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VIRTUAL EVENT

4th International Conference on

Future of Preventive Medicine & Public Health

MARCH 18-19, 2024

FUTURE OF PMPH 2024

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PEERS ALLEY MEDIA

PROGRAM-AT-A-GLANCE >>

YOUR FIRST CHOICE FOR RESEARCH INGENUITY

FUTURE OF PMPH 2024

DAY 1
MARCH 18, 2024

Scientific Program

GMT - Greenwich Mean Time

08:15-08:30	**Opening Ceremony**

Topics: Preventive Medicine | Public Health and Healthcare | Midwifery | Healthcare Innovations | Patient Safety | Digital Health | Primary Care | Occupational Health and Safety | COVID 19 | Nursing | Internal Medicine | Family Medicine | Women's Health | Psychology and Psychiatric Disorders | Preventive Medicine and Chronic Diseases | Pharmaceuticals | Telemedicine | Artificial Intelligence in Healthcare

Distinguished Speaker Talks

08:30-08:50	**Title: Using machine learning to reveal variations of polypharmacy among patients with dementia from primary care electronic health records** **Shang-Ming Zhou,** *University of Plymouth, UK*
08:50-09:10	**Title: Child physical abuse: Knowledge of dental students in Hamburg, Germany** **Ali Thaer Ali Al-Ani,** *Großhansdorf, Germany*
09:10-09:30	**Title: Probiotics reduce the recurrence of asymptomatic Bacterial Vaginosis in Chinese women patients** **Rui Zhang,** *Peking University First Hospital, China*
09:30-09:50	**Title: State-of-the-art in synthetic data generation for healthcare: Advancements, challenges, and future prospects** **Vinh Bui,** *Southern Cross University, Australia*
09:50-10:10	**Title: Single-cell detection of DMSO promoted HL-60 differentiation toward granulocyte based on DC-iDEP for medicine screening** **Yameng Liu,** *Tianjin University of Traditional Chinese Medicine, China*
10:10-10:30	**Title: Identification of immune infiltration and Ferroptosis-related gene in Age-related macular degeneration using machine learning** **Meijiang Zhu,** *Tongji University School of Meidcine, China*

10:30-10:50	**Title: The association of Hypertension with Increased mortality rate during the COVID-19 pandemic: An update with meta-analysis** **Doaa Mahmoud Eisa Sabir,** *Hamad Medical Corporation, Qatar*
Refreshment Break 10:50-11:10	
11:10-11:30	**Title: Breaking barriers: Understanding transphobia, resilience, and psychological distress in the Transgender community of Israel** **Mally Shechory,** *Ariel University, Israel*
11:30-11:50	**Title: Effect of *Solanum lycopersicum* and *Citrus limon* derived exosome like vesicles on chondrogenic differentiation of adipose derived stem cells** **Merve Yıldırım Canpolat,** *Yeditepe University, Turkey*
11:50-12:10	**Title: What did Asclepius and his family say to modern medicine and medical education?** **Ilgaz Akdogan,** *Aydın Adnan Menderes University, Turkey*
12:10-12:30	**Title: Tobacco use and pancreatic cancer: Unraveling the molecular mechanisms, risk factors, and prognostic implications – A systematic review** **Muhammad Subhan,** *Allama Iqbal Medical College, Pakistan*
12:30-12:50	**Title: Campylobacter infections: Is it a neglected entity?** **Kundoly Velayudhan Suseela,** *Amala Institute of Medical Sciences, India*
12:50-13:10	**Title: Impact of a single-cell hemoprotein on gut health from animal case studies** **Pil Kim,** *Catholic University of Korea, South Korea*
Lunch Break 13:10-13:40	
13:40-14:00	**Title: Meditation: Well-being and health** **Agustin de la Herran Gascon,** *Autonomous University of Madrid, Spain*
14:00-14:20	**Title: Biochemistry – not oncogenes – may demystify and defeat cancer** **Ajay Kulshreshtha,** *Independent Scientist, USA*

14:20-14:40	**Title: Machine learning-based identification of Long COVID Syndrome: Leveraging encounter notes symptoms** **Surani Matharaarachchi,** *University of Manitoba, Canada*
14:40-15:00	**Title: Evaluating the Whole Community concept based on the national response to COVID-19** **W. Michael Dunaway,** *National Institute of Standards and Technology Gaithersburg, USA*
15:00-15:20	**Title: Brief Interventions for cannabis using adolescents** **Ken C. Winters,** *Oregon Research Institute, USA*
15:20-15:40	**Title: Understanding variants of uncertain significance in Germline Genetic Diagnostic Testing** **Piper Nicolosi,** *Invitae, USA*
15:40-16:00	**Title: Curriculum and assessment innovations to enhance social determinants of health-informed clinical reasoning of medical students** **Barbara Masi,** *Icahn School of Medicine at Mount Sinai, USA*
Refreshment Break 16:00-16:20	
16:20-16:40	**Title: Bridging the gap between patient and clinician** **Nicholas Kelly,** *Bowling Green State University, USA*
16:40-17:00	**Title: A review of literature on interventions aimed at increasing play for children with autism spectrum disorder** **Goodson Chaidamoyo Dzenga,** *University of Montana Western, USA*
17:00-17:20	**Title: Revisiting a Telencephalic extension of the ascending reticular activating system** **Edison K Miyawaki,** *Harvard Medical School, USA*
17:20-17:40	**Title: Overview of SARS-COV-2 infection at the Butantan penitentiary progression center** **Soraya Gomes de Amorim Andrade,** *Universidade de São Paulo, Brazil*
17:40-18:00	**Title: Current quality of life metrics and their feasibility and applicability in adaptive sports** **Joseph Tingen,** *Tufts University School of Medicine, USA*

18:00-18:20	**Title: Application of discrete wavelet transform and spectral entropy in epileptic seizure detection** **Tahmineh Azizi,** *University of Wisconsin-Madison, USA*
18:20-18:40	**Title: Impact of the COVID-19 Pandemic on public hospitals in the United States** **Will Ross,** *Washington University School of Medicine, USA*

Closing Remarks

End of Day 1

DAY 2
MARCH 19, 2024

Scientific Program

GMT - Greenwich Mean Time

08:15-08:30	**Opening Ceremony**

Topics: Preventive Medicine | Public Health and Healthcare | Midwifery | Healthcare Innovations | Patient Safety | Digital Health | Primary Care | Occupational Health and Safety | COVID 19 | Nursing | Internal Medicine | Family Medicine | Women's Health | Psychology and Psychiatric Disorders | Preventive Medicine and Chronic Diseases | Pharmaceuticals | Telemedicine | Artificial Intelligence in Healthcare

Distinguished Speaker Talks

08:30-08:50	**Title: Open abdomen and negative pressure wound therapy for acute peritonitis especially in the presence of anastomoses and ostomies** **Orestis Ioannidis,** *Aristotle University of Thessaloniki, Greece*
08:50-09:10	**Title: Landscape, barriers, and facilitators of scientific productivity in schizophrenia research in Southeast Asia: A bibliometric analysis** **Mary Nadine Alessandra R.Uy,** *University of the Philippines Manila, Philippines*
09:10-09:30	**Title: Natural progress history of asymptomatic bacterial vaginosis in Chinese Han women and associated risk factors** **Rui Zhang,** *Peking University First Hospital, China*
09:30-09:50	**Title: Novel MYBPC3 mutations in Indian population with Inherited Cardiomyopathies** **Deepa Selvi Rani,** *CSIR-Centre for Cellular and Molecular Biology, India*
09:50-10:10	**Title: The role of generative AI and large language models in revolutionizing cancer laboratories: Next-generation diagnosis and therapeutics** **Niloofar Faraji Lahijani,** *Guilan University of Medical Sciences, Iran*
10:10-10:30	**Title: The anti-cancer potential of active compounds extracted from Millettia griffoniana on pancreatic and colorectal cancer cells** **Fatima Hoosen,** *University of Johannesburg, South Africa*
10:30-10:50	**Title: Diagnostic and prognostic value of indicators of markers of bone metabolism in patients with type 2 diabetes mellitus with intraosseous dental implantation** **Gagik K Hakobyan,** *Yerevan State Medical University, Armenia*

Refreshment Break 10:50-11:10

11:10-11:30	**Title: Block chain enabled patient health record management** **Jane Rubel Angelina Jeyaraj,** *Kalasalingam Academy of Research and Education, India*
11:30-11:50	**Title: Antimicrobial activity of Kaffir Lime (Citrus hystrix) extract as antimicrobial agent against nosocomial pathogen MRSA** **Maria Georgina Wibisono,** *Pelita Harapan University, Indonesia*
11:50-12:10	**Title: Navigating the landscape of concept-supported XAI: Challenges, innovations, and future directions** **Zahra Shams Khoozani,** *Universiti Malaya, Malaysia*
12:10-12:30	**Title: Efficacy of vibration motion in comparison to reciprocation motion in retreatment of root canals obturated with lateral compaction technique: An *in vitro* study** **Yomna Adel Wagih Fahmy Serageldin,** *Misr International University, Egypt*
12:30-12:50	**Title: Prevention of falling in postmenopausal women with osteoporosis during functional reaching-Transporting task** **Marzieh Hatami,** *Tarbiat Modares University, Iran*
12:50-13:10	**Title: Where do the analytical methods stand in cardiovascular problems: An overview of blood flow as a biomechanical problem in Arteriosclerosis** **Elif Kayaalp Ata,** *Gebze Technical University, Turkey*

Lunch Break 13:10-13:40

13:40-14:00	**Title: RUNX1 inhibition leads to decreased cathepsin levels and reduced infarct size in rats after acute myocardial infarction** **Weihong He,** *Sichuan University, China*
14:00-14:20	**Title: Fetal and neonatal complications of gestational diabetes mellitus** **Wioletta Wujcicka,** *Polish Mother's Memorial Hospital-Research Institute in Lodz, Poland*
14:20-14:40	**Title: The benefit of physical training in the prevention of falls in seniors** **Eva Durinova,** *University of Ss. Cyril and Methlodius in Trnava, Slovakia*

14:40-14:50	**Title: Pre-emptive femoral-femoral crossover and subsequent resection of locally recurrent colon cancer with multiorgan involvement including the common iliac vessels** **Natalie Guiney,** *Royal Melbourne Hospital, Australia*

Closing Remarks

End of the Conference

PEERS ALLEY MEDIA

DISTINGUISHED SPEAKER TALKS

DAY 1

4th International Conference on

Future of Preventive Medicine & Public Health

March 18-19, 2024

Using machine learning to reveal variations of polypharmacy among patients with dementia from primary care electronic health records

Shang-Ming Zhou[1], Elisabetta Longo[2] and **Bruce Burnett[3]**

[1]University of Plymouth, UK
[2]The Aptuit, an Evotec Company, Italy
[3]The Institute of Life Science, Swansea University Medical School, UK

Background: The syndrome of dementia is characterised by a steady decline in brain function. It is unknown how medication usage changed and changed before dementia (DoD) was diagnosed. This study aims to determine polypharmacy tendencies prior to DoD, as well as their prevalence and potential consequences.

Methods: We gathered anonymized primary care electronic health information for 33,451 dementia patients in Wales from 1990 to 2015. The drugs denoted by Read codes were allocated to data subsets at each of the five-year intervals and twenty years before the diagnosis of dementia. Each patient was prescribed at least three different medications during a 5-year period, and these medication clusters were identified using exploratory factor analysis.

Findings: Period 1 (0–5 years before DoD) revealed three clusters of polypharmacy: drugs for respiratory/urinary infections, arthropathies and rheumatism, and cardio-vascular disease (CVD); drugs for infections, arthropathies and rheumatism, cardio-metabolic disease (CMD) and depression; and drugs for arthropathies, rheumatism and osteoarthritis. Period 2 revealed four clusters of polypharmacy: drugs for infections, arthropathies, and CVD; drugs for CVD and depression; drugs for CMD and arthropathies; and drugs for arthropathies and rheumatism, and CVD. Six clusters of polypharmacy were identified in Period 3: drugs for infections, arthropathies, and CVD; drugs for CVD, acute-respiratory-infection (ARI), and arthropathies; drugs for arthropathies and rheumatism; medicines for depression, anxiety; drugs for CMD; and drugs for dermatologic disorders. Three primary clusters of polypharmacy were identified in Period 4: medicines for infections, arthropathy, and CVD; medicines for anxiety, ARI; and medicines for ARI and CVD.

Conclusions: This study demonstrated that patterns of polypharmacy varied significantly along with patients developing towards dementia. These varying patterns would

inform “safe- prescribing” practice before dementia diagnosis in terms of selecting low anticholinergic burden medicines to minimise their impact on cognitive impairments.

Biography

Dr Shang-Ming Zhou is the Full Professor of eHealth and Deputy-Director of the Centre for Health Technology, Faculty of Health, University of Plymouth, UK. He is the Director of NHS Kernow Data-Lab. His research has been funded by research councils, industries, local organisations, healthcare providers, charities, and overseas partners.

His scholarly interests focus on artificial intelligence (AI) in health and biomedical informatics, health data science, biomedical statistics; information aggregation / integration via type-1 OWA operators and type-2 OWA operators. He is particularly interested in AI with electronic health data for precision health, disease phenotyping, polypharmacy, multimorbidity, risk factors identification; local modelling for personalized health; clinical decision supports driven by type-1 OWA operators and type-2 OWA operators; machine learning and data mining applied to epidemiology and public health.

Virtual Event

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Child Physical Abuse: Knowledge of Dental Students in Hamburg, Germany

Ali Al-Ani[1], Raghad Hashim[2], Ulrich Schiffner[3] and **Ch. H. Splieth[4]**

[1]Dental-Ästhetik, Großhansdorf, Germany
[2]Department of Growth & Development, Ajman University, UAE
[3]Department of Periodontics, Preventive and Restorative Dentistry, University Medical Center Hamburg-Eppendorf, Germany
[4]Department of Preventive and Pediatric Dentistry, University of Greifswald, Germany

Purposes: This study was aimed at evaluating the levels of knowledge about child abuse among students attending the School of Dental and Oral Medicine at the University of Hamburg-Eppendorf, Germany.

Methods: Cross-sectional study utilized a self-administered and structured questionnaire, consisting of 23 multiple choice questions, the questionnaire focused on rating the students' knowledge of, and ability to diagnose child abuse. Each question was analyzed by simple descriptive statistics.

Results: The students (181) were aware of their legal and ethical responsibilities towards children and their parents. More than two-thirds (69.6%) responded positively when asked if a dentist should be legally responsible to report cases of child abuse coming to his attention. The majorities of the students (96.1%) agreed that dentists had an ethical duty to report such cases. However, students were unable to define or describe the signs, symptoms, and social indicators of child abuse. About 93.4% of the students lacked basic training related to child abuse, while 95.7% of them admitted the absence of sufficient training in issues relevant to child abuse.

Conclusions: There is a general lack of information about child abuse among students of dentistry. The majority of the students showed interest in the topic of child abuse and neglect, but was unable to clearly identify its signs and symptoms. More lectures and workshops regarding child abuse should be available for all dentists in order to reinforce their knowledge as well as to strengthen their self-esteem when faced by suspected cases of child abuse.

Biography

Ali Thaer Ali Al-Ani

2007 – 2012: DDS. (Doctor of Dental Surgery)/Ajman University, United Arab Emirates (UAE).

2012 – 2015: M.Sc. (Master of Science) in Pediatric Dentistry / Hamburg-Eppendorf (UKE) & University of Greifswald (UMG), Germany.

2015 – 2020: Coworker and Researcher at the University of Greifswald, Germany.

2015 – 2021: Doctoral student in Pediatric Dentistry at the University of Greifswald, Germany.

09/2019 - 06/2021: Coworker at the (MVZ Zahnzentrum) dental clinic in Schwerin, Germany.

05/2021 – 12/2021: Coworker at the (LS Praxis) dental clinic in Hamburg, Germany. 01/2022 – 09/2022: Coworker at the (Mein Lachen) dental clinic in Hamburg, Germany. 10/2022 – Present: Coworker at the (Zauberwald) dental clinic in Großhansdorf, Germany.

Probiotics reduce the recurrence of asymptomatic Bacterial Vaginosis in Chinese women patients

Rui Zhang[1], Zhaohui Liu[2], Yan Zhang[1], Dai Zhang[1] and **Qinping Liao[3]**

[1]Peking University First Hospital, China
[2]Beijing Obstetrics and Gynecology Hospital, China
[3]Beijing Tsinghua Changgung Hospital, China

Objectives: To investigating the difference of efficacy between Probiotics and Metronidazole in treating aBV.

Methods: The present study conducted a multicenter, randomized, controlled trial involving 716 Chinese women with aBV. Participants received a 10-day course of intravaginal probiotic capsule (Lactobacillus delbrueckii subsp. lactis DM8909) once daily or a 7-day course of oral metronidazole twice a day. Follow-up visits were performed at the end of the 1st, 2nd, and 4th week after therapy. These women cured by either of the two methods were followed up for 3 additional visits each month.

The primary outcomes were the difference of cure rates of aBV between groups. The secondary outcomes included the difference of recurrence rates, the presence of adverse events.

Results: A total of 312 of the 358 participants (87.2%) who were assigned to receive Probiotics and 313 of the 358 participants (87.4%) who were assigned to receive Metronidazole completed the study and all the follow-up visits.

The cumulative cure rates at the end of the 1st, 2nd and 4th week after the completion of treatments in Probiotics group were higher than those in Metronidazole group (OR 1.063, 95%CI [0.765-1.467], P=0.715; OR 1.324, 95%CI [0.964-1.819], P=0.083; OR 1.338, 95%CI [0.975-1.835], P=0.071), while the differences were not statistically significant (Table 2).

Altogether 144 women in Probiotics group and 123 women in Metronidazole group were followed up to investigate the characteristics of recurrence.

The difference of cumulative recurrence rates between the two groups were statistically significant at the end of the 2nd, 3rd, and 4th month after treatments (OR 0.212, 95%CI

[0.099-0.453], P=0.000; OR 0.160, 95%CI [0.086-0.297], P=0.000; OR 0.119, 95%CI [0.065-0.217], P=0.000) (Table 4).

Conclusions: Probiotics could be used as a superior therapeutic option for the treatment of aBV due to its high cure rate, low recurrence rate and minimal side effects.

Biography

Rui Zhang, Doctor of Obstetrics and Gynecology, Peking University Medical Department

Mainly engaged in the research on the relationship between microecology and obstetric and gynecological diseases, and has done a lot of basic and clinical researches on the micro biological mechanism, micro biological diagnosis and treatment of infectious diseases in obstetrics and gynecology

Engaged in the diagnosis and treatment of clinical diseases in obstetrics and gynecology, especially in the diagnosis and treatment of gynecological malignant tumors

Published 30 scientific research papers

Independently obtained and completed 1 National Natural Science Foundation project, 1 Doctoral Program Foundation project of the Ministry of Education, and participate in 3 national and provincial scientific research projects

State-of-the-art in synthetic data generation for healthcare: Advancements, challenges, and future prospects

Vinh Bui

Southern Cross University, Australia

As the healthcare industry strives to harness the power of data-driven technologies, the quest for comprehensive and privacy-preserving datasets has led to the emergence of synthetic data generation as a compelling solution. This presentation delves into the state-of-the-art in synthetic data generation for healthcare, presenting an overview of cutting-edge methodologies, advancements, challenges, and the potential impact on healthcare research and applications.

Real-world medical data, due to privacy concerns and limited accessibility, often falls short in fulfilling the data requirements for training robust machine learning models. Synthetic data generation, as an innovative alternative, offers the promise of producing realistic and privacy-preserving datasets to address this critical limitation.

The presentation unveils the diverse array of techniques that have garnered attention within the healthcare domain like Generative Adversarial Networks (GANs), Variational Autoencoders (VAEs), and the use of rendering virtual environments such as Unity3D and AI-powered algorithms to generate lifelike avatars harmonizing seamlessly with synthetic data's capacity to emulate genuine patient profiles.

The presentation also emphasizes the importance of maintaining data quality, preventing bias propagation, and validating the efficacy of generated datasets. It also addresses ethical considerations and regulatory compliance to ensure that synthetic data respects patient privacy while still reflecting the true diversity of real-world medical scenarios.

In conclusion, the presentation summarizes the potential impact of state-of-the-art synthetic data generation techniques on healthcare research and applications. By overcoming data scarcity, privacy concerns, and restrictive data access policies, synthetic data has the potential to revolutionize medical imaging, diagnostics, personalized treatment plans, and drug development. However, it underscores the necessity of ongoing research, collaboration, and ethical guidelines to maximize the benefits of synthetic data generation while safeguarding patient rights and ensuring the responsible adoption of this transformative technology.

Biography

Dr. Vinh Bui has background in both computer science and electrical engineering. He holds a Master degree in Information Technology and a PhD in Electrical Engineering, both from the University of New South Wales, Australia. Dr. Vinh Bui is researching in the area of applied computing, focusing on applications of generative AI, machine learning, and big data analytics in healthcare, tourism and waste management. He has a special interest in synthetic data and synthetic environment for training machine learning algorithms. Dr. Bui has published over 30 peer-reviewed articles in the above area and helped to secure over 10 million dollars of research funding. Dr Vinh Bui is a member and certified professional of the Australian Computer Society and member of the IEEE Computational Intelligence Society.

Single-cell detection of DMSO promoted HL-60 differentiation toward granulocyte based on DC-iDEP for medicine screening

Yameng Liu

School of Materia Medica, Tianjin University of Traditional Chinese Medicine, China

The most common form of leukemia in adults is acute leukemia. Drug differentiation control is an extremely critical treatment for acute leukemia. Unfortunately, current techniques detecting differentiation control experience long time and complex steps of verification hindering the pace of medicine discovery: flow cytometry and RT-PCR are highly accurate and efficient at a cost of inconvenient fluorescent labeling or a high risk of contamination; conventional staining leads to cell death unavailable for further pharmacological tests. There is a great interest in developing simple, fast, and non-invasive techniques to screen medicine. DC-iDEP is an emerging label-free identification technique taking advantage of the whole cell native biophysical property for sorting cell populations. Here, HL-60 cell line has been used as a model to study the differentiation process toward granulocytes and medicine efficacy. The results showed that DEP succeeded in detecting the DMSO promoted HL-60 differentiation degree by the weighted average characterization factor. This factor is related to the single cell biophysical property, which accumulates to generate differences in each population with distinct constitutions. Furthermore, cichoric acid was investigated to be capa- ble of promoting DMSO-induced differentiation efficiently. Using the change induced by cichoric acid, the HL-60 medicine screening application has been first attempted based on DEP. A rapid, label-free medicine screening method has been established to monitor HL-60 differentiation toward granulocyte and has great potential for medicine screening.

Biography

Yameng Liu has completed his PhD from Arizona State University, USA. Now work as an assistant professor of Tianjin University of Traditional Chinese Medicine. She has published papers in reputed journals such as Analytical Chemistry, Lab on a chip, Biotechnology journal, Analyst etc. as first or corresponding authors. She served as a peer reviewer for Electrophoresis in 2023.

Identification of immune infiltration and Ferroptosis-related gene in Age-related macular degeneration using machine learning

Meijiang Zhu

Tongji University School of Meidcine, China

Background: Age-related macular degeneration (AMD) stands as a significant contributor to irreversible visual impairment, prominently manifesting as non-neovascular (dry) AMD. Many factors including aging, oxidative stress, and inflammatory processes collectively contribute to retinal pigment epithelium (RPE) cells degeneration, pivotal in the pathogenesis of dry AMD. Ferroptosis, an emerging form of programmed cell death, has been linked to the pathogenesis of numerous diseases. Thus, our primary aim was to explore the involvement of ferroptosis-associated genes and immune cells in the progression of AMD.

Methods: Based on 50 normal and 41 AMD samples from the GSE29801 dataset, we conducted a comprehensive investigation into immune cell infiltration and differential gene expression (DEGs) associated with AMD. Subsequently, DEGs and ferroptosis-associated genes were meticulously extracted, revealing a subset of differentially expressed ferroptosis-associated genes (DEFGs) through their overlap. Machine learning methods were employed to identify ferroptosis feature diagnostic genes. To validate our findings, a comprehensive series of experiments were conducted to confirm the expression of identified ferroptosis feature diagnostic genes within the context of an AMD model.

Results: We identified 462 DEGs when comparing normal and AMD samples. The GO enrichment analysis indicated significant involvement in key biological processes like collagen-containing extracellular matrix composition, positive cell adhesion regulation, and extracellular matrix organization. Through the intersection with ferroptosis gene sets, we pinpointed 10 DEFGs. Leveraging machine learning algorithms, we pinpointed five ferroptosis feature diagnostic genes: VEGFA, SLC2A1, HAMP, HSPB1, and FADS2. Notably, immune cell infiltration disparities, notably involving macrophages and dendritic cells, were discerned in the context of AMD. Subsequent the experiments validated the increased expression of SLC2A1 and FADS2 in the AMD model.

Conclusion: The occurrence of ferroptosis could potentially contribute to the advancement

of AMD through the initiation of immune-mediated inflammation. SLC2A1 and FADS2 have demonstrated promise as emerging diagnostic biomarkers and plausible therapeutic targets for AMD.

Biography

Dr. Meijiang Zhu, a Chinese national, is a 29-year-old male. He holds a Doctor of Ophthalmology degree from the School of Medicine, Tongji University. Dr. Zhu is currently affiliated with the Department of Ophthalmology at Shanghai Tenth People's Hospital in Shanghai, China.

Dr. Zhu has made significant contributions to the field of ophthalmology, particularly in age-related macular degeneration (AMD). His research focuses on identifying immune infiltration and ferroptosis-related genes in AMD using machine learning techniques. He also explores novel therapeutic approaches for AMD.

Dr. Zhu's seminal work, "Salidroside alleviates ferroptosis in FAC-induced Age-related macular degeneration models by activating Nrf2/SLC7A11/GPX4 Axis," has been published in prestigious scientific journals. His research underscores his dedication to advancing the understanding and treatment of retinal diseases.

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The association of Hypertension with Increased mortality rate during the COVID-19 pandemic: An update with meta-analysis

Doaa M Sabir[1], Ahmad R. Al-Qudimat[1,2], Ayisha Ameen[1], Heba Alkharraz[1], Mai Elaarag[1], Ayisha Althani[1], Kalpana Singh[1], Wassim M. Alhimoney[1], Raed M. Al-Zoubi[1,3,4] and **Omar M. Aboumarzouk[1,5,6]**

[1]Department of Surgery, Surgical Research Section, Hamad Medical Corporation, Qatar
[2]Department of Public Health, College of Health Sciences, Qatar University, Qatar
[3]Department of Biomedical Sciences, College of Health Sciences, Qatar University, Qatar.
[4]Department of Chemistry, Jordan University of Science and Technology, Jordan
[5]College of Medicine, Qatar University, Qatar
[6]School of Medicine, Dentistry and Nursing, The University of Glasgow, UK

Background and Aim: The impact of multiple risk factors on COVID-19 mortality has been previously reported in multiple systematic reviews and meta-analyses. The aim of this review is to provide a comprehensive update on the association between hypertension (HTN) and mortality in patients with COVID-19.

Methods: A systematic review and meta-analysis were performed and followed the Preferred Reporting Items for Systematic Reviews (PRISMA) guidelines. A search was achieved using PubMed, Scopus, and Cochrane Databases for research publications on hypertension, COVID-19, and mortality published between December 2019 and August 2022.

Results: A total of 23 observational studies involving 611,522 patients from 5 countries (China, Korea, the UK, Australia, and the USA) were included in our study. The confirmed number of COVID-19 with HTN cases in each study ranged from 5 to 9964. The mortality ranged from 0.17% to 31% in different studies. Pooled results show that the mortality rate of COVID-19 among the included studies ranges from a minimum of 0.39 (95% CI 0.13–1.12) to a maximum of 5.74 (95% CI 3.77–8.74). Out of the 611,522 patients, 3119 died which resulted in an overall mortality prevalence of 0.5%. Subgroup analyses indicated that patients with COVID-19 who have hypertension and male patients had slightly less risk of mortality than female patients [the percentage of men>50%; OR 1.33: 95% CI (1.01, 1.76); the percentage of men≤50%: OR 2.26; and 95% CI (1.15, 4.48)]. Meta-regression analysis results also showed a statistically significant association between hypertension and COVID-19 mortality.

Conclusion: This systematic review and meta-analysis suggests that hypertension may not be the only risk factor associated with the increased mortality rate during the COVID-19 pandemic. In addition, a combination of other comorbidities and old age appears to increase the risk of mortality from COVID-19.

Biography

Dr. Doaa Mahmoud Eisa Sabir, a Sudanese living in Qatar. I received my MBBS degree in 2019 from Al Gazera University in Sudan. Consequently, I completed a 1 year of internship at Hamad Medical Corporation (HMC) in 2021. I had the opportunity to work during the COVID-19 pandemic at HMC for 6 months. I'm glad to mention that I passed IFOM exam, plab1 exam, OET exam and TOEFL exam. In addition, I participated in multiple research studies in different roles, such as, data collection, writing the manuscripts and analyzing the results. And this has immensely increased my interest in the research field leading to me achieving 3 publications, and I'm eager to enrich my future career with more publications and effective studies. Currently, I am working as a physician trainee at B Health company in Qatar.

Virtual Event

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Breaking barriers: Understanding transphobia, resilience, and psychological distress in the Transgender community of Israel

Mally Shechory Bitton and **Shalhevet Weiss**

Department of Criminology, Ariel University, Israel

Objectives: This study aimed to investigate the relationships between external and internal resilience resources, stress measures, and emotional distress levels among transgender individuals in Israel. Specifically, we examined the mediating role of internalized transphobia in the relations between resilience resources and emotional stress. The study also sought to propose a theoretical model integrating variables from the Minority Stress Model (MSM) and the Transgender Resilience Intervention Model (TRIM), providing insights into the complex links between these factors.

Methods: 119 transgender individuals completed questionnaires assessing personal details, psychological stress levels, personal resilience, social support, coping styles related to gender identity, and internalized transphobia levels. Data analysis included means, standard deviations, Pearson correlation coefficients, t-tests, and multiple linear regressions.

Results: The findings indicated that social support, personal resilience, and problem-focused coping styles were associated with reduced emotional stress. Conversely, higher levels of emotional distress and internalized transphobia were linked to increased stress. While the assumed mediation model was not supported, an alternative model revealed the moderating role of internalized transphobia in the relationships between resilience resources, coping styles, and emotional stress.

Conclusion: This study integrated variables from the MSM and TRIM to develop a comprehensive model predicting emotional stress levels among transgender individuals. These findings have important implications for increasing awareness of the unique stress experienced by transgender individuals and designing targeted intervention programs. These programs can involve awareness campaigns in educational, military, and community settings, as well as family support. Moreover, the proposed model can guide therapeutic plans within transgender support organizations.

Overall, this study enhances our understanding of the factors influencing emotional stress in transgender individuals, providing a foundation for future research and interventions in preventive medicine and public health.

Biography

Prof. Shechory Bitton is a Full Professor at Ariel University, Israel since 2017. Since 2021, she has served as the head of the Master Degree Program in Clinical Criminology, which she founded and opened. Previously, she held the position of vice rector at Ariel University from 2013 to 2020 and served as the head of the Criminology department from 2016 to 2022. Prof. Shechory Bitton completed her studies in Family Therapy at Tel Aviv University and pursued post-doctoral research on Victim Offender Mediation at Tübingen, Germany. Her academic work encompasses various areas, with a particular focus on Trauma and resilience, domestic and sexual violence, Terrorism, and Forensic judgments and detection.

She has acquired practical and theoretical expertise in the fields of victimology, violence, and aggression. Throughout her career, she has received several scholarships that have enabled her to conduct evaluation and applied studies in these areas, contributing to the advancement of knowledge and the development of evidence-based policies and practices.

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March 18-19, 2024

Effect of *Solanum lycopersicum* and *Citrus limon* derived exosome like vesicles on chondrogenic differentiation of adipose derived stem cells

Merve Yıldırım Canpolat, Naz Ünsal, Bilge Kabataş, Olcay Eren and **Fikrettin Şahin**

Yeditepe University, Turkey

Articular cartilage defect treatment is a very important problem because its therapeutic options are not successful enough. Due to the weak self-repairing capacity of the avascular cartilage, even minor damage can progress and cause joint damage leading to osteoarthritis. Although various treatment strategies have been developed to repair damaged cartilage, cell- and exosome-based therapies are promising. Plant extracts have been used for decades, and their effects on cartilage regeneration have been studied. Exosome-like vesicles, which are secreted by all living cells, are involved in cell-to-cell communication and cell homeostasis. The differentiation potential of exosome-like vesicles isolated from *S. lycopersicum* and *C. limon,* which are known to have anti-inflammatory and antioxidant properties, was investigated in the differentiation of human adipose-derived mesenchymal stem cells (hASCs) into chondrocytes. In order to obtain tomato-derived exosome-like vesicles (TELVs) and lemon-derived exosome-like vesicles (LELVs) Aquous Two- Phase system was performed. Characterisation of isolated vesicles based on size, shape were achived via Zetasizer, NTA FAME analysis, and SEM techniques. These results showed that TELVs and LELVs increased cell viability and did not show any toxic effects on stem cells. Although TELVs triggered chondrocyte formation, LELVs downregulated. The expression of ACAN, SOX9, and COMP, known as chondrocyte markers, was increased by TELV treatment. In addition, protein expression of the two most important proteins, COL2 and COLXI, found in the extracellular matrix of cartilage, increased. These findings suggest that TELVs can be used for cartilage regeneration, and may be a novel and promising treatment for osteoarthritis.

Biography

An expert in the field of Genetics, Bioengineering and Gene therapy with a particular focus on the use of plant- derived exosomes in the treatment of cancer and osteoarthritis. She is graduated from Biotechnology Program of Yeditepe University. In partnership with MD Anderson Cancer Center, she has conducted clinical studies on cancer treatments and awarded a patent for an cancer drug. Her published work includes the effects of plant- derived exosomes applications for the regeneration of bone, cartilage, muscle and hearth muscle. Recently, she was developed a new treatment for osteoarthritis which is currently undergoing clinical trials. In 2020, she was elected Scientific Chairman of Cancer free Life Association, a non- profit to assist patient and family undergoing cancer treatment. As co-founder of Cellestetix, she sherheads the R&D initiatives to develop a wide range of breakthrough discoveries and novel molecular applications for disease treatments, cellular regeneration and longevity support.

What did Asclepius and his family say to modern medicine and medical education?

Ilgaz Akdoğan[1] and **Hayriye Dilek Akdoğan**[2]

[1]Department of Anatomy, Aydın Adnan Menderes University, Turkey
[2]Department of Medical Education, Aydın Adnan Menderes University, Turkey

Asclepius is considered the god of health and healing in mythology. The first text in history to mention Asclepius is Homer's Iliad. In this book, Asclepius is referred to as the perfect physician. Later, Asclepius became a myth and a cult was formed. Asclepius marries Epione and they have children (six girls, three boys). The secrets of medicine were passed on to his children by Asclepius. All children of Asclepius carry his healing power. The steps of health in modern medicine can be listed as follows; preventive medicine before the disease occurs, understanding the etiology when the disease occurs, treatment, which can be medical or surgical, and the recovery period of the disease. Recently, concepts such as health promotion, healthy and long life have been included in the modern literature. Interestingly, we see that these steps and concepts, which we think belong to modern medicine, are almost exactly represented and met by the children and family of Asclepius in mythology. This study objective to investigate Asclepius and his family's approach to medicine.

The understanding of modern medicine has shown undeniable progress in the protection and development of health with developing technology and new medical approaches. In addition, excessive specialization, mechanistic view in health, and dependence on technology sometimes cause the biopsychosocial and holistic approach to the patient to be put in the back ground. Centuries ago, the children of Asclepius actually told us the necessity of a holistic approach to the patient and the importance of holistic medicine. Asclepius and his children, without ignoring any of the steps of health, fully explained how the patient should be handled and how to heal with a holistic treatment approach. Today, we think it is very important to keep in mind the reflections of mythology and history on modern medicine and medical education.

Biography

Ilgaz Akdoğan, graduated from Eskişehir Osmangazi University, Faculty of Medicine as a medical doctor in 1994. He received his PhD degree from Eskişehir Osmangazi University, Health Sciences Institute, Department of Anatomy. In 2011, he became a Professor at Pamukkale University, Faculty of Medicine. He currently works at Aydın Adnan Menderes University, Faculty of Medicine, Department of Anatomy. In addition to anatomy, he is interested in the history of medicine and mythology related to the history of medicine.

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Tobacco use and pancreatic cancer: Unraveling the molecular mechanisms, risk factors, and prognostic implications – A systematic review

Muhammad Subhan[1], Hafiz Zeyad[2], Dharani Swarna Deiveegan[3], Muhammad Waqas[4], Piere Ray Tito Rodriguez[5], Gopi Sairam Reddy Mulaka[6], Navya Pillikunte Doddareddy[7], Mubeena Javed[8] and **Ruqiya Bibi[8]**

[1]Internal Medicine, Jinnah Hospital, Allama Iqbal Medical College, Pakistan
[2]Medicine and Surgery, Services Institute of Medical Sciences (SIMS), Services Hospital, Punjab Institute of Cardiology (PIC), Pakistan
[3]Mahatma Gandhi Memorial Government Hospital, (Affiliated to The Tamil Nadu Dr.M.G.R. Medical University), India
[4]Internal Medicine, Jinnah Sindh Medical University, Pakistan
[5]Department of Health Sciences, Private University of the Valley (UNIVALLE) / La Paz Branch, Bolivia
[6]Caribbean Medical Graduate Internal Medicine Aspirant, St.Martinus University, Curacao
[7]Banglore Medical College and Research Institute, India
[8]Jinnah Hospital, Allama Iqbal Medical College, Pakistan

Pancreatic cancer (PC) represents a formidable challenge in healthcare, accounting for the primary cause of cancer-related deaths in the United States and Europe. Despite significant advancements in unraveling the molecular intricacies of PC and developing innovative therapeutic approaches, its prognosis remains dismal. A significant contributor to PC risk is long-term smoking, though the exact molecular mechanisms underlying smoking-induced PC pathogenesis remain incompletely understood. Nevertheless, quitting smoking has been proven to substantially reduce the likelihood of developing PC. This review addresses the critical processes involved in how chemicals found in tobacco smoke impact two pivotal aspects of PC development: fibrosis and inflammation within the pancreas. These processes are foundational to comprehending the origins of PC. Looking forward, the review suggests that future research should concentrate on a comprehensive examination of the effects of smoking-related chemicals on pancreatic stem cells. Such an investigation could shed light on the essential mediators of the connection between smoking and the emergence of cancer cells in the pancreas. It underscores the gravity

of PC as a leading cause of cancer-related mortality, while recognizing ongoing efforts to unravel its molecular complexities. It emphasizes the established link between prolonged smoking and PC and advocates for a deeper understanding of the underlying pathways. Additionally, it proposes a forward-looking research direction focused on the influence of smoking chemicals on pancreatic stem cells, potentially unveiling novel diagnostic targets and offering hope for improved PC outcomes. In sum, this abstract encapsulates the urgency of addressing PC, acknowledges the role of smoking in its development, and suggests a promising avenue for future research to combat this deadly disease.

Biography

Dr. Muhammad Subhan

Research and Academic Experience: He completed MBBS, Allama Iqbal Medical College, Lahore (November 2016— May 2022). He completed Faculty of Sciences (F.Sc), Government College University, Lahore during September 2014 — September 2016 (Graduated with High Distinction securing 1006/1100 (91.45%). He completed Matriculation, Government High School Chung Multan Road, Lahore City in March,2012 — March,2014 with scored 1030/1100 (93.63%) in Board of Intermediate and Secondary Education, Lahore. He has passed the United States Medical Licensing Exams Step 1 and will take Step-2 and OET in next coming months. He had an internship experience at Jinnah hospital for one year from June 10, 2022, to June 10, 2023. During this time, He has acquired many academic, clinical, and communication skills. He got the opportunity to develop his leadership skills during the community-based training program the medical school implements. He is also a member of peer review panel of CUREUS Journal of Medical Science. He is a committed and dedicated person for the things he believe in, and he strongly believe that he would bring his best potential to this position to provide quality health care and excellent treatment to his patients while further improving his professional, practical, and personal skills.

Research Specialization: He has research experience as a Researcher Enrolled in Medical Review Articles Research Training Program (Online course). He covered fundamentals of clinical research, basics, and advanced training in an observational study (including QI), systematic review and meta-analysis, survey study, literature reviews, and case report, Learnt - brainstorming ideas, translating ideas into hypotheses, observing study documentation, collecting data, formulating hypotheses, interpreting data, tabulating the results, manuscript writing, and submission process. He engaged with other physicians with similar interests, worked on several projects, and applied all these skills in those projects to present, and publish them at peer review conferences and journals. During his 4th year MBBS, he participated in Cross-Sectional Study under the supervision of Dr. Nazim Gardazi (Department of Community Medicine, Allama Iqbal Medical College Lahore) with the title of "Assessment Of The Frequency Of Acne And Knowledge, Attitude And Practices For Self Medication For Acne Among Medical Students In Lahore."

Number of Published papers: He has published seven research articles published in different journals and three article is under peer review process.

Special Award: He is the editor at International journal of Oncology and reviewer at various journals.

Campylobacter infections: Is it a neglected entity?

Suseela V Kundoly

Department of Microbiology, Amala Institute of Medical Sciences, India

Objectives: This case report on *campylobacter* infection is to highlight the complications and mortality caused by this infection, if it is neglected.

Scope: Lack of awareness leads to delayed or non-reporting of the *campylobacters*, a zoonotic infection which may cause complications and mortality. There are reports on the presence of these bacteria in the chicken eggs in this geographical area. But reports on human cases are scant.

Results: Blood culture revealed *campylobacter*. Despite antibiotic treatment was started, the patient succumbed to the disease. There was *campylobacter* in the peritoneal wash also. Patient had granulomatous lesion in the intestine suggestive of tuberculosis.

Methods: A 22- year-old male patient was admitted with sudden onset of abdominal pain. He had been diagnosed as pulmonary tuberculosis based on the findings like weight loss, dyspnea and pleural effusion. Anti-tubercular drugs had been prescribed empirically during the previous admission four days back. Explorative laparotomy was done and there were intestinal obstruction and perforation. Following the correction of the perforation, during post operative period, the patient developed septicaemia. The blood and peritoneal wash were subjected to bacteriological culture.

Conclusion: The presenting case did come with abdominal complications like intestinal obstruction and perforation. The patient died of *campylobacter* septicaemia. Any intestinal perforation should be investigated for campylobacteriosis and treated specifically to prevent the mortality.

Biography

Prof. Dr. Suseela V Kundoly is working as Professor and Head of Microbiobiology at Amala Institute of Medical Sciences, Thrissur, Kerala, India. She has authored 20 research publications in peer-reviewed National and International journals. She is a life member of Indian Association of Medical Microbiologists and Academy of Clinical Microbiologists, Kerala. She has more than 20 years of teaching experience at undergraduate and postgraduate courses and serves as consultant Microbiologist. She is an active participant and has presented various research articles in International and National conferences. Prof. Dr. Suseela is an examiner to Microbiology courses in the various Medical Universities and her area of research interest is bacteriology.

Impact of a single-cell hemoprotein on gut health from animal case studies

Pil KIM[1], Sehyun PARK[1] and **Byungah KIM[2]**

[1]Research Group on Novel Food Ingredients for Alternative Protein, the Catholic Univ. of Korea, South Korea
[2]Hemolab I. c., South Korea

To ascertain the single-cell hemoprotein (hSCP, a biomass lysate of the highly reproducible bacteria) is a suitable weight-gain ingredient as an alternative protein, an experiment was conducted on forty 1-day-old broiler chickens (ROSS 308 strain). These chickens were divided into groups of 40 in 4 kennels at a farm facility to feed the test diet for 32 days. The weight-gain of 1 ppm hSCP-administered group was 2.8 %-lower compared with the control group with a 6 %-lower Feed-Conversion-Rate and an 86 % increase in the number of caecum lactic acid bacteria. To further understand the low weight-gain effect of the hSCP, an alternative dog meat containing 0.2% hSCP (100 g for each dog) was manufactured and fed to pet dogs (weighing less than 10 kg, n=7) by consumers. The feces collected from these consumers were analyzed to define the structure of the microbiota. Although the health conditions of dogs between before and after the alternative dog meat consumption showed little noticeable differences, the fecal bacteria compositions were re-shaped to resemble a healthy gut. To explore the potential of the hSCP as an anti-obesity supplement, obese mice were administered varying concentrations of hSCP concentrations (0, 0.05, and 0.5%) for 10 and 28 days (n=5 per group). Based on the dissected tissues weight and the visual observations, the hSCP-fed obese mice exhibited reductions in body fat weight, serum fat components, and inflammation indicator concentration. Additionally, there was a reshaping of the fecal microbiota leading to the proliferation of anti-obesity bacterial biomarkers such as *Akkermansia* etc. Additional mouse tests administrating a normal diet or a high-fat diet containing 0.05% hSCP for 28 days (n=3 per group) resulted in enhanced goblet cells in their gut tissues. The mode of gut health improvement by hSCP leading fat reduction of host animals are further discussed.

Biography

Professor Pil KIM graduated his bachelor's degree at Korea University (Food Technology), master and Ph. D. degrees at KAIST (Biological Sciences). He has conducted postdoc fellows at KRIBB (Fermentation Systems RU) and at Michigan State University (Dept. of Biochemistry and Molecular Biology) as well as at the Tongyang Confectionery Co. as a special military service before the assignment as a full-time professor at the Catholic Univ. of Korea (Dept. of Biotechnology) since 2004. He has been studying on developments of biologics/biotics based on metabolic engineering and cellular evolutionary engineering of single-cells and proteins, on microbial energy metabolism and its physiology. He has accomplished Technology Fee Incomes and has founded a company during his adjunct professorshi. He is a current director of a research group composing 10 domestic institutes entitled "Development of Novel Food Ingredients for Alternative Proteins" funded by Korean Ministry of Science, Technology, and ICT.

Meditation: Well-being and health

Agustín de la Herrán Gascón

Department of Pedagogy, Autonomous University of Madrid, Spain

Meditation is an ancient path to greater well-being, better health and inner evolution. However, it is still a rare or unconventional practice in health and educational centers. In this paper we will focus only on its possibilities and limits for well-being and health. The aim of this contribution is to provide a representative overview of studies that have shown the advantages that the practice of meditation can have for the majority of the population. We will also analyse some limitations to its implementation and research.

Biography

Lecturer in the Department of Pedagogy at the Universidad Autónoma de Madrid (UAM). Promoter of the radical and inclusive approach to education and radical and inclusive pedagogy. He directs the consolidated research group "Pedagogy, training and conscience" (https://pedagogiafc.com/). He has received around twenty awards for his academic, teaching and research career or for projects on which he has worked.

Biochemistry – not oncogenes – may demystify and defeat cancer

Jay Kulsh

Independent Scientist, USA

The presence of mutated genes strongly correlates with the incidence of cancer. Decades of research, however, has not yielded any specific causative gene or set of genes for the vast majority of cancers. The Cancer Genome Atlas program was supposed to provide clarity, but it only gave much more data without any accompanying insight into how the disease begins and progresses. It may be time to notice that epidemiological studies consistently show that the environment, not genes, has the principal role in causing cancer. Since carcinogenic chemicals in our food, drink, air, and water are the primary culprits, we need to look at the biochemistry of cancer, with a focus on enzymes that invariably facilitate transformations in a cell. In particular, attention should be paid to the rate-limiting enzyme in DNA synthesis, ribonucleotide reductase (RnR), whose activity is tightly linked to tumor growth. Besides circumstantial evidence that cancer is induced at this enzyme's vulnerable free-radical-containing active site by various carcinogens, its role in initiating retinoblastoma and human papillomavirus (HPV)-related cervical cancers has been well documented in recent years. Blocking the activity of malignant RnR by quenching its critical free-radical by gentle electrotherapy provides us with an effective, non-toxic and universal cancer treatment.

Biography

Ajay Kulshreshtha is a independent scientist who has published peer-reviewed articles about cancer causation and a cancer treatment. As a graduate student in the Department of Chemistry and Biochemistry at UCLA in late 1970's, he got interested in potential role of the enzyme Ribonucleotide Reductase (RnR) in causing cancer after learning about the unique structure of its "free-radical stabilized by two iron atoms" active-site.

In 1993, in our 10-minute meeting, Dr. James Watson (of DNA double-helix) dismissed involvement of biochemistry in cancer initiation and insisted on role of genes. However, in 2016, he stated in the New York Times:

locating the genes that cause cancer has been "remarkably unhelpful"… If he were going into cancer research today, he would study biochemistry rather than molecular biology.

he was ahead of time by 23 years.

National Cancer Institute and MD Anderson Cancer Center have acknowledged the validity of my approach to treat cancer.

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4th International Conference on
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Machine learning-based identification of Long COVID Syndrome: Leveraging encounter notes symptoms

S. Matharaarachchi[1], M. Domaratzki[2], A. Katz[3] and S. Muthukumarana[1]

[1]Department of Statistics, University of Manitoba, Canada
[2]Department of Computer Science, Western University, Canada
[3]Departments of Community Health Sciences and Family Medicine, University of Manitoba, Canada

The absence of a definitive diagnostic test for Long COVID Syndrome (LCS) presents a significant challenge in recent medical literature regarding accurately identifying affected individuals. This study is driven by the primary objective of developing a computational phenotype model that leverages machine learning techniques to precisely identify LCS cases within a substantial dataset of reported COVID-19 cases in Manitoba, Canada. The importance of this model lies in its potential to revolutionize the identification process of LCS, making it a significant contribution to the medical field.

The paper employs natural language processing techniques to differentiate LCS cases from various health conditions based on encounter notes symptoms. The foundation of the machine learning approach lies in establishing the pre-confirmed LCS group for classification, aiming to provide a precise and reliable method for patient identification. The study extensively evaluates various machine learning models, including the logistic regression model, logistic regression with elastic net regularization, and the random forest classifier, observing their predictive capabilities to identify the most efficient approach for detecting LCS. Through a thorough examination of classification and re-sampling techniques, incorporating patient attributes and pre- and post-COVID symptoms, model performance is assessed using key metrics such as sensitivity, specificity, and ROC analysis.

The results highlight the efficacy of logistic regression with elastic net regularization and Random Under-Sampling as the most effective predictive methodology, achieving a sensitivity of 0.95, specificity of 0.81, and an AUC of 0.94. This approach successfully identifies 24.7% of potential LCS patients within the COVID-19 cases set, significantly surpassing pre-identified cases. These findings contribute to developing a robust and efficient strategy for identifying LCS patients, advancing our comprehension of the condition, and facilitating more accurate diagnoses and improved treatment strategies.

Biography

Surani Matharaarachchi is an accomplished data scientist with a strong background in statistics and machine learning. Surani's academic journey includes a BSc (Sp.) in Statistics from the University of Sri Jayewardenepura, Sri Lanka, an MSc and ongoing doctoral research in Statistics at the University of Manitoba, Canada. Her research focuses on addressing the class imbalance issue in classification problems and developing novel methods in the presence of outliers. Currently serving as a Data Scientist at the Government of Manitoba, she is pivotal in leveraging data to drive informed decisions and policy formulation.

Evaluating the "Whole Community" concept based on the national response to COVID-19

Michael Dunaway[1] and **Brenda Bannan**[2]

[1]Innovation IoT Devices and Infrastructure Group,
National Institute of Standards and Technology Gaithersburg, USA
[2]Center for Human-Machine Partnerships, George Mason University, USA

This presentation summarizes an 18-month study of the national response to the COVID-19 pandemic as viewed from the individual perspectives of a team of local emergency management professionals. The research project evaluated the COVID-19 response based on a concept articulated by the Federal Emergency Management Agency (FEMA) and Centers for Disease Control and Prevention (CDC) as a "whole community approach" to disaster preparedness and public health, which became the de facto organizing structure for the COVID-19 national response. The research project identifies significant deficiencies in implementation of that concept and offers some recommendations for defining a true "whole community approach" to public health and safety as a mitigation strategy against future national-scale civic emergencies.

To further that goal, the Smart City Infrastructure program of the National Institute for Standards and Technology is initiating a project to design a "whole community" approach to community resilience and disaster recovery for Smart Cities.

Biography

Michael Dunaway is Associate Director for Innovation in the Smart Connected Systems Division at the National Institute of Standards and Technology (NIST), and program lead for the Global Community Technology Challenge (GCTC), a federal Smart City program.

Dr. Dunaway has led research institutes in community resilience at the University of Louisiana and the University of Cincinnati. Earlier positions included Senior Director for Preparedness and Resilience at the National Headquarters of the American Red Cross; Chief for Risk Management and Program Manager for Community Resilience at the Science & Technology Directorate, U.S. Department of Homeland Security; and as project manager in the Cognitive, Neural, and Social Science Division of the Office of Naval Research.

A graduate of the United States Naval Academy, and career Naval Officer, He holds an M.A. from the Fletcher School of Law and Diplomacy at Tufts University, and Ph.D. (Systems Engineering) from George Washington University.

Brief Interventions for cannabis using adolescents

Ken C. Winters

Oregon Research Institute, USA

This presentation will discuss the application of brief interventions to address adolescents with a cannabis use problem. Topics to include the following: brief intervention approach and its role in the Screen Brief Intervention Referral to Treatment (SBIRT) model; existing outcome literature; a review of current brief interventions that focus on youth cannabis use; and adjustments to a brief intervention when addressing adolescent cannabis use, including personalizing content, co-existing problems, parent role, referral to treatment issues, and future directions.

Biography

Ken C. Winters, Ph.D. is a Senior Scientist at the Oregon Research Institute (USA; Minnesota location) and a consultant to the Native Center on Behavioral Health at the University of Iowa. He previously was a Professor in the Department of Psychiatry at the University of Minnesota, where he founded and directed the Center for Adolescent Substance Abuse Research for 25 years. He is the co-founder of Smart Approaches to Marijuana Minnesota, a state-wide community coalition. Dr. Winters has received numerous research grants from the National Institute of Health and various foundations over a 35-year period to address behavioral health. He has published over 140 peer-reviewed articles and numerous other works, including *Contemporary Health Issues on Marijuana,* published in 2018 by Oxford University Press and co-edited with Kevin Sabet, Ph.D.

Understanding variants of uncertain significance in Germline Genetic Diagnostic Testing

P. Nicolosi

Invitae, USA

Appreciation for the diagnostic utility of germline genetic testing (GGT) has increased recently as the technology has become more available in clinical settings. Consequently, there has been an increase in questions regarding when and how GGT results should be used to diagnose and treat patients. Guidelines created by the American College of Medical Genetics and Genomics (ACMG) and others created a framework for classifying variants into five categories: "pathogenic" (P), "likely pathogenic" (LP), "uncertain significance (VUS), "likely benign" (LB), and "benign" (B).[1-3] VUSs represent the majority of variants detected by GGT and have insufficient evidence to establish a disease connection. A study of disease relevant germline variants in men with prostate cancer, found 2/3 of detected variants were VUSs.4 A majority of VUSs will be downgraded to B/LB based on functional or population frequency data (Invitae, unpublished data). Analysis of variants detected in White versus non-White men with prostate cancer found that African American (AA) men have an equal likelihood of a P/LP variant ($p = 0.09$), but were more likely to have a VUS (odds ratio [OR] = 1.95; $p < 0.0001$)[5] Additionally, Hispanic men with prostate cancer have a higher VUS return rate (21.5%) compared to White men (16.6%)[6] These findings highlight that men of color, are more likely to receive an inconclusive result from GGT than their White counterparts. This has serious clinical implications for non-White and ancestral admixture individuals who are underrepresented in the population databases and GGT data sets. GGT is a critical tool in the diagnosis and management of inherited diseases, but more is needed to ensure it is being used accurately and equitably. Until VUSs can be reclassified by the preponderance of available data, clinicians should avoid taking therapeutic action based on a VUS result.

Biography

Dr. Nicolosi received her doctorate in Biomedical Sciences at the University of California, Irvine where her work centered on the development and patterning of stem cell domains in neuroepithelial tissues. She went on to a Postdoctoral Fellowship at Stanford University where she was an NIH IRACDA (Institutional Research and Academic Career Development Award) Fellow in the Department of Pathology. Her postdoctoral work focused on the genomics of prostate cancer. She is currently a senior clinical genomic scientist at Invitae, a genetic diagnostic testing company, where she serves as a variant analyst and has been involved in the development of both their germline and somatic cancer products. She has published multiple papers on the genetic in collaboration with key opinion leaders in the field of prostate cancer. She currently resides in Washington with her husband and four children.

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Curriculum and assessment innovations to enhance social determinants of health-informed clinical reasoning of medical students

Barbara Masi[1], Samar Hegazy[2], Kellie Mullany[2], Jaya Yodh[2], Grace Park[2], and **Imanni Sheppard[2]**

[1]Icahn School of Medicine at Mount Sinai, USA
[2]Carle Illinois College of Medicine, USA

Interest in integration of the social determinants of health (SDOH) framework in medical education to enhance patient-centered healthcare rather than disease-focused care is growing, however, there is no consensus for effective curricular approaches. This work investigated the impact of integrating SDOH framework into problem-based learning (PBL) on students' clinical case problem-solving skills towards enhancing patient-centered health care. The research question was whether a novel curriculum of PBL-based case vignettes enhanced with SDOH-relevant probes when linked with concept mapping (CM) and reflection would impact student approaches to patient treatment plan development. Fourteen student volunteers were randomly assigned to control and experimental PBL groups. The control group explored two patient cases with clinical and basic science probes to prompt case analysis. The experimental group explored the same cases with additional SDOH-linked probes and completed a group CM of treatment plan development. To assess intervention impact, all students received new case vignettes, breast cancer and liver disease, to work on individually. Each student created CMs of treatment plans and recorded reflections of CM development process. Reflection transcripts were analyzed using inductive coding. Inductive coding identified themes that highlight clinical reasoning and SDOH integration: Case Framing, Clinical Reasoning to Diagnosis, Clinical Reasoning to Treatment Plan. Coding revealed differences between groups in clinical problem-solving approaches: experimental group followed SDOH-informed clinical reasoning approach leading to a patient-centered treatment plan with balanced therapeutic and non-therapeutic elements while control group followed a clinical reasoning approach to their treatment plan development that mainly focused on clinical case aspects. Comparison of coding of breast and liver case reflections identified differences SDOH integration quality. This study provides an effective approach to SDOH integration into medical education towards enhancing trainee competencies to provide patient-centered treatment plans. Results also highlight how case vignette design may be used to tailor SDOH – clinical reasoning integration.

Biography

Barbara Masi's twenty-five year career in medical and STEM education has included leadership of major multidisciplinary education innovation and research initiatives at Massachusetts Institute of Technology and University of Rochester. Dr. Masi's medical education research at the Frank Netter College of Medicine and Carle-Illinois College of Medicine in the USA has focused on research and innovations to enhance all students' progress in medical studies and medical curriculum development related to patient equity in healthcare.

Bridging the gap between patient and clinician

Nicholas Kelly

Bowling Green State University, USA

Topic Objectives - Based on actionable steps

- Improve clinician accountability through dynamic growth
- Understand the patient's perspective
- Implement patient perspective to improve patient outcomes
- Utilize passion for improving work dynamics and outcomes for clinicians and patients
- Increase mindfulness as it relates to minority population interactions
- Discuss methods to improve minority relationships and conversations

There is no secret a disconnect between healthcare providers and the people they help is very real. This gap exists for a multitude of reasons; however, it is imperative, that we as clinicians attempt to close this gap. This presentation discusses methods to close this gap, by utilizing information and strategies to help clinicians understand the patient experience, identify appropriate approaches to diversity, equity, and inclusion, and invigorate clinicians with renewed energy by leveraging passion.

Biography

Passionate, energetic, knowledgeable, and compassionate, are a few words to describe, Nicholas Kelly's approach to life. His story began at three months old when his mother diagnosed him with Cystic Fibrosis. Growing up Nick strove for normalcy, valuing himself as a person, meant to stand out.

Nick thrived despite his disease; obtaining a Bachelor's and Master's degree from Bowling Green State University, and becoming a Dietitian. In addition, he is an author, decorated speaker, and advocate. Nick's life has focused on utilizing his abilities and knowledge to influence those around him while acting as a positive representation of the educational, artistic, and CF community.

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A review of literature on interventions aimed at increasing play for children with autism spectrum disorder

Goodson C. Dzenga[1] and **Krystal J. Kennedy**[2]

[1]University of Montana Western, USA
[2]Tennessee Tech University, USA

Objectives: This review aimed to investigate interventions designed to enhance play for children with autism spectrum disorder (ASD), emphasizing the utilization of typically developing peers and adults within the intervention. The primary focus is on understanding the impact of such interventions on improving social communication skills, play engagement, and community integration for children with ASD.

Methods: This review examined 20 studies containing interventions to enhance play for children with ASD using typically developing peers and adults as part of the intervention. The studies included single-case designs (SCDs) and group design studies published from 2000 to 2022.

Results: The findings reveal that successful play interventions for children with ASD often involve a combination of practices. Notably, certain components, including following the child's interest, prompting, video modeling, and live modeling frequently featured across the studies. Also, other components, such as priming and social stories, were less commonly employed. The synthesis of these results sheds light on effective strategies for teaching play to children with ASD and informs the development of comprehensive intervention approaches. Furthermore, the research underscores the significance of tailoring play interventions to individual needs, emphasizing that a personalized approach enhances the effectiveness of strategies. The identified components provide valuable insights for educators and caregivers, fostering a deeper understanding of the methods that contribute to successful play interventions for children with ASD.

Conclusions: This review concludes that interventions incorporating a combination of strategies prove most effective in enhancing play for children with ASD. The identified components, such as following the child's interest and various modeling techniques offer valuable insights for designing targeted interventions. By understanding the diverse needs and preferences of children with ASD, interventions can be tailored to foster meaningful play experiences, positively impacting social communication, behavior, and community integration.

Biography

Dr. Goodson Dzenga is an accomplished and dedicated educator, holding a Ph.D. in Exceptional Learning/Applied Behavior Analysis-Special Education from Tennessee Technological University. As a Board-Certified Behavior Analyst (BCBA), Dr. Dzenga currently serves as an Assistant Professor in Special Education at the University of Montana Western, where he also holds the role of Special Education Coordinator.

His expertise shines through in teaching courses such as Principles of Applied Behavior Analysis, contributing significantly to the university's commitment to providing quality education. Dr. Dzenga's professional engagement extends to esteemed organizations like the Association of Behavior Analysis International (ABAI) and the Council for Exceptional Children (CEC). His noteworthy contributions to the field include peer-reviewed journal publications, book chapters, and conference presentations, highlighting his research prowess.

Dr. Dzenga's teaching skill set is robust, reflecting his dedication to fostering inclusive education, personalized learning, and evidence-based practices.

Revisiting a Telencephalic extension of the ascending reticular activating system

Edison Miyawaki[1], Matthew Torre[2] and **Shamik Bhattacharyya[1]**

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Brigham and Women's Hospital, Harvard Medical School, USA
[2]Department of Pathology, MassGeneral Brigham,
Brigham and Women's Hospital, Harvard Medical School, USA

Is the cerebrum involved in its own activation to states of attention or arousal? "Telencephalon" is a term borrowed from embryology to identify not only the cerebral hemispheres of the forebrain, but also the basal forebrain. We review a generally undercited literature that describes nucleus basalis of Meynert, located within the substantia innominata of the ventrobasal forebrain, as a telencephalic extension of the ascending reticular activating formation. Although that formation's precise anatomical definition and localization have proven elusive over more than 70 years, a careful reading of sources reveals that there are histological features common to certain brainstem neurons and those of the nucleus basalis, and that a largely common dendritic architecture may be a morphological aspect that helps to define non-telencephalic structures of the ascending reticular activating formation (e.g., in brainstem) as well as those parts of the formation that are telencephalic and themselves responsible for cortical activation. We draw attention to a pattern of dendritic arborization described as "isodendritic," a uniform (isos-) branching in which distal dendrite branches are significantly longer than proximal ones. Isodendritic neurons also differ from other morphological types based on their heterogeneous, rather than specific afferentation. References reviewed here are consistent in their descriptions of histology, particularly in studies of locales rich in cholinergic neurons. We discuss the therapeutic implications of a basal forebrain site that may activate cortex. Interventions that specifically target nucleus basalis and, especially, the survival of its constituent neurons may benefit afflictions in which higher cortical function is compromised due to disturbed arousal or attentiveness, including not only coma and related syndromes, but also conditions colloquially described as states of cognitive "fog" or of "long-haul" mental compromise.

Biography

Edison Miyawaki, M.D. is an associate neurologist at Mass General Brigham and an assistant professor of Neurology at Harvard Medical School, both in Boston, MA USA. He trained in both neurology and psychiatry at Harvard teaching hospitals. He has practiced academic neurology for over 35 years, has published over 100 articles or presentations in print and other media, including ten books on neurology and psychiatry (subjects of those books include Sigmund Freud's psychology of love and human and vertebrate neuroanatomy; regarding the latter topic, he has written nine books, among them *The Autumn Brain Seminars*, in two volumes). He has written about neuroscience for general audiences in periodicals such as *The American Scholar*, *The Atlantic*, and *The Yale Review.* He has taught both in the United States and internationally, including annual lectures (2013-2016) at Pitié-Salpêtrière Hospital, University of Paris VI in France. He has received multiple awards for his teaching.

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Overview of SARS-COV-2 infection at the Butantan penitentiary progression center

Soraya Gomes de Amorim Andrade[1], Fernando Moreira de Andrade[1], Anderson da Silva[2], Maria Regina Alves Cardoso[3], Guilherme Rodrigues Ferraz[2], Eliana Nogueira Castro de Barros[2], Patrícia Emilia Braga[2], Milena Martello Cristófalo[1] and **José Mendes Aldrighi[1]**

[1]Departamento de Saúde, Universidade de São Paulo, Ciclos de Vida e Sociedade, Brazil
[2]Instituto Butantan, Brazil
[3]Departamento de Epidemiologia, Universidade de São Paulo, Brazil

Objective: To estimate the prevalence of exposure to the SARS-CoV-2 virus among individuals living in restricted freedom.

Methods: A seroprevalence survey was carried out with the population of the female penitentiary of the Centro de Progressão Penitenciária (CPP) in Butantan (municipality of SãoPaulo), between June 24 and August 20, 2020. During this period, according to the Secretariat of Penitentiary Administration (SAP), the positivity of rapid tests among inmates ranged from 65% to 78%. The evaluation method used in the study was the "One Step COVID-19" rapid test (chromatography), from the company Wondfo, also using the RT-PCR method in symptomatic participants to confirm the viral condition. The study population consisted of 879 female inmates and 170 employees of the institution.

Results: The prevalence of total antibodies (IgG/IgM) against the SARS-CoV-2 virus in the total population of 1049 study participants was 6.1%; among the population of 879 inmates, a prevalence of 5.8% was observed, and among the institution's employees, 7.5%.

Conclusions: The prevalence of covid-19 at the Butantan CPP was low, which is due to the implementation of simple prevention measures at the institution, such as the use of masks (with appropriate changes), emphasis on hygiene, hand washing and social distancing, in addition to other strategies, such as suspending inmates' visits from relatives and friends and cutting back on elective medical appointments and outside work.

Biography

Graduated from the Faculty of Medical Sciences of Santa Casa de São Paulo in 1996. She attended Medical Residency in Gynecology and Obstetrics at the Irmandade da Santa Casa de Misericórdia from February 1997 to January 1999. At the same institution she studied Specialization in the areas of Normal Obstetrics , Obstetric Pathology, Video Laparoscopy, Infertility, Oncology, Ultrasound and Climacteric. He also specialized in Ultrasonography in Internal Medicine and in Gynecology and Obstetrics at the Ultrasonography Training Center of São Paulo in the years 2000 to 2001. He completed postgraduate studies at Master's level at the Escola Paulista de Medicina - Universidade Federal de São Paulo, after defending Public Dissertation in 2006. Currently pursuing a PhD in the Postgraduate Course at the Faculty of Public Health of the University of São Paulo. She is currently a certified Assistant Physician at the São Paulo State Department of Health. She worked as a Gynecologist at the Penitentiary System Hospital Center for the Health Department / OSS Santa Casa de São Paulo from 2009 to 2015 and the ABC Foundation from 2016 to the present date. She works as the Doctor Responsible for Ultrasound at the Centro Assistencial Cruz de Malta, having the role of Preceptor of General Ultrasound and Fetal Medicine and works as a Gynecologist at the Edmundo Vasconcelos Hospital.

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Current quality of life metrics and their feasibility and applicability in adaptive sports

Joseph Tingen[1] and **Michael Berns**[2]

[1]Tufts University School of Medicine, USA
[2]Life Rolls On Foundation, USA

Purpose of Review: There is already widespread evidence that participation in adaptive sports contributes to a significant improvement in quality of life. This review will cover the current metrics in assessing quality of life and determine their feasibility in evaluating large-scale adaptive sports organizations, which can serve populations with very diverse types of disabilities.

Recent Findings: Quality of life has historically been studied in patients with a spinal cord injury, leaving many groups under researched in terms of the benefit from adaptive sports. Multiple metrics have been developed to address different types of disabilities but leave the evidence disconnected.

Summary: No standardized metric has studied the quality of life in a community with a very wide range of disabilities. Previous literature has also pushed for more subjective definitions of quality of life — aspects that current metrics do not address. A single, standardized metric is needed, as consistent evidence is of utmost importance to support these communities.

Biography

Joseph Tingen (him/him) is a second-year medical student at Tufts University School of Medicine in Boston, MA, USA. He also attended Tufts University for his bachelor's degree in Cognitive Brain Science and Biomedical Sciences. In addition to his MD degree, his pursuing a Master's in Public Health at the medical school. He became driven by the widespread health inequities and biases for people living with a disability and was able to research with the Life Rolls Foundation, an adaptive sports organization in California. Ensuring equitable quality of life for all patients and individuals in the community has become a passion of his, which is what drove him to research the areas discussed in this abstract. His future career in medicine is currently unknown, but he is interested in pursuing a neurosurgery residency program.

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Application of discrete wavelet transform and spectral entropy in epileptic seizure detection

T. Azizi

University of Wisconsin-Madison, USA

Recently, characterizing the dynamics of brain functional networks at task free or cognitive tasks has developed different research efforts in the field of neuroscience. Epilepsy is an electrophysiological brain disease which is accompanied by recurrent seizures. Seizure and epilepsy detection is a main challenge in the field of neuroscience. Understanding the underling mechanism of epilepsy and transition from a normal brain to epileptic brain crucial for the diagnosis and treatment purposes. To understand the organization of epileptic brain network functions at large scales, electroencephalogram (EEG) signals measure and record the changes in electrical activity and functional connectivity. Time frequency analysis and continuous spectral entropy are well developed methods which reveal dynamical aspects of brain activity and can analyze the transitions in intrinsic brain activity. In this work, we aim to model the dynamics of EEG signals of epileptic brain and characterize their dynamical patterns. We use Time frequency analysis to capture the alterations in the structure of EEG signals from patients with seizure. Continuous spectral entropy is used to detect the start of seizures. The main purpose of the current is to explore the changes in the organization of epileptic brain networks. Using time frequency techniques, we are able to draw a big picture of how the brain functions before and during seizure and step forward to classify seizure and corresponding brain activity during different stages of epilepsy. The present study may contribute to characterizing the complex non-linear dynamics of EEG signals of epileptic brain and further assists with biomarker detection for different clinical applications. This finding helps towards effective diagnosis and better treatment of epilepsy.

Biography

Tahmineh Azizi is a highly innovative and accomplished researcher at Washington University in St. Louis with extensive understanding and more than six years' experience of presentations, development of novel models and tools, and computational analysis to quantitatively bridge the gap between in-vitro experiments and in-vivo endpoints. she research has been directed towards areas including mathematical biology, dynamical systems theory, computational analysis, mathematical modeling, statistical modeling, Neuroscience, epidemiological models, topological data analysis, fractional calculus and fractal geometry, multiscale modeling.

Impact of the COVID-19 Pandemic on public hospitals in the United States

Will Ross

Washington University School of Medicine, USA

The country's public hospitals, guided by the principles established by the first such hospital in in 1736 and codified through the policies of the Surgeon General in 1936, have played an outsized role as safety net institutions for disadvantaged populations. Public hospitals are predominantly located in urban, under resourced neighborhoods, and treat a larger percentage of low-income individuals who are uninsured or enrolled in Medicaid. In assessing the status of public hospitals and urban communities in the 21st century, the impact of the COVID-19 pandemic was evaluated at two high performing public hospitals: Grady Memorial Hospital and Rush University Medical Center, and a network of safety hospitals affiliated with the Missouri Hospital Association. COVID-19 infections and death rates stratified by race and ethnicity were examined. The results suggest a trend towards lower mortality in African American patients in the first year of the pandemic, and possible adverse outcomes in a subset of rural hospitals in Missouri. This study highlights the need to expand funding and support for the nation's essential hospitals.

Biography

Will Ross, MD, MPH is associate dean for diversity at Washington University School of Medicine and professor of medicine in the Renal Division. As a public health and health care policy expert he has worked nationally and globally on systems integration and construction of conceptual frameworks to reduce health care disparities. He is a charter and founding member of the St. Louis Regional Health Commission, which has been instrumental in leveraging millions of dollars annually to St. Louis to maintain an integrated network of safety net primary care clinics and public health services. He served as Chairman of the board of directors of the Missouri Foundation for Health, where he directed the Foundations's creation of the nonprofit center, Health Literacy Missouri. He is Chairman of the Directors of the Mid America Transplant Services Foundation and Chairman of the St. Louis Board of Health. He served as a member of the Institute of Medicine health Literacy Roundtable and is a member of Centers for Disease Control health Disparities Subcommittee where he promotes efforts to further diversity in the public health workforce. Dr. Ross is the associate editor of the public health journal, Frontiers in Public Health Education and Promotion. He has received numerous honors and awards, including the 2009 Washington University Medical Center Alumni Faculty Achievement Award, the 2011 Health Literacy Missouri Trailblazer Award, and the 2013 Samuel Goldstein Leadership in Medical Education Award. A Yale University graduate, he completed medical school at Washington University School of Medicine, Internal Medicine residency at Vanderbilt University, and a Rental Fellowship at Washington University, He completed a Master's of Science in Epidemiology at the Saint Louis University School of Public Health.

PEERS ALLEY MEDIA

DISTINGUISHED SPEAKER TALKS

DAY 2

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Open abdomen and negative pressure wound therapy for acute peritonitis especially in the presence of anastomoses and ostomies

Orestis Ioannidis

Department of Surgery, Medical School, Aristotle University of Thessaloniki, General Hospital "George Papanikolaou", Greece

Acute peritonitis is a relatively common intra-abdominal infection that a general surgeon will have to manage many times in his surgical carrier. Usually it is a secondary peritonitis caused either by direct peritoneal invasion from an inflamed infected viscera or by gastrointestinal tract integrity loss. The mainstay of treatment is source control of the infection which is in most cases surgical. In the physiologically deranged patient there is indication for source control surgery in order to restore the patient's physiology and not the patient anatomy utilizing a step approach and allowing the patient to resuscitate in the intensive care unit. In such cases there is a clear indication for relaparotomy and the most common strategy applied is open abdomen. In the open abdomen technique the fascial edges are not approximated and a temporarily closure technique is used. In such cases the negative pressure wound therapy seems to be the most favourable technique, as especially in combination with fascial traction either by sutures or by mesh gives the best results regarding delayed definite fascial closure, and morbidity and mortality. In our surgical practice we utilize in most cases the use of negative pressure wound therapy with a temporary mesh placement. In the initial laparotomy the mesh is placed to approximate the fascial edges as much as possible without whoever causing abdominal hypertension and in every relaparotomy the mesh is divided in the middle and, after the end of the relaparotomy and dressing change, is approximated as much as possible in order for the fascial edges to be further approximated. In every relaparotomy the mesh is further reduced to finally allow definite closure of the aponeurosis. In the presence of ostomies the negative pressure wound therapy can be applied as usual taking care just to place the dressing around the stoma and the negative pressure can be the standard of -125 mmHg. However, in the presence of anastomosis the available date are scarce and the possible strategies are to differ the anastomosis for the relaparotomy with definitive closure and no further need of negative pressure wound therapy, to low the pressure to -25 mmHg in order to protect the anastomosis and to place the anastomosis with omentum in order to avoid direct contact to the dressing. The objective should be early closure, within 7 days, of the open abdomen to reduce mortality and complications.



Biography

Dr. Ioannidis is currently an Assistant Professor of Surgery in the Medical School of Aristotle University of Thessaloniki. He studied medicine in the Aristotle University of Thessaloniki and graduated at 2005. He received his MSC in "Medical Research Methodology" in 2008 from Aristotle University of Thessaloniki and in "Surgery of Liver, Biliary Tree and Pancreas" from the Democritus University of Thrace in 2016. He received his PhD degree in 2014 from the Aristotle University of Thessaloniki as valedictorian for his thesis "The effect of combined administration of omega-3 and omega-6 fatty acids in ulcerative colitis. Experimental study in rats." He is a General Surgeon with special interest in laparoscopic surgery and surgical oncology and also in surgical infections, acute care surgery, nutrition and ERAS and vascular access. He has received fellowships for EAES, ESSO, EPC, ESCP and ACS and has published more than 180 articles with more than 3000 citations and an H-index of 28

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Landscape, barriers, and facilitators of scientific productivity in schizophrenia research in Southeast Asia: A bibliometric analysis

Mary Nadine Alessandra R. Uy[1,2] and **Ourlad Alzeus G. Tantengco**[1]

[1]College of Medicine, University of the Philippines Manila, Philippines
[2]Department of Medicine, Philippine General Hospital, Philippines

Background: Schizophrenia research has significantly grown in the past years. However, there is no comprehensive evaluation of schizophrenia research publications from Southeast Asia (SEA). Thus, this study determined the characteristics and trends of published articles about schizophrenia in SEA through a bibliometric analysis.

Methods: A database search on schizophrenia research in SEA countries was performed using the Scopus databases from 1973 to 2021. Bibliometric information was obtained from Scopus, and network visualization was conducted using VOSviewer software.

Results: There were 1068 articles on schizophrenia from SEA from 1973 until 2021. Schizophrenia research outputs from SEA started to increase from 2000 onwards. Singapore, Malaysia, and Thailand were the most productive countries in schizophrenia research and had the most collaborations. Most schizophrenia research in SEA was published in Asia- or SEA-based journals. The research hotspots for schizophrenia in SEA included treatment, pathophysiology, symptomatology, and psychological and social aspects of schizophrenia. Lastly, correlation analysis showed that gross domestic product per capita, research and development (R&D) expenditures, number of researchers in R&D, number of physicians, and international research collaborations were significantly correlated with higher research productivity and scientific impact in schizophrenia research.

Conclusion: In conclusion, this study showed the trends and gaps for research in SEA and the socioeconomic factors correlated with research productivity for schizophrenia in SEA. This study emphasized increasing financial support and collaborations for schizophrenia research to improve research productivity in schizophrenia in the SEA region.

Biography

Mary Nadine Alessandra R. Uy, Previously worked on: (1) handling Drosophila melanogaster as an animal model for genetically associated neurodegenerative movement disorders for my Ph.D.; and (2) transcriptomic analysis of sepsis patients for prognostication. Also had experience in field biology during my undergraduate. Currently interested in bibliometric analysis (neurology and neurosciences), neurogenetics, and translational research. Currently working as an internist in training at the Philippine General Hospital.

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Natural progress history of asymptomatic bacterial vaginosis in Chinese Han women and associated risk factors

Rui Zhang[1], Zhaohui Liu[2], Yan Zhang[1], Dai Zhang[1] and **Qinping Liao[3]**

[1]Peking University First Hospital, China
[2]Beijing Obstetrics and Gynecology Hospital, China
[3]Beijing Tsinghua Changgung Hospital, China

Objective: Asymptomatic bacterial vaginosis (aBV) is prevalent in the general population, while a previous study only investigated the natural history of aBV in women at high-risk. This stage study was to investigate the natural history of aBV in Chinese Han women at general risk and examine risk factors associated with different outcomes.

Methods: Women of reproductive age with aBV were enrolled and prospectively followed up with for four months. Participants were classified into one of three outcomes: progress, self-cure, or no-change. Univariate and multivariate analyses were used to determine the association between potential risk factors and outcomes.

Results: A total of 3420 subjects were screened and 1014 women with aBV were enrolled. Eventually, 984 participants completed the study, with 30 patients dropped out. Among the 984 cases, 42 cases self-cured spontaneously, while 433 cases progressed and 509 cases did not change significantly. Of the 433 cases that progressed, several types of mixed infections were observed in addition to 196 symptomatic bacterial vaginosis. According to univariate analysis, frequent travel (OR, 95% CI, 2.73 [2.09 ~ 3.55]) and history of bacterial vaginosis (BV) (5.47, [4.15 ~ 7.21]) exhibited significant associations with aBV progression, while condom contraception (0.46 [0.36 ~ 0.61]) and lower Nugent score (0.49, [0.37 ~ 0.64]) demonstrated protective effects for self-cure. According to multivariate regression analysis, the risk factors for aBV progression were history of BV (6.67, [4.86 ~ 9.15]) and frequent travel (3.57, 2.59 ~ 4.92). Condom contraception (0.36, 0.26 ~ 0.49) exhibited a protective effect against aBV progression.

Conclusion: Without intervention, a large proportion of aBV would progress, compared to the very few patients whose aBV self-cured spontaneously. It is necessary to clinically intervene aBV patients. Condom utilization can be used as an effective method to improve the outcome of aBV.

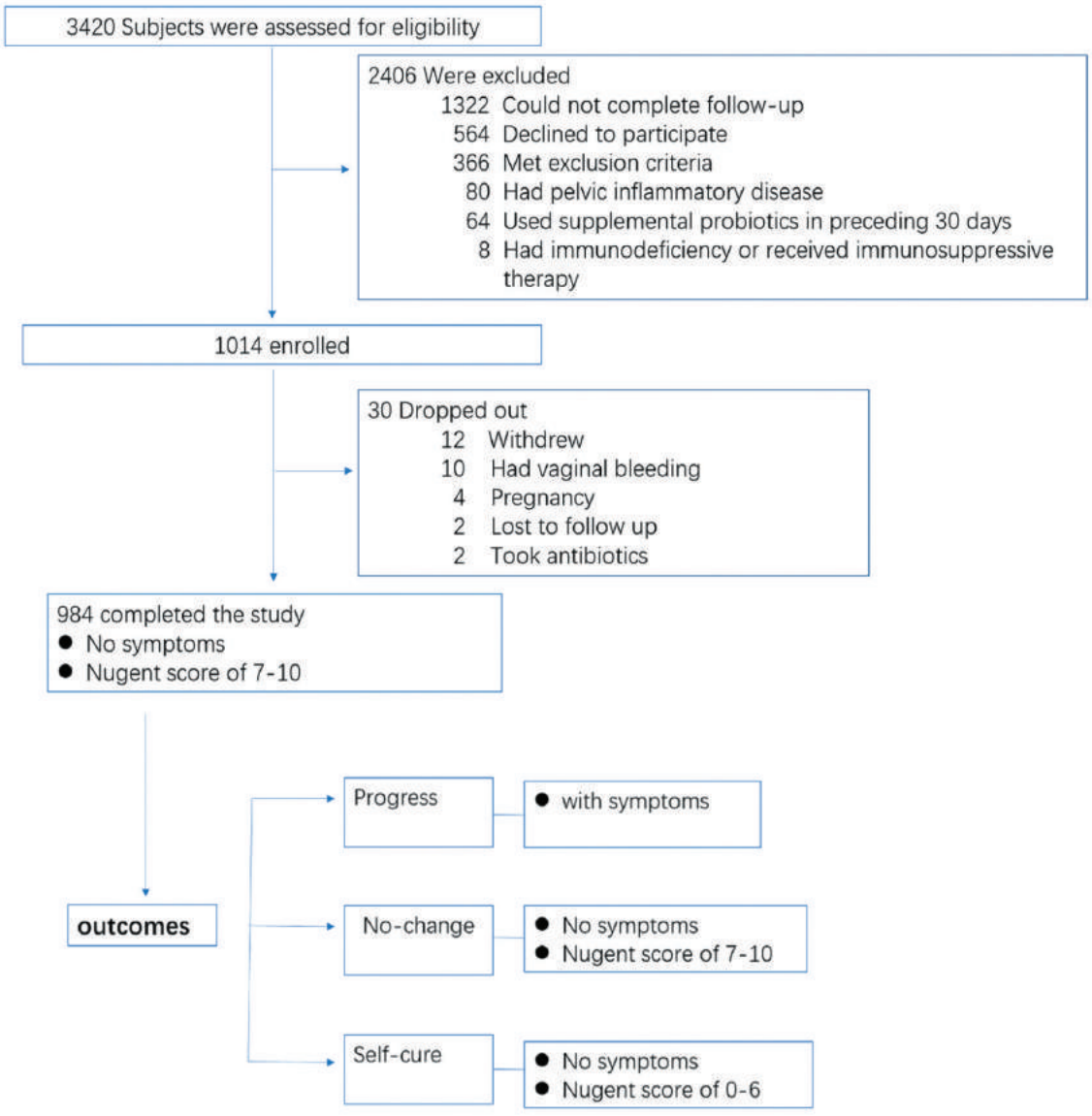

Figure 1. Overview of screening process and progress results.

Table 1. Cumulative number and rate of different outcomes in 4 months.

	1 month			2 months			3 months			4 months		
	N[a]	%[a]	P value	N[b]	%[b]	P value	N[c]	%[c]	P value	N[d]	%[d]	P value
Progress	121	12.3	0.04*	249	25.3	0.00*	340	34.6	0.00*	433	44.0	0.00*
No-change	853	86.7	0.00*	712	72.3	0.00*	614	62.4	0.00*	509	51.7	0.00*
Self-cure	10	1.0	-	23	2.4	-	30	3.0	-	42	4.3	-

a,b,c,d: Cumulative number and rate of patients * Difference between progress and self-cure, difference between No-change and self-cure were analyzed, and most P values were lower than 0.05/3 (adjusted by Bonferroni method). The rate of progress in each month were 12.3%, 15.0%, 12.8% and 15.1% respectively. The rate of self-cure in each month were 1.0%, 1.5%, 1.0% and 2.0% respectively.

Biography

Rui Zhang, Doctor of Obstetrics and Gynecology, Peking University Medical Department

Mainly engaged in the research on the relationship between microecology and obstetric and gynecological diseases, and has done a lot of basic and clinical researches on the micro biological mechanism, micro biological diagnosis and treatment of infectious diseases in obstetrics and gynecology

Engaged in the diagnosis and treatment of clinical diseases in obstetrics and gynecology, especially in the diagnosis and treatment of gynecological malignant tumors

Published 30 scientific research papers

Independently obtained and completed 1 National Natural Science Foundation project, 1 Doctoral Program Foundation project of the Ministry of Education, and participate in 3 national and provincial scientific research projects

Novel MYBPC3 mutations in Indian population with Inherited Cardiomyopathies

Deepa Selvi Rani

CSIR-Centre for Cellular and Molecular Biology, India

Background: Mutations in Myosin Binding Protein C (MYBPC3) are one of the most frequent causes of cardiomyopathies in the world but not much data is available in India.

Methods: We carried out targeted direct sequencing of MYBPC3 in 115 Hypertrophic (HCM), and 127 Dilated (DCM) Cardiomyopathies against 197 ethnically matched healthy controls from India.

Results: We detected 33 single nucleotide variations in MYBPC3, of which 19 were novel. We found a splice site mutation [(IVS6+2T) T>G] and 16 missense mutations in Indian cardiomyopathies; [5 in HCM; E258K, T262S, H287L, R408M, V483A: 4 in DCM; T146N, V321L, A392T, E393K and 7 in both HCM and DCM; L104M, V158M, S236G, R272C, T290A, G522E, A626V], but those were absent in 197 normal healthy controls. Interestingly, we found 7 out of 16 missense mutations (V158M, E258K, R272C, A392T, V483A, G522E, and A626V) in MYBPC3 were altering the evolutionarily conserved native amino acids, accounted for 8.7% and 6.3% in HCM and DCM, respectively. The bioinformatic tools predicted that those 7 missense mutations were pathogenic. Moreover, the co-segregation of those 7 mutations in families further confirmed their pathogenicity. Remarkably, we also identified compound mutations within the MYBPC3 gene of 6 cardiomyopathy patients (5%) with more severe disease phenotype; of which 3 were HCM (2.6%), [(1. K244K + E258K + (IVS6+2T) T>G); (2. L104M + G522E + A626V); (3. P186P + G522E + A626V]; and 3 were DCM (2.4%), [(1. 5'UTR + A392T; 2. V158M+G522E; and 3.V158M + T262T + A626V].

Conclusion: The present comprehensive study on MYBPC3 has revealed both single and compound mutations in MYBPC3 and their association with disease in Indian Population with Cardiomyopathies. Our findings in the future may perhaps help in initiating diagnostic strategies and eventually recognizing the targets for therapeutic interventions.

Biography

Dr. Deepa Selvi Rani is from CCMB-CSIR, India. She is interested in understanding the Genetic basis of Cardiovascular Diseases, Male infertility, Mitochondrial disorders, and the Origin of Modern Humans. She has two master's degrees, M.Sc. in Biochemistry and M.Sc. in Biotechnology. She did her Ph.D. on "Molecular Studies in Cardiomyopathies and Noonan Syndrome." She identified several mutations in sarcomere protein genes https://www.ncbi.nlm.nih.gov/projects/SNP/snp_viewTable.cgi?type=contact&handle=THANGARAJ_DEEPA_CCMB&batch_id=1062022 causing cardiomyopathies and sudden cardiac arrest. To understand the disease specifically, she studied their molecular mechanisms, which are relevant to pharmacogenomic studies and personalized medicine. Dr. Rani is an enthusiastic, dedicated, outstanding researcher and published 50 papers in peer-reviewed International Journals. She has a 23 h-index with a total of 1802 citations https://scholar.google.co.in/citations?hl=en&user=qUgZf-kAAAAJ&view_op=list_works&sortby=pubdate. WIN CARS has recently awarded her "Servier Women Researchers Award" in 2019.

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The role of generative AI and large language models in revolutionizing cancer laboratories: Next-generation diagnosis and therapeutics

Niloofar Faraji[1], **Taher Fattahi**[2] and **Shahab Aali**[1]

[1]Guilan University of Medical Sciences, Iran
[2]HerzensApp GmbH, Austria

In cancer research, integrating artificial intelligence (AI) and large language models (LLMs) has emerged as a groundbreaking frontier, revolutionizing laboratory procedures and data analyses. AI algorithms enable meticulous analysis of vast datasets, identify and validate novel biomarkers, and predict potential drug candidates to enhance early cancer detection through unique molecular signatures. Integrating AI and the Internet of Medical Things (IoMT) improves cancer laboratories' data collection, remote monitoring, personalized treatment, and collaborative capabilities. Tumoral exosomes pose challenges in drug delivery, immune escape, and metastasis. Machine learning algorithms can be trained on tumor and exosome data to identify patterns and predict the likelihood of tumor exosomes involved in immune evasion and metastasis. Furthermore, deep learning techniques, such as convolutional neural networks (CNNs) and recurrent neural networks (RNNs), analyze complex biological data, including multi-omics data, to predict tumoral exosomes associated with metastasis strategies. Moreover, network analysis techniques model complex interactions between tumor cells, immune cells, and exosomes, identifying critical nodes and edges involved. On the other hand, natural language processing (NLP) extracts relevant information from biomedical evidence, identifying biomarkers and signaling pathways associated with tumoral exosomes to predict the tumor's next target to immigrate and consider preventive strategies to defeat the tactics of tumoral cells.

Reinforcement learning models can continuously evaluate treatment outcomes, adapt recommendations, and optimize therapeutic strategies against tumoral exosomes. AI algorithms guided by robotic process automation streamline laboratory workflows, enabling efficient data evaluation and troubleshooting. Also, real-time quality control incorporates genetic patterns to achieve precise results. NLP combined with reinforcement learning refines algorithms, improving accuracy across successive analyses. Efforts are made to ensure equal results based on socioeconomic and environmental impacts, enabling seamless sharing of research outcomes; flexible algorithms that account for variables and

confounders facilitate result sharing. Collaborative efforts among immunology, oncology, and AI experts should be crucial for developing effective and safe therapeutic strategies.

Biography

Niloofar Faraji, honored as the Distinguished Researcher of the Year at Guilan University of Medical Sciences, Rasht, Iran, in December 2023. A highly motivated and self-directed Biomedical Resarcher and Medical Lab Scientist, I demonstrate my commitment through diverse interdisciplinary courses and proficiency in professional lab skills. With over ten years of expert experience, I have collaborated in various lab units and clinical studies (infectious diseases, genetics, and clinical sciences). In addition to my contributions, my evolving interests now extend to the intersection of Artificial Intelligence (AI) and medical and biomedical sciences. Exploring the potential of AI in healthcare, I aim to leverage cutting-edge technologies to enhance diagnostics, treatment planning, and overall patient care. This expansion signifies my commitment to embracing innovative approaches, pushing the boundaries of scientific understanding, and contributing to the transformative integration of AI in the biomedical field.

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The anti-cancer potential of active compounds extracted from *Millettia griffoniana* on pancreatic and colorectal cancer cells

Fatima Hoosen[1], Jordan Tonga Lembe[1], Derek Ndinteh[1], Tagatsing Fotsing Maurice[2], Yankep Emmanuel[2], Lesetja Raymond Motadi[1] and **Mpho Susan Choene[1]**

[1]University of Johannesburg, South Africa
[2]University of Yaoundé I, Cameroon

Background and Aim: Pancreatic and colorectal cancer are two of the most lethal cancers; this stems from poor prognosis. Current treatments may lack effectiveness and produce dangerous side effects, hence a need for alternatives. Medicinal plants like Millettia griffoniana may possess anti-cancer properties. This study aimed to isolate and identify compounds from M. griffoniana to test for potential anti-cancer activity on pancreatic and colorectal cancer.

Experimental procedure: Seeds and root bark of M. griffoniana underwent solvent extraction and separation using column chromatography. Isolated compounds were screened using AlamarBlue assays and cytotoxic compounds were identified with 2D NMR. Compounds were subject to cellular viability assays using AlamarBlue and xCELLigence analysis. The Caspase Glo®-3/7 kit measured caspase activity and Real-Time PCR analysis measured apoptosis-related gene expression.

Results and Discussion: 7 compounds were isolated and screened. Compounds 5 and 7 were chosen; identified as durmillone and isojamaicin. Both showed varying concentration-dependent cytotoxic activity, in AlamarBlue and xCELLigence assays, for both cell lines. Caspases 3 and 7 were up-regulated and both compounds up-regulated BAX and down-regulated BCL-2 and p53 in both cell lines.

Conclusion: Durmillone and isojamaicin displayed cytotoxic activity on pancreatic and colorectal cancer. Apoptotic activity induced by the compounds was verified by the up-regulation of caspase activity and BAX and down-regulation of BCL-2 and p53. Further studies need to be done towards understanding the mechanisms by which these compounds bring about their cytotoxic activity.

Biography

Fatima is an MSc in biochemistry graduate from the University of Johannesburg, South Africa. She gained an interest in cancer research in her early undergraduate years and chose to focus her postgraduate research in cancer drug development. The research group she joined had a keen focus on extracting and testing novel active compounds from medicinal plants for potential anti-cancer activity. Fatima was also drawn to medicinal plant research due to its potential for integrating community development in South African communities that rely on the expertise and use of tradition medicine and medicinal plants. After completing her MSc, Fatima has also chosen to pursue a graduate program, with the Auwal Socioeconomic Research Institute in South Africa, which focuses on socioeconomic research, policy and law making as well as NGO contributions to community development. She is a strong believer, that scientific advancements should be used to grow and develop communities in need, especially in her home country.

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March 18-19, 2024

Diagnostic and prognostic value of indicators of markers of bone metabolism in patients with type 2 diabetes mellitus with intraosseous dental implantation

Gagik Hakobyan[2] and **Hakob Khachatryan**[1]

[1]Maxillofacial surgeon, Central clinical Military, Armenia
[2]Department of Oral and Maxillofacial Surgery, Yerevan State Medical University, Armenia

Objectives: To assess the indicators of bone metabolism markers Osteocalcin and β-Cross-Laps in blood serum in patients with type 2 diabetes mellitus with intraosseous dental implantation.

Material and Methods: The study included 86 patients, diagnosed type 2 diabetes mellitus in period 2018 - 2023 with partially or complete edentulous.

All patients underwent a clinical, laborator examination and computed tomography. Patients underwent implantation with HbA1c levels <7.2% or less than 154 mg/dL.

Implant surgery was performed after periodontal therapy using 187 UV functionalization dental implants. Final dental prosthetics was performed 4-5 months

The content biochemical markers of bone remodeling osteocalcin and β-Cross-Laps serum was determined by enzyme immunoassay.

Outcomes assessed included; implant survival, men MBL, PPD, BOP, RFA, prosthetic success, Quality of life

Results: There were no clinical examinations of serious biological or prosthetic complications. When installing 367 implants, the average value of RFA records was 65.2 ISQ (Implant Stability Quotient) and after 4 months, respectively, 72.6 ISQ.

After 5 months loss of the marginal bone of 0.7 ± 0.35 mm (MBL), after 12 months of observation, loss of the marginal 1.2 ± 0.38 mm (MBL), after 5 years of observation 1,47 ± 0.42. mm (MBL),

After 5 years of observation, the average PPD was 2.42 ± 0.47 mm, the average BOP was 1.32 ± 0.85.

All patients showed a decrease in osteoocalcin and an increase in the level of β-Cross-Laps compared to the norm.

The mean was osteocalcin levels was 8.5 ng /ml-14.7 ng /ml, the mean level of β-Cross-Laps was 0.76 ng / ml -0.87 ng / ml.

There is a correlation between different concentrations of Osteocalcin or β-Cross- Laps and the success rate of implants. Implants were shown to be unsuccessful low concentrations of Osteocalcin and high concentrations β-Cross- Laps in serum.

The success rate was 96.7% and 95.2% 1 and 5 years respectively

The success rate was lower in patients with values below the mean osteocalcin level of 9.0 ng/ml and above the mean β-Cross-Laps level of 0.85 ng/ml.

Conclusion: This study confirmed that implant therapy can be successfully used in patients diagnosed with diabetes using UV photofunctionalization of the implants, blood glucose levels should be maintained at normal levels at all times, indicators of bone metabolism markers Osteocalcin or β-Cross- Laps

Biography

Gagik V. Hakobyan, Education 1978-1983 Head of the Department and Professor of Surgical Dentistry and Maxillofacial Surgery Scientific Degree, Doctor of Medical Sciences, (MD, PhD) Yerevan State Medical Institute, Faculty of Stomatology Specialization Oral surgeon, implantologist, general dentist (aesthetic restoration of teeth using veneers, zirconium and ceramic crowns, bridges and arch prostheses, implant prosthetics)

Block chain enabled patient health record management

Jane Rubel Angelina Jeyaraj

Kalasalingam Academy of Research and Education, India

The block chain is anticipated to have a big influence on health care. It is used in the health sector to protect health care data, manage electronic health record data, track diseases and outbreaks, and so on. This presentation will focus on five aspects. First, it will focus on the block chain concepts in health records management. It then focuses on the algorithms for building consensus. The security provided to the health records through block chains is discussed next. A combination of block chains and artificial intelligence for tracking diseases and outbreaks will be discussed next. Finally, the storage issues related to block chain records are discussed.

Biography

Dr. Jane Rubel Angelina J, earned a Bachelor of Engineering in Computer Science and Engineering from Madurai Kamaraj University in India. Anna University in India awarded her an M.E. in Computer Science and Engineering. Anna University in India awarded her a PhD in information and communication engineering. She has more than 20 years of teaching experience. She is currently working as an associate professor in the Department of Computer Science and Engineering at the Kalasalingam Academy of Research and Education, India. She has authored research publications in journals, conferences, and books. Her research interests include data duplication, storage systems, deep learning, intelligent systems, and anomaly detection.

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Antimicrobial activity of Kaffir Lime (*Citrus hystrix*) extract as antimicrobial agent against nosocomial pathogen MRSA

Maria Georgina Wibisono[2], Veronica Wiwing[1], Alfred Zebua[2], Jonathan Sebastian Winata[2], Mohammad Zuhriansyah Sabran[2], Cucunawangsih[1] and **Gladies Mercya Grameinie[3]**

[1]Department of Clinical Microbiology and Infection Control, Pelita Harapan University, Indonesia
[2]Pelita Harapan University, Indonesia
[3]Department of Biochemistry, Pelita Harapan University, Indonesia

Methicillin-resistant Staphylococcus aureus (MRSA), a nosocomial infection with a prevalence of 20-30% in Southeast Asia, is a major cause of mortality and morbidity in health facilities worldwide. Nosocomial infection refers to an infection acquired within a healthcare setting or during the course of receiving medical treatments. Considering the historical use of plant extracts as antiseptics and the abundant presence of *Citrus hystrix* plants found in Southeast Asia, there is a strong potential for utilizing *Citrus hystrix* extract as an antimicrobial agent. Therefore, this study aims to evaluate antibacterial properties of *Citrus hystrix* extract against MRSA pathogens. This study compares the antimicrobial activity of *Citrus hystrix* extract against MRSA clinical isolate and control pathogen. The antibacterial activities were evaluated using the disc diffusion method in which the inhibition zone determines the antimicrobial activity. A positive control of oxacillin was used to assess sensitivity of beta-lactam antibiotics to clinical isolate pathogens in accordance with resistance classification established by CLSI 2020. The results show that *Citrus hystrix* significantly inhibits MRSA clinical isolate growth (24.79 mm) and Staphylococcus aureus control pathogen growth (25.85 mm). Oxacillin has a reduced efficacy in inhibiting clinical MRSA growth with an average diameter of 11.76 mm. This concludes that *Citrus hystrix* extract has the potential to be utilized as an antimicrobial agent against MRSA strains. However, further studies are required to evaluate minimum inhibitory concentration of *Citrus hystrix* extract against MRSA.

Biography

I am Maria Georgina Wibisono, a third-year medical student studying at Pelita Harapan University, Indonesia. Throughout my academic journey, I have embraced every opportunity to expand my knowledge and skills, particularly in the field of human cardiovascular and respiratory system. This fascination stems from a combination of academic pursuits and hands-on experience. At just 20 years old, I realize there's a wealth of knowledge yet to be uncovered in this field.

During my undergraduate dissertation, I studied the relationship between atrial fibrillation and the severity of ischemic stroke. It was through this extensive research process that reaffirmed my lifelong dream to be a cardiothoracic surgeon. With a relentless drive, I aspire to become a compassionate physician who not only treats diseases but also advocates for equitable access to healthcare for all individuals, regardless of their background or circumstances.

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Navigating the landscape of concept-supported XAI: Challenges, innovations, and future directions

Zahra Shams Khoozani[1], Aznul Qalid Md Sabri[1], Woo Chaw Seng[1], Manjeevan Seera[2] and **Kah Yee Eg[3]**

[1]Department of Artificial Intelligence, Universiti Malaya, Malaysia
[2]Econometrics and Business Statistics, School of Business, Monash University Malaysia, Malaysia
[3]Key ASIC Bhd (707082-M), Malaysia

Background: AI technologies have showcased their robustness across medical specialties such as oncology, neurology, and cardiology. Despite these advancements, medical experts exhibit reluctance to fully embrace and trust cutting-edge AI solutions. This study delves into the comprehensive exploration of factors contributing to this hesitation, aiming to uncover challenges and propose innovative strategies to foster trust and acceptance among medical professionals.

Objectives: This comprehensive review of concept-supported interpretation methods in Explainable Artificial Intelligence (XAI) navigates the multifaceted landscape. As machine learning models become more complex, there is a greater need for interpretation methods that deconstruct their decision-making processes. Traditional interpretation techniques frequently emphasize lower-level attributes, resulting in a schism between complex algorithms and human cognition. To bridge this gap, our research focuses on concept-supported XAI, a new line of research in XAI that emphasizes higher-level attributes or 'concepts' that are more aligned with end-user understanding and needs.

Methods: We provide a thorough examination of over twenty-five seminal works, highlighting their respective strengths and weaknesses. A comprehensive list of available concept datasets, as opposed to training datasets, is presented, along with a discussion of sufficiency metrics and the importance of robust evaluation methods.

Results: We identify six key factors that influence the efficacy of concept-supported interpretation: network architecture, network settings, training protocols, concept datasets, the presence of confounding attributes, and standardized evaluation methodology. We

also investigate the robustness of these concept-supported methods, emphasizing their potential to significantly advance the field by addressing issues like misgeneralization, information overload, trustworthiness, effective human-AI communication, and ethical concerns.

Conclusion: The paper concludes with an exploration of open challenges such as the development of automatic concept discovery methods, strategies for expert-AI integration, optimizing primary and concept model settings, managing confounding attributes, and designing efficient evaluation processes.

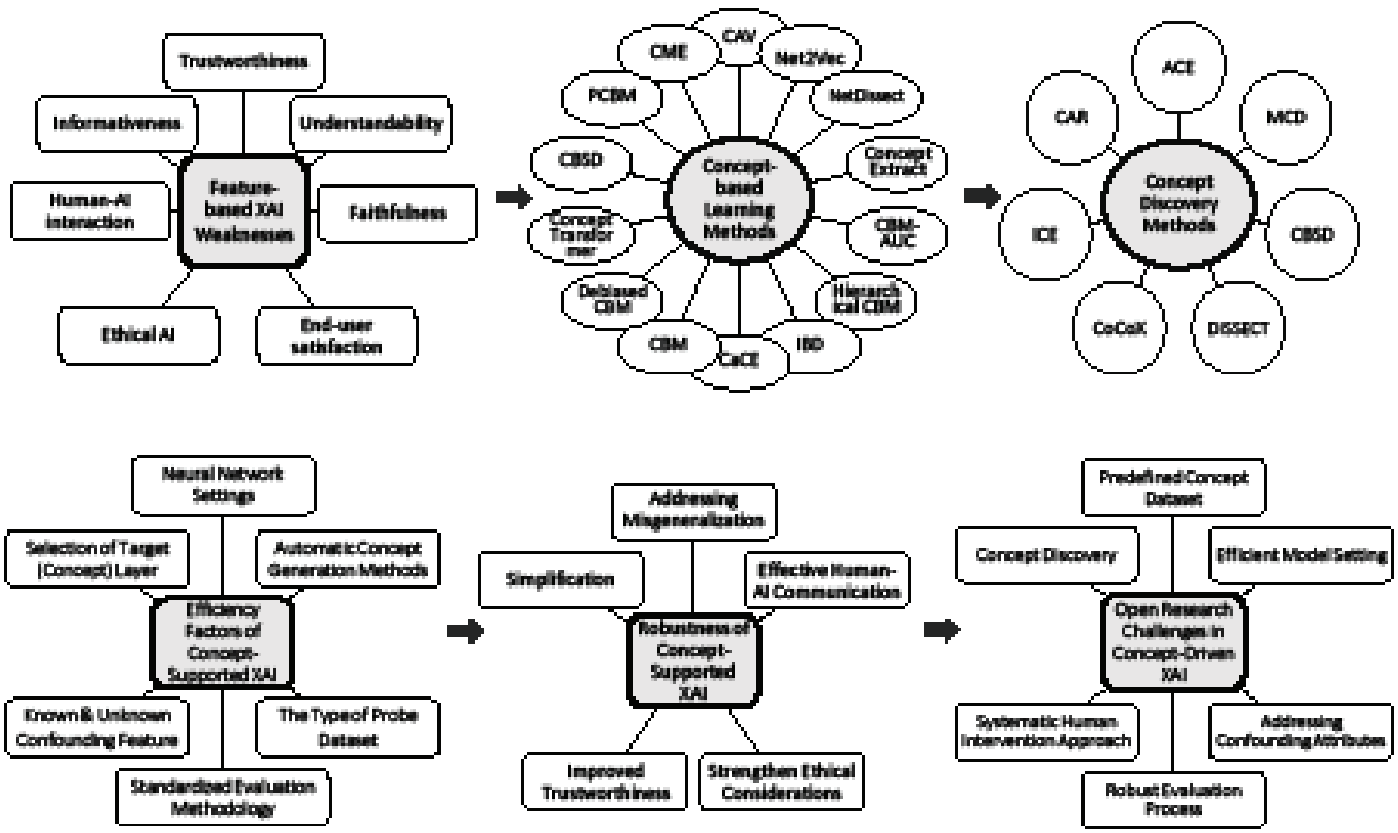

Figure 1: Summary of concept-supported XAI challenges, innovations, and future directions discussed in this study

Biography

Zahra Shams Khoozani is currently a PhD candidate at Universiti Malaya (UM) in the Department of Artificial Intelligence, with experience in both academic and corporate research and development (R&D). As an AI research engineer, her expertise includes mathematical algorithms, statistical models, complex neural networks, computer vision, and medical imaging. Holding a master's degree from UM's Department of Artificial Intelligence, she is enthusiastic about advancing the intersection of AI and healthcare.

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Efficacy of vibration motion in comparison to reciprocation motion in retreatment of root canals obturated with lateral compaction technique: An *in vitro* study

Yomna Adel Serageldin[1], Abeer Abdulhakim Elgendy[2] and **Ahmed Hussein Abuelezz[3]**

[1]Misr International University, Egypt
[2]Ain Shams University, Egypt
[3]Misr International University, Egypt

Background: Most root canal retreatment methods do not completely remove filling material from the root canal walls.

Aim of the Study: To evaluate the effect of reciprocation motion in comparison to vibration motion in the removal of root canal filling in retreatment procedure after obturation using lateral compaction technique.

Materials and methods: Forty-eight maxillary first molars were selected. Obturation using bioceramic sealer was performed in all distobuccal canals using lateral compaction technique. Teeth were randomly divided into two main groups (n = 24) according to the technique of removal of root canal filling material: Groups A and B: reciprocation and vibration motions, respectively. The percentage of remaining filling material was evaluated using a stereomicroscope, heat on the external root surface was measured using a thermocouple, and time for filling removal was calculated using a stopwatch.

Results: Statistical analysis showed that there was no significant difference between the two groups regarding the percentage of debris in the coronal and middle thirds, and regarding the time of removal of root canal filling. There was a statistically significant difference between the two groups regarding the percentage of debris in the apical third and regarding the heat on the external root surface.

Conclusion: Vibration motion caused a lower percentage of debris in the coronal and middle thirds. Reciprocation motion was most effective in the removal of root canal filling, especially in the apical third. Vibration motion caused a higher temperature increase on the external root surface. Reciprocation motion required less time for the removal of root canal filling than vibration motion.

Biography

Yomna Serageldin is a dentist and master's student in the endodontics department at Misr International University. She received her bachelor's degree in Oral and Dental Medicine from Misr International University. Yomna has been working in the dental field for about 7 years and has experience in endodontics and restorative dentistry. She manages her private practice in Cairo, Egypt, and works on providing the utmost healthcare for her patients. She is interested in new research concepts in endodontics, especially in the field of retreatment and regeneration. She is keen on learning new techniques and recent advances in her area of specialty.

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Prevention of falling in postmenopausal women with osteoporosis during functional reaching-Transporting task

Marzieh Hatami, Giti Torkaman and **Mohammad Najafi Ashtiani**

Department of Physical Therapy, Tarbiat Modares University, Iran

Falling is reported as the leading cause of eighty percent of all non-spine fractures and over ninety percent of hip fractures in older adults. In this regard, postural stability has been proposed as an essential factor for functional independence in older adults, and impaired postural control is a major risk factor for falls. Postural control is different in individuals with osteoporosis than in general older individuals. Individuals with osteoporosis are more likely to present higher sway velocities and a higher number of falls. A study of community-dwelling older adults found that a substantial proportion of falls occurred during tasks such as carrying an object, reaching or leaning.

Methods: 24 postmenopausal volunteers were classified into two groups based on the lumbar T-score: osteoporosis (≤-2.5,n=12) and non-osteoprosis (>-1,n=12). Using a custom-designed device, participates randomly performed 12 reaching-transporting tasks at the head level. Electromyography signals were collected while reaching task with a wireless system. The peak of the root means square (PRMS) and time to PRMS (TPRMS) were measured. In addition, the isometric muscle strength and the fear of falling were assessed.

Results: The isometric muscle strength in the osteoprotic group was significantly lower than in the non-osteoprotic group ($p<0.05$), except for vastus lateralis(VL).The fall efficacy score was significantly higher in the osteoporotic group than in the non-osteoporotic group ($P<0.001$).The PRMS value of the muscles was greater for non-osteoprotic group compared to the osteoprotic group. TPRMS values generally were longer in the osteoprotic group than in the non-osteoprotic group significantly for BF ($p=0.026$) and TA($p=0.014$).

Conclusion: The results showed that the muscles in the osteoprosic group are weaker, this activity may not maintain stability during the task and may cause disturbance and falling. These results can help design the prevention rehabilitation program and ergonomic considerations for the arrangement of household items in postmenopausal women with osteoporosis to decrease the risk of falling.

Biography

1. Personal Information:

Name : Marzieh Hatami

2. Educational Records

B.Sc: Ahvaz Jundishapur University of Medical Sciences

M.sc: Tarbiat Modares University of Medical Sciences

3. Membership of Scientific Societies

Physical therapy Iranian Association

4.Innovation:

device for separating different phases in functional test at electromyography signals

5. Papers:

Different muscle strategy during head/knee level of functional reaching-transporting task to decrease falling probability in postmenopausal women with osteoporosis

6. Oral Prezantation:

The 1st International Tele-congress on clinical movement sciences:

"Comparison of fall efficacy scale and strength of lower limb and trunk muscles in osteoprotic and non-osteoprotic postmenopausal women"

33rd Annual congress of Iranian Physiotherapy Association:

"Comparison of electromyographic activity of Gluteal muscles in reaching task in the post menopausal women with and without osteoporosis"

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Where do the analytical methods stand in cardiovascular problems: An overview of blood flow as a biomechanical problem in Arteriosclerosis

Elif KAYAALP ATA

Gebze Technical University, Turkey

From a biomechanical perspective, cardiovascular problems are regarded as among the most complex issues in the world. The statistic that deaths from cardiovascular diseases account for 32% of all deaths worldwide underscores the significance of this complex array of problems. The interplay of various factors, including the shape of blood vessels, the non-linear behaviour of blood flow, and complex blood properties, makes these issues particularly challenging. This circumstance lays a suitable foundation for multidisciplinary studies.

Technological advances have made a significant contribution to cardiovascular diseases, much like they have in every field. Today, it is possible to develop patient-specific treatment methods, design medical devices, and conduct surgical planning. However, despite the improvement in software technology and the attainment of satisfactory results, there is still no software available to model the entire cardiovascular system in a computer environment. While this might appear as a drawback, it serves as a source of motivation for continued studies across various domains. Consequently, experimental, analytical, and numerical studies conducted in different dimensions contribute to a rich body of literature in this field.

In this study, experimental, numerical and analytical studies that can be considered as breaking points in the field of arteriosclerosis are included and the contribution of these studies to the literature is emphasized. In addition, examples of the place of analytical studies in the current working environment are given and the reflection of the combination of methods on the literature in overcoming the difficulties is presented to the reader's interest.

Biography

Elif Kayaalp Ata, originally a mathematician, completed her PhD in applied mathematics under the supervision of an aeronautical engineer. The combination of the discipline of Kayaalp Ata's pure mathematics background and the broad perspective of an engineer supervisor allowed them to conduct an analytical study in the field of intravascular blood flow. As a result of this study, the researcher observed the strength of interdisciplinary work and continues to work in this direction and is looking for different methods and different team members.

RUNX1 inhibition leads to decreased cathepsin levels and reduced infarct size in rats after acute myocardial infarction

Weihong He

Sichuan University, China

Acute myocardial infarction (MI) results in prolonged ischemia and the subsequent cell death leads to heart failure which is linked to increased deaths or hospitalizations. Cathepsins are lysosomal cysteine proteases involved in protein degradation and can also be secreted into extracellular spaces. Recent evidence shown that cardiac release of a subtype of cathepsin (cathepsin-L) in MI patients causes elevated serum cathepsin-L levels which are associated with reduced cardiac function and increased infarct size. However, the mechanism of the increased cathepsin-L level is unknown. Runt-related transcription factor-1 (RUNX1) is a master-regulator transcription factor, which is implicated in the transcriptional regulation of gene expression. Recent evidence demonstrated that RUNX1 plays a critical role in the heart after MI. This work sought to investigate whether inhibition of RUNX1 affects cathepsin levels in a rat MI model. MI was surgically induced by performing coronary artery ligation. Heart samples were taken at 24 hours post-MI and analysed by LC-MS/MS operating in the data-independent acquisition (DIA) mode. We found that overall cathepsin levels were increased in control hearts after MI. In contrast, rats treated with RUNX1 inhibitor demonstrated decreased cathepsin levels relative to control rats. Furthermore, RUNX1 inhibition led to a reduced infarct size at 24 hours post-MI as determined through 2,3,5-triphenyltetrazolium chloride (TTC) staining. These results are in line with Dr. He's previous study performed in isolated rat hearts which demonstrates that inhibition of cathepsin-L reduces infarct size and improves cardiac function ex vivo. The present study suggests that inhibition of RUNX1 after acute MI can also reduce infarct size in rat hearts in vivo and the beneficial effects may be achieved by decreasing cathepsin levels.

Biography

Weihong He is a principal investigator and associate professor at the Department of Physiology, West China School of Basic Medical Sciences and Forensic Medicine, Sichuan University. Weihong obtained an MD (2012) at West China School of Medicine & West China Hospital, Sichuan University, and completed a PhD (2017) at the BHF Glasgow Cardiovascular Research Centre, University of Glasgow. Weihong was associate professor at Jining Medical University (2018-2020). Since 2020, Weihong has led a research group to study the pathophysiology of cardiovascular diseases and to investigate novel therapeutic drugs for the treatment of myocardial infarction and cerebral infarction at Sichuan University. He also teaches physiology and mentors both national and international students. Weihong has expertise in a number of methodologies which span the level of biochemistry, cell biology, isolated heart, and whole animal in vivo disease models.

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Fetal and neonatal complications of gestational diabetes mellitus

Wioletta Wujcicka[1], Marian Kacerovsky[2,3] and **Mariusz Grzesiak[4,5]**

[1]Scientific Laboratory of the Center of Medical Laboratory Diagnostics and Screening, Polish Mother's Memorial Hospital-Research Institute in Lodz, Poland
[2]Department of Obstetrics and Gynecology, University Hospital Hradec Kralove, Charles University, Czech Republic
[3]Biomedical Research Center, University Hospital Hradec Kralove, Czech Republic
[4]Department of Perinatology, Obstetrics and Gynecology, Polish Mother's Memorial Hospital-Research Institute in Lodz, Poland
[5]Department of Gynecology and Obstetrics, Medical University of Lodz, Poland

In pregnancies complicated by gestational diabetes mellitus (GDM), placental changes are observed at the microanatomical and molecular level. These changes include abnormal villi vascularization, imbalance of vasoactive molecules, and increased oxidative stress. Placental changes and angiogenesis are linked in GDM, influencing fetal development and long-term health outcomes. Uncontrolled GDM can lead to large birth weight (LBW, macrosomia), preterm birth and respiratory problems in the baby, as well as high blood pressure and preeclampsia in the mother. As a result of GDM, fetal LBW and cardiovascular and metabolic effects may occur. Complications of LBW occurring during labor include shoulder dystocia (difficulty giving birth to the shoulders) and an increased risk of cesarean section. Changes in the intrauterine environment affect the blood vessels and metabolism of the fetus. Intrauterine hyperglycemia (high blood sugar) may have a detrimental effect on fetal vascular health during critical periods of fetal development. These effects may permanently affect the health of the offspring. Long-term complications of GDM include hypertension, endothelial dysfunction and cardiovascular problems. In newborns, GDM may cause hypoglycemia, respiratory distress syndrome (RDS), and in offspring, an increased risk of type 2 diabetes, obesity, and neurodevelopmental disorders. RDS occurs as a result of immature lung development, causing breathing difficulties soon after birth. In summary, a healthy pregnancy and optimal fetal development require regular prenatal care and adherence to medical recommendations.

Biography

Dr. Wioletta Wujcicka has completed her Ph.D. in medical sciences at the age of 28 years from Medical University of Lodz, in Poland. She performed her dissertation at the Department of Molecular Cancerogenesis, at the Medical University of Lodz, Poland. Then she was a scientific assistant at the Laboratory of Molecular Virology and Biological Chemistry, at the Polish Academy of Sciences in Lodz, Poland. Nowadays, she is an assistant professor at the Scientific Laboratory of the Center of Medical Laboratory Diagnostics and Screening, at the Polish Mother's Memorial Hospital - Research Institute in Lodz, Poland.

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The benefit of physical training in the prevention of falls in seniors

Durinova E., Labudova M., Zambojova I. and **Simonova M.**

Faculty of health sciences, Piestany, University of Ss. C&M in Trnava, Slovakia

Methods: The movement training included 30 probands (15 men and 15 women) over the age of 70 years (average 77,5 by men's, 77,9 by women's) without a serious disease present, with planned laparoscopic surgery for gallbladder disease. The 6-week training consisted of two-hour exercises twice a week. The training was carried out on devices focused on standard training of static and dynamic balance, training of walking on a treadmill, as well as in the form of group exercises using raster equipment, a parallel bar with a stepper. In the entry and exit tests, the muscular strength of the flexors and extensors of the foreleg and knee (Biodex System 3 device), as well as stability (Biodex Balance System SD device) and stride length (6-minute test) were evaluated

Intervention: In the first part of the rehabilitation, we focused on device-oriented increasing the strength of the lower limbs, improving the parameters of walking, stability and coordination. We practiced static balance using chairs. The next step towards increasing the level of difficulty was placing the feet in the so-called semi-tandem or tandem position. Each senior performed the corresponding number of repetitions according to his current condition. For dynamic balance, we used the raster, stepper and so-called star on the floor, which were placed next to the balustrade to ensure the necessary support and safety of seniors while performing the exercise.

Tab 1 Strength of the extensors and flexors of the knee joint (Wilcox test)

	60°/s extension		60°/ flexion		120°/s extension		120°/s flexion	
	entry	output	entry	output	entry	output	entry	output
average	54,55	65,96	34,12	45,15	42,99	51,72	34,37	40,43
stand. dev.	22,98	27,27	17,03	16,50	18,35	21,27	19,21	14,06
Sig.		0,015		0,00		0,015		0,027

Tab 2 Strength of the extensors and flexors of the foreleg (Wilcox test)

	60°/s extension		60°/ flexion		120°/s extension		120°/s flexion	
	entry	output	entry	output	entry	output	entry	output
average	22,26	32,22	7,89	11,47	17,44	24,32	5,00	7,21
stand. dev.	11,52	16,51	3,96	6,39	8,83	12,21	3,25	6,27
Sig.		0,001		0,00		0,003		6,27

Tab 3 Stride length and average velocity (Wilcox test)

	Stride lenght		Average velocity	
	entry	output	entry	output
average	215,47	308,87	0,59	0,85
stand. dev.	73,68	76,68	0,20	0,21
Sig.		0,00		0,00

Tab 4 Stability measurement

	Stability	
	entry	output
average	1,58	1,11
stand. dev.	0,64	0,54
Sig.		0,003

Results: In all four parameters of the evaluation of the muscular strength of the knee joint as well as the ankle joint, there was a statistically significant increase in the values between the input and output measurements ($p < 0.001$). Stability improved insignificantly in 24 probands. Walking parameters improved statistically significantly in 28 probands (distance and speed), resp. 26 probands (step length).

Conclusion: Experimentally created interventional movement training composed of elements of static and dynamic balance training has objectively demonstrated improving the condition of seniors before the planned operation.

Pre-emptive femoral-femoral crossover and subsequent resection of locally recurrent colon cancer with multiorgan involvement including the common iliac vessels

Natalie Guiney

Division of Cancer Surgery and Division of Cancer Research,
Peter MacCallum Cancer Centre, Victorian Comprehensive Cancer Centre, Australia

Exenterative units are still expanding the indications for what is considered resectable disease in locally advanced and recurrent pelvic malignancies. The excision of major vessels is possible in some cases. However, vascular reconstruction can be challenging when there is intraoperative manupulation of bowel leading to contamination. We present a technique used in a 68 year old male whereby femoral-femoral arterial and venous crossover grafts with arteriovenous loop fistula were formed prior to en block vascular resection of a recurrent colon cancer. Clear resection margins were obtained due to this techique demonstrating that pre-emptive vascular reconstruction is feasible with a theoretically reduced risk of graft infection.

Biography

Dr. Natalie Guiney is a General Surgical Registrar at the Royal Melbourne Hospital. During her previous secondment to Peter MacCallum Cancer Centre, she worked as the colorectal resident. She has completed her MBBS (with Honours) at Monash University and completed her Masters in Surgery at the University of Sydney.

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FUTURE OF PMPH 2024

Computational Neuroimaging For Post-Stroke Recovery Prediction and Precision Rehabilitation

Alan Wang[1,2,3]

[1]*Auckland Bioengineering Institute, University of Auckland, New Zealand*
[2]*Centre for Medical Imaging, University of Auckland, New Zealand*
[3]*Centre for Brain Research, University of Auckland, New Zealand*

Stroke is the second leading cause of death and a significant cause of disability worldwide. Its incidence is increasing because of the aging population. A key challenge in stroke rehabilitation is identifying an individual's recovery potential to make personalized neurorehabilitation decisions, avoiding a "one-size-fits-all" approach because stroke is a vascular disease with highly heterogeneous effects on injury and recovery. The recent advances in artificial intelligence technologies will be introduced in the talk for generating intelligent computational models that enable precision prediction of post-stroke outcomes and precision rehabilitation.

Post-stroke outcomes, e.g., motor function, can be predicted using structural and functional biomarkers of the descending corticomotor pathway, typically measured using magnetic resonance imaging and transcranial magnetic stimulation, respectively. However, the precise structural determinants of intact corticomotor function are unknown. Identifying structure–function links in the corticomotor pathway could provide valuable insight into the mechanisms of post-stroke motor impairment. This talk will introduce the supervised machine learning approach to classify upper limb motor evoked potential status using MRI metrics obtained early after stroke.

Based on the intelligent post-stroke recovery prediction, the optimal multi-target electromagnetic nerve stimulation system will be introduced in this talk for achieving personalized precision rehabilitation. Temporal interference magnetic stimulation can stimulate deep targets without activating superficial non-target areas. However, at present, the stimulation target of this technology is single, and it is challenging to realize the coordinated stimulation of multiple brain regions, which limits its application in the modulation of multiple nodes in the brain network. This talk will introduce a multi-target temporal interference magnetic stimulation system with array coils. Mmulti-target temporal interference magnetic stimulation with array coils can simultaneously stimulate multiple network nodes in the brain region and realize accurate stimulation of multiple targets in the brain area.

Biography

Alan Wang is a principal investigator and Associate Professor at The University of Auckland. He has more than ten years of research experience in bioengineering informatics and integrated medicine, especially in advancing the role of medical informatics in health care. His research interests include bioengineering, data informatics, neurocomputing, and biomedical statistics and simulation. He has developed medical data analytics methods for mobile health and personalized diagnosis and prognosis based on intelligent computing theories. He has experience analyzing huge cohorts of patient data with applications of early diagnosis, disease understanding, and effective treatment of patients with different disorders. He serves as an Editorial Board Member and an Active Reviewer for several international journals.

A Health Data Analytics Maturity Model for Hospitals Information Systems

Álvaro Rocha[1] and **João Vidal de Carvalho**[2]

[1]*ISEG, University of Lisbon,Portugal*
[2]*ISCAP, Polytechnic of Porto, Portugal*

In the last five decades, maturity models have been introduced as reference frameworks for Information System (IS) management in organizations within different industries. In the healthcare domain, maturity models have also been used to address a wide variety of challenges and the high demand for Hospital IS (HIS) implementations. The increasing volume of data exceeds the ability of health organizations to process it for improving clinical and financial efficiencies and quality of care. It is believed that careful and attentive use of Data Analytics in healthcare can transform data into knowledge that can improve patient outcomes and operational efficiency. A maturity model in this conjuncture, is a way of identifying strengths and weaknesses of the HIS maturity and thus, find a way for improvement and evolution. This speech presents a proposal to measure Hospitals Information Systems maturity regarding Data Analytics. The outcome is a maturity model, which includes six stages of HIS growth and maturity progression.

Biography

Álvaro Rocha holds the title of Honorary Professor, and holds a D.Sc. in Information Science, Ph.D. in Information Systems and Technologies, M.Sc. in Information Management, and BCs in Computer Science. He is a Professor of Information Systems at the University of Lisbon - ISEG, researcher at the ADVANCE (the ISEG Centre for Advanced Research in Management), and a collaborator researcher at both LIACC (Laboratory of Artificial Intelligence and Computer Science) and CINTESIS (Center for Research in Health Technologies and Information Systems). His main research interests are maturity models, information systems quality, online service quality, requirements engineering, intelligent information systems, e-Government, e-Health, and information technology in education. He is also Vice-Chair of the IEEE Portugal Section Systems, Man, and Cybernetics Society Chapter, and Founder and Editor-in-Chief of both following Scopus and/or WoS journals: JISEM (Journal of Information Systems Engineering & Management) and RISTI (Revista Ibérica de Sistemas e Tecnologias de Informação / Iberian Journal of Information Systems and Technologies). Moreover, he has served as a Vice-Chair of Experts for the European Commission's Horizon 2020 Program, and as an Expert at the COST - intergovernmental framework for European Cooperation in Science and Technology, at the European Commission's Horizon Europe Program, at the Government of Italy's Ministry of Universities and Research, at the Government of Latvia's Ministry of Finance, at the Government of Mexico's National Council of Science and Technology, at the Government of Polish's National Science Centre, and at the Government of Cyprus's Research and Innovation Foundation.

He has 342 of his publications indexed in Scopus database, having an H-Index = 26 and 2629 citations. In Google Scholar he has an H5-Index = 36, having 6074 citations. He has 204 of his publications indexed in the Web of Science database (Core Collection), having an H-Index = 20 and 1433 citations. And in ResearchGate he has an H-Index = 30 and 4162 citations, being part of the group of the 2% best scientists in the world, considering all areas of research, and part of the group of the 1% best scientists in the world, considering only his area of research: Information Systems.

A New Direction in FLASH Therapy

Arnab Chakravarti

The Ohio State University, USA

FLASH radiotherapy is defined as ultra-high dose rate (> 40 Gy/sec) radiation delivered in a very short period of time that produces a damaging effect in tumor tissue while sparing surrounding normal tissues. The clinical application of this novel radiation modality has the potential to revolutionize our approach in treating all types of cancer patients. The overall mission of the FLASH Program at The Ohio State University is to systematically evaluate the biological effect of FLASH radiotherapy on normal tissue toxicity and tumor control across multiple disease sites utilizing pre-clinical models. The physical parameters to achieve FLASH dose rates (> 40 Gy/sec) were established on the IntraOp Mobetron and Varian Clinac. Mouse models were used to evaluate the acute and late effects of radiation (8-40 Gy) comparing FLASH and conventional (CONV) (~0.1 Gy/sec) dose rates in different tissue (skin, intestine, ovaries, testes) and tumor (glioblastoma, melanoma, sarcoma) types at the gross, histological, and molecular levels. Irradiation of the intestine (14-18 Gy), ovaries (8 and 16 Gy), and testes (5 Gy) resulted in similar acute and late normal tissue toxicities when comparing FLASH and CONV dose rates. When evaluating skin, FLASH irradiation (25-35 Gy) resulted in significant normal tissue sparing compared to CONV irradiation. Additionally, flank (melanoma, fibrosarcoma, glioblastoma) and intracranial (glioblastoma) tumor studies demonstrated comparable tumor control efficacy between FLASH and CONV irradiation (10-20 Gy). The observation of the biological FLASH effect appears to be both tissue-specific and dose-dependent. Further studies are underway in additional disease sites and will focus on understanding the molecular mechanisms underlying the FLASH effect. Future studies in veterinary subjects will lay the foundation for a phase I clinical trial in metastatic melanoma.

Biography

I am professor and chair of the Department of Radiation Oncology at The Ohio State University. I also hold the Klotz Chair in Cancer Research and direct the Brain Tumor Program. I have been on Castle Connolly list of "America's Top Doctors" from 2012-present.

I have received NIH funding since 1999. Our laboratory focuses on development of novel therapeutics for cancer, other human diseases, and on translational cancer research to identify novel biomarkers that are predictive of treatment efficacy and survival. Under my leadership with the NCI-supported Radiation Therapy and Oncology Group Brain Tumor/

NRG Translational Research Subcommittee and Brain Tumor Committee, my team's studies have defined the standard of care for patients with CNS tumors.

I have published more than 193 articles in leading scientific and medical journals, including The New England Journal of Medicine, Journal of the American Medical Association, Cancer Cell and Journal of Clinical Oncology, among others.

Discussing the Practicality of the Model of Engaging Communities Collaboratively Through Various Equity-deserving Population-led Projects

C. McIlduff[1], D. McKenzie[2] and **J.Starr[3]**

[1]University of Saskatchewan, Canada
[2]Kids First North, Canada
[3]Star Blanket Cree Nation, Canada

The Model of Engaging Communities Collaboratively (MECC) was developed with the integration of literature reviews in cultural adaptation approaches, engagement, and implementation approaches; and international Indigenous feedback to inform the processes of implementing evidence-based practices (EBPs) with Indigenous populations. This model synthesizes the collective strengths of these approaches and feedback and provides checklists for practicality of use by researchers, service providers and global Indigenous populations alike. This model has been piloted successfully with Indigenous communities within Australia and Canada.

In northern Métis communities, this model has been successfully utilized to address food security, oral health, youth engagement and caregiver support. In First Nations communities, this model has been successfully utilized to address culture and language revitalization, Elder health and wellbeing, Addictions Empowerment and Mental Health.

During our time together, we will share how this flexible, responsive model can be utilized with various equity-deserving populations across many different projects, scenarios and disciplines as it has in the above listed projects and communities. We will also discuss how the use of this model allows for community empowerment and capacity building, ensuring sustainability of community-led initiatives.

Biography

Dr. McIlduff obtained a bachelor's degree in psychology, with the support of the Terry Fox Humanitarian Award. Cari completed her PhD in Australia. Cari has authored a parenting module for families who have or are experiencing trauma and/or toxic stress within the Positive Parenting Program. She co-developed, evaluated and co-authored the Model of Engaging Communities Collaboratively with Indigenous communities across five countries; a model of culturally safe methodology for community capacity building and social change that was piloted across 42 communities in the Kimberley region of north Western Australia. Cari is dedicated to working with Indigenous communities globally to support, promote and hold space for self-determination, and community-led social change for what is required in each unique Indigenous community. Cari's research interests are in mental health, epigenetics, effects of colonization that continues to oppress Indigenous Peoples globally, cultural safety, effects of racism, social change/justice, and child and family wellbeing.

Read it, write it, Talk about it: The impact of African Centered Education in Higher Learning Amongst Diverse Student Body Populations

Clarence George III

California State University of Sacramento, USA

An African-centered approach to education challenges Eurocentric ideas that remain dominant in the academy, instills racial pride in the recipients of this education, and provides the socio-political backdrop for understanding contemporary issues involving race, racism, and power. The utility and impact of an African-centered education on minority students have been well documented at K-12 and collegiate institutions. However, a less explored phenomenon is how African-centered education affects non-minority students at prominently white institutions (PWIs). As such, this essay examines the role and value of African-centered pedagogy on non-minority students at two predominantly white institutions, California State University – Sacramento and the University of Central Arkansas. Drawing from survey data collected by two African American male professors who approach teaching through an African-centered lens, this study demonstrates that non-minority students also benefit from an African-centered education, thus proving ACE's effectiveness in classroom instruction and promoting multiculturalism.

This research project was exploratory in that the primary researchers