization of imaging parameters, image quality can be increased and the patient dose reduced. These actions will necessarily decrease the risk of cancer incidence and radiation-induced mortality risk. Further studies are recommended to assess the workplace environment and practical training in radiology institutions, along with the quality control tests of radiology devices.

Biography

Khatereh Shamsi is a graduate with a Master's degree in Radiobiology from Babol University of Medical Sciences in 2019. She has worked in the fields of dose calculation, DRL, and estimating various types of cancer for different age groups using the Barracuda X-ray analyzer RTI. Since 2020, she has been working at the Nuclear Medicine Research Center in Bushehr in the areas of dosimetry, calibration, radiation protection, and cancer. Currently, her interests are in the field of protection, and estimation of secondary cancers in medical imaging using artificial intelligence.

FUTURE OF PREVENTIVE MEDICINE AND PUBLIC HEALTH

March 20-22, 2025



Fixation of Depressed Posterolateral Tibial Plateau Fractures Using a Direct Lateral Approach

Reza Noktehsanj¹, Keyvan Amini² and Payman Amini³

¹Department of Surgery and Orthopedics, Ardabil University of Medical Sciences, Iran

²Department of Emergency, Ardabil University of Medical Sciences, Iran

³School of Medicine, Ardabil University of Medical Sciences, Iran

Fixation of plateau posterolateral fracture (PLF) is challenging because the fracture site is mostly covered by vital neurovascular structures. We operated on 15 cases of PLF using a direct lateral approach. Between 2017 and 2019, 15 cases of PLFs were fixed with a direct lateral approach and a tricortical autologous bone graft from the iliac crest. A depression of more than 2 mm was indicated for the surgical treatment. Clinical evaluation included Lysholm score, International Knee Documentation Committee Score (IKDC) score, and Tegner activity scale. The last follow-up was at 24 months after the operation. The mean postoperative Tegner activity scale did not change significantly compared to before the injury (6.5 (6–7) vs. 7 (6–8, $p = 0.5$)). The postoperative IKDC and Lysholm scores improved significantly compared to before the operation ($p < 0.001$). The full range of motion was seen in all patients except one who was manipulated after three months. Surgical treatment using a direct lateral approach is a safe procedure for PLFs that results in good, short-term clinical and radiologic outcomes without fibular osteotomy or compromising the important neurovascular structures. This study offers a less invasive with better exposure and direct reduction of the fracture fragments in PLFs. The advantages of the presented lateral approach include a direct vision for anatomic reduction, the ability to dispense with fibular osteotomy, and the preservation of soft tissue around the posterolateral corner of the tibia plateau.

Biography

Dr. Reza Noktesanj is an Assistant Professor at Ardabil University of Medical Sciences, Iran. He is an orthopedic surgeon and holds a fellowship in knee replacement surgeries. Additionally, Dr. Noktesanj serves as the Education Deputy at Ardabil University of Medical Sciences.

FUTURE OF PREVENTIVE MEDICINE AND PUBLIC HEALTH

March 20-22, 2025



Aerial Spraying and Human Health in Ecuadorian Banana- Growing Areas

Mauricio Guillen Godoy

School of Health Sciences, Universidad Estatal de Milagro, Ecuador

Aim: The present research aimed to establish the human health impacts of aerial spraying in banana-growing areas of Ecuador (the rural sectors of the cantons Milagro and Naranjito, Guayas Province).

Objectives: The objectives of this study were to gather information on basic services and environmental rationality, as well as to analyze the low levels of cholinesterase, the presence of carbamates, and the prevalent diseases among the population.

Methodology: The methodology involved administering a questionnaire with informed consent and performing venipuncture for cholinesterase testing. The data were processed using the EPI-INFO 7.2 system (a statistical software designed for public health professionals and researchers), with protocol certification issued by the Bioethics Committee of the Kennedy Hospital Clinic in Ecuador.

Results: The results showed that 89.5% of the inhabitants lack access to potable water, 92.5% do not have sewage services, 97.5% experience aerial spraying at their homes or workplaces without government oversight, 57% exhibit low cholinesterase levels, and 21.5% have detectable carbamates. Additionally, several gastrointestinal, respiratory, neurological, dermatological, and reproductive disorders were identified among the population.

Conclusions: There is an absence of corporate social responsibility actions toward the inhabitants of banana-growing areas. Banana companies do not conduct blood tests to monitor cholinesterase levels or detect carbamates, organophosphates, or organochlorines in the population. Furthermore, no monitoring or follow-up has been conducted on the births of individuals with various disabilities in these agricultural zones. The Ministry of Public Health has also failed to implement controls or address the health issues affecting

FUTURE OF PREVENTIVE MEDICINE AND PUBLIC HEALTH

March 20-22, 2025

this at-risk population.

Biography

Mauricio Alfredo Guillen Godoy is an experienced educator and researcher currently serving as a full-time Associate Professor at the Faculty of Health and Social Services at the State University of Milagro (UNEMI), Ecuador. He holds a Doctorate in Accounting and Business Sciences from the National University of San Marcos, Peru (2020), and a Master's in Business Administration from the National University of Loja, Ecuador (2010). With over a decade of academic and professional experience, he specializes in public health, statistical analysis, and project formulation.

Dr. Guillen has published extensively in indexed journals on topics such as public health, nutrition, and mental health, and has contributed to book chapters on statistics and probability. His research includes the impacts of aerial spraying in banana-growing regions and health disparities in Ecuador. He is an active participant in academic conferences and holds certifications in advanced research methodologies and pedagogy.

FUTURE OF PREVENTIVE MEDICINE AND PUBLIC HEALTH

March 20-22, 2025



A Rare Cause of Post-Renal Transplant Anemia by Parvovirus-B19: Case Report

Mona Aghaei and Mohammad Amir Sarabi

School of Medicine, Islamic Azad University, Tehran Medical Branch, Iran

One of the issues during the post-transplant phase is anemia. The increased risk of graft rejection makes evaluating transplant recipients difficult. Parvovirus-B19 (PV-B19) should be considered one of the differential diagnosis of post-transplant anemia (PTA) in renal transplantation recipients. In this article, we report a 32-year-old man who was admitted to the hospital with anemia. During the assessment, infection with PV-B19 was confirmed as the cause of the anemia. He received intravenous immunoglobulin (IVIG) as the treatment.

Biography

She, Dr. Mona Aghaei, is a general practitioner since 2022, having graduated from Islamic Azad University, Tehran Medical Branch. She has worked as an ER doctor for a year and has a strong interest in research, particularly in internal medicine, cardiology, and radiology.

Despite being at the beginning of her medical journey, she embraces challenges and is committed to continuous learning and professional growth. She has several publications under submission in various journals and is dedicated to pursuing her goal of becoming a specialist in the US.

FUTURE OF PREVENTIVE MEDICINE AND PUBLIC HEALTH

March 20-22, 2025



Multidisciplinary Approach to the Diagnostics and Introduction of Psychosomatic Disorders in Women with Menstrual Dysfunctions

Zelenkova-Zakharchuk T.A, Absatarova Yu.S and Andreeva E.N

National Medical Research Center of Endocrinology, Russia

Aim: to study the relationship between psychopathology, menstrual dysfunction and present an interdisciplinary approach to the management of patients with amenorrhea of different genesis.

Materials and Methods: 70 women aged between 18 and 39 years with amenorrhea (that lasted for more than 3 months) were included in the study group. All participants were consulted by a psychiatrist-psychotherapist specializing in endocrine psychosomatics.

Results: The following distribution by groups of diagnoses was established in the study group: stress-dependent menstrual disorder (normogonadotropic amenorrhea) – 20 patients, hypothalamic amenorrhea (hypogonadotropic hypogonadism) – 11 patients, polycystic ovary syndrome (PCOS, normogonadotropic amenorrhea) – 12 patients, premature ovarian failure – 7 patients. Distribution of patients according to the syndromic and nosological classification of psychopathology is the following: anxiety disorder with eating disorders (ED) by type anorexia/ orthorexia (6 patients), mixed anxiety and depressive disorder with ED by type overeating (12 patients), recurrent depressive disorder, current mild episode (14 patients), depressive disorder, current moderate episode (10 patients), cyclothymic-level depressive disorder ED by type overeating with bulimic reactions (4 patients), bipolar affective disorder, current episode of mild to moderate depression (2 patients), generalized anxiety disorder with ED by type bulimia nervosa (2 patients).

Thus, in all patients of the main group, various psychopathological disorders of mild and moderate severity were found.

Conclusions: Taking into account the established psychosomatic relationships between depressive disorders, anxiety disorders, ED and menstrual disorders, a pathogenetically

FUTURE OF PREVENTIVE MEDICINE AND PUBLIC HEALTH

March 20-22, 2025

substantiated approach to the management of patients with various forms of amenorrhea is recommended for complex treatment with the prescription of thymoanaleptics and multimodal short-term psychotherapy.

Biography

- In 1996, Tatyana Zelenkova-Zakharchuk graduated from Pirogov Russian National Research Medical University with a specialty of Pediatrics.
- From 1996 to 1997, she had an internship in the Scientific and Practical Center for Mental Health of Children and Adolescents named after G.E. Sukhareva.
- From 1997 to 1999, she achieved a residency, then from 1999 to 2003 - a postgraduate course at the Mental Health Research Center.
- From 1997 to 1999, Tatyana Zelenkova-Zakharchuk worked as a psychiatrist at Russian Children's Clinical Hospital.
- In 1999 she took a professional retraining course on Psychotherapy at the Russian Medical Academy of Postgraduate Education.
- From 1999 to 2015, she worked as a psychotherapist at the out-patient department.
- In 2007, Tatyana Zelenkova-Zakharchuk got Ph.D. The thesis is "Depressive conditions in patients with diabetes mellitus (clinical, psychosomatic relationships, treatment)".
- Since 2000 Tatyana Zelenkova-Zakharchuk has been working as a psychiatrist, psychotherapist at the National Medical Research Center of Endocrinology

FUTURE OF PREVENTIVE MEDICINE AND PUBLIC HEALTH

March 20-22, 2025



Diffusion Tensor Imaging Biomarkers and Clinical Assessments in Amyotrophic Lateral Sclerosis (ALS) Patients: An Exploratory Study

Saharnaz Pezeshgi¹, Sadegh Ghaderi^{1,2} and Farzad Fatehi^{1,3}

¹Neuromuscular Research Center, Department of Neurology, Shariati Hospital, Iran

²Department of Neuroscience and Addiction Studies, School of Advanced Technologies in Medicine, Iran

³Department of Neurology, University Hospitals of Leicester NHS Trust, UK

Objectives: This study explores the utility of diffusion tensor imaging (DTI) metrics as biomarkers for detecting microstructural white matter alterations in patients with amyotrophic lateral sclerosis (ALS) and evaluates their correlation with clinical assessments.

Methods: We conducted a cross-sectional study involving 11 ALS patients and 21 healthy controls (HCs). All participants underwent 3T MRI with DTI, assessing fractional anisotropy (FA), mean diffusivity (MD), radial diffusivity (RD), and axial diffusivity (AD) in key motor and extra-motor white matter tracts. Correlations between these imaging metrics and clinical measures such as the ALS Functional Rating Scale-Revised (ALSFRS-R), dynamometry, and motor unit number index (MUNIX) were analyzed.

Results: Significant microstructural changes were identified in ALS patients compared to HCs. Key findings included reduced FA and increased MD, RD, and AD in several regions, particularly the corticospinal tract, external capsule, and hippocampal tracts. MD and RD showed the greatest sensitivity in detecting white matter abnormalities. Interhemispheric correlations revealed symmetric degeneration patterns in ALS, underscoring the bilateral nature of the disease. Moreover, MD and RD metrics correlated significantly with clinical measures of disease severity, including ALSFRS-R scores (negative correlation) and muscle strength (positive correlation with dynamometry and MUNIX). A representative table highlights tract-specific DTI alterations and their clinical correlations (Table 1), while a figure illustrates significant group differences in DTI metrics (Figure 1).

FUTURE OF PREVENTIVE MEDICINE AND PUBLIC HEALTH

March 20-22, 2025

Conclusion: DTI metrics, particularly MD and RD, are promising biomarkers for detecting and monitoring ALS progression. Their significant correlation with clinical measures supports their integration into a multimodal diagnostic and prognostic framework. Future research should focus on longitudinal designs and multimodal approaches to refine these findings and facilitate their clinical application.

Table 1

Clinical measures of amyotrophic lateral sclerosis patients

Descriptive statistics

	Minimum	Maximum	Mean $\pm$ SD
MUNIXLmedian	9	155	91 $\pm$ 74.9
MUNIXLulnar	16	176	101.6 $\pm$ 57.4
MUNIXLtibial	23	111	80.3 $\pm$ 32.5
MUSIXRtibial	33	184	65.2 $\pm$ 45.4
MUSIXRulnar	36	246	101 $\pm$ 64.1
MUSIXRmedian	40	410	131.3 $\pm$ 110.2
MUSIXLmedian	42	75	58 $\pm$ 15.6
MUSIXLulnar	42	141	81.9 $\pm$ 40.5
MUSIXLtibial	37	61	49.6 $\pm$ 6.9
ALSFRS-R	27	46	39.4 $\pm$ 5.6
DynamoR	1	36	18.4 $\pm$ 11.9
DynamoL	10	40	23.3 $\pm$ 9.9
Duration (month)	2	36	9

ALS Functional Rating Scale; MUSIX, motor unit size index.

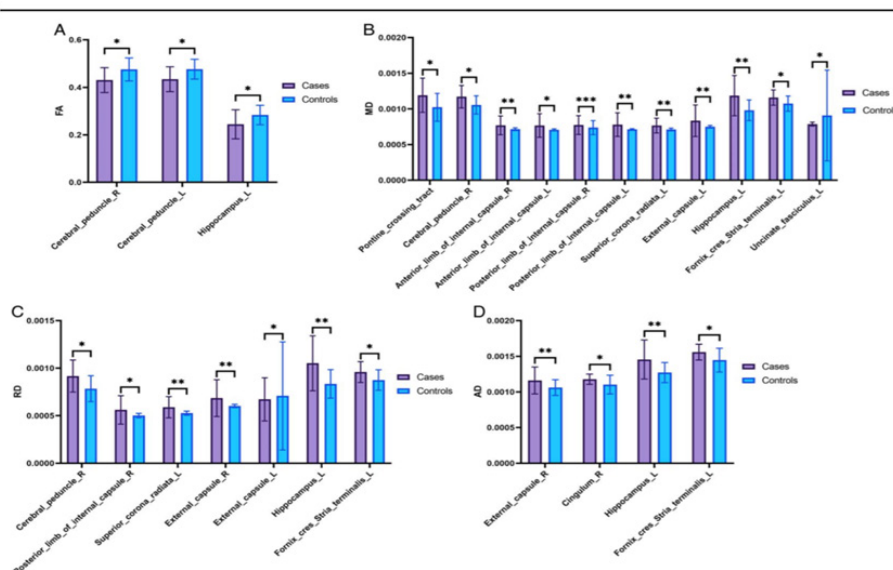


Figure 1. Most of the significant differences in (A) FA, (B) MD, (C) RD, and (D) AD metrics (A P value of less than 0.05 is shown with a single star (*). A P value less than 0.01, denoted by two stars (**). A P value of less than 0.001 is denoted by three stars (***)). AD, axial diffusivity; FA, fractional anisotropy; MD, mean diffusivity; RD, radial diffusivity.

FUTURE OF PREVENTIVE MEDICINE AND PUBLIC HEALTH

March 20-22, 2025

Biography

Dr. Saharnaz Pezeshgi is a dedicated Radiology resident at Tehran University of Medical Sciences, with a strong academic and research background in diagnostic imaging and artificial intelligence applications in healthcare. Graduating with distinction (ranked 218/11,000) and completing her MD with top rankings, Dr. Pezeshgi has cultivated expertise in advanced imaging techniques, including CT, ultrasound, and neuroimaging. Her passion for research is evident in her prolific contributions to high-impact journals, with publications spanning oncology, neurodegenerative diseases, and ophthalmology.

Dr. Pezeshgi's research interests focus on the integration of AI in medical imaging to enhance diagnostic accuracy and patient outcomes, particularly in oncology and breast imaging. She has collaborated on cross-disciplinary studies exploring imaging biomarkers in neurodegeneration and cancer diagnostics. Outside medicine, she is a skilled pianist, a sports enthusiast, and a lifelong learner.

FUTURE OF PREVENTIVE MEDICINE AND PUBLIC HEALTH

March 20-22, 2025



Studying Ecotoxicology of the Fungal Culture Filtrates from *Aspergillus Terreus* and *Aspergillus Sydowii* under Polythene Degradation Process

Avinash B. Ade

Department of Botany, Savitribai Phule Pune University, India

Plastic is a routine material extensively used in daily life because of its unique properties of durability, lightness and inertness against the reactive substances. Due these popular properties the usage is tremendous and went beyond the maximum limit which led to accumulation in the ecosystem. The manufacture and disposal balance have not been recovered yet that ultimately lead to the environmental pollution. It not only pollutes the soil but also air and water too. Majority of the plastic waste is naturally mixed with the soil which is circulated in the water with the help of small streams and then deposited in the rivers and the oceans. Thus, from the manufacturing it is being handled by human at every step. After usage the plastic is being dumped in the soil as garbage. After collection in the garbage it is sorted and recycled in various ways. Still the remnants are buried under the soil. These under soil pieces of polythene come in contact with the soil dwelling organisms such as microbes, root systems of the plants and the animals which are residing in the burrows in the soil. Due to various environmental factors such as light, temperature and moisture the strength of the polythene pieces is depleted which are further degraded due to microbial action. It leads to the production of smaller products, which are released in the environment. In order to observe the bioactivity of these products the testing was done on animal and plant system. For animal system the fish Tiger shark was selected. The mortality of these organisms was assessed where it was found that these are safe significantly.

Biography

The author is working as Senior Professor in the Department of Botany, Savitribai Phule Pune University, Pune. He is working in the field of Bioremediation and Biodegradation of the waste.

FUTURE OF PREVENTIVE MEDICINE AND PUBLIC HEALTH

March 20-22, 2025



Polyethylene & Polypropylene Degradation using Marine Fungi

Rajkumar Kherdekar and Avinash Ade

Department of Botany, Savitribai Phule Pune University, India

Plastic is a challenging problem in the world, and its use is increasing daily. Every day plastic is used for packaging food and utensils. Moreover, plastics are also used for the wrapping of solid and filling of liquid materials by various industries. In the present situation, plastics are available in various forms, however, polyethylene and polypropylene are abundantly used. Annually millions to trillions of polyethylene carry bags are utilized in the world. These single-use carry bags accumulate in the environment so pollution occurs. As per the research polyethylene and polypropylene are resistant to environmental factors by natural degradation and therefore need several years. Various physical and chemical methods can carry out plastic degradation, however, these methods are not cost-effective and create environmental pollution by releasing hazardous gases and byproducts. Bio-degradation is the only natural method for plastic degradation. Current investigation deals with the study of polyethylene and polypropylene degradation by treating salt, heat, and acids followed by marine fungi. The fungal spores' adherence and corrosion of the surface indicated the degradation of polyethylene and polypropylene.

Biography

Rajkumar Kherdekar is a research student of the Department of Botany, Savitribai Phule Pune University, Pune, working on the biodegradation of plastic under the supervision of Avinash Ade, Senior Professor, from the same department.

INDEX

Name	Pg. No
Alfred Keith Félix Mabika-Obanda	74
Ana Rodriguez	88
Ashraf Esmaeilizad	76
Avinash B. Ade	156
Barzizza E.	45
Bernardo Chávez Plaza	113
Brenda Hanley	102
Danya Ibrahim	139
Debashis Dev Misra	23
Dora Kuir-Ayius	43
Dr. Divyabharathi Selvam	21
Elif Sarac	31
Ernesto Aguayo-Téllez	115
Erum Anwar	33
Eva Ghosh	65
Everett L	107
Galeano Monica Alicia	55
Goodson Dzenga	100
Gulsym Manasova	142
Hafsa HAJJI	27

Name	Pg. No
Hanane ABBOU	29
Haroon Haider	66
Hernán Freddy Ortega Cruz	49
Hongyi Sun	63
Isaura Romero Peixoto	53
Jacqueline M. Hirth	105
James Davies	92
Jennifer L. Dodge	98
Ji Hyun Park	19
John Draper	111
John Wang	51
Khatereh Shamsi	145
KODZO Lalit Dzifa	121
Korotkov E.V	39
Lenet Bayam	20
Loubna BOUHSAIEN	25
M.Dougul Regis	83
Marcia Dinkins	109
Mauricio Guillen Godoy	148
Mediha Suleymanoglu	37

INDEX

Name	Pg. No
Mohamed Maoui	68
Mona Aghaei	150
Najmeh Sarafriz	41
Nesrain Mubarak Alhamedi	35
Nkopodi Nkopodi	72
Pablo Miguel De Souza Sánchez	94
Quiñones-Rozo Laura del Pilar	58
Rajeshwari Parasuraman	123
Rajkumar Kherdekar	157
Rakesh Suryadevara	125
Randy Lin	47
Reza Noktehsanj	147
Rie Ryoke	14
Rustam Singatulin	126

Name	Pg. No
Sabah Butty	57
Sahar I Ghanem	81
Saharnaz Pezeshgi	153
Sarvin Bosak	128
Sen Hu	16
Sepideh Etemadi	96
Shibanee Mishra	137
Simona Astorino	90
Stéphanie R. do Amaral	60
Surabhi Singh	79
Theeban Raj	134
Weisman A	103
Yao Lu	119
Yunuo Zhang	117
Zelenkova-Zakharchuk T.A	151
Zeynab Khosrowpour	70

FUTURE OF PMPH 2025

FUTURE OF PMPH 2025

FUTURE OF PMPH 2025

Peers Alley Media

1126 59 Ave East, V5X 1Y9, Vancouver BC, Canada

 WhatsApp No: +1 (506) 909-0537

BOOKMARK YOUR DATES

6th International Conference on

FUTURE OF PREVENTIVE MEDICINE AND PUBLIC HEALTH

March 2026 | Rome, Italy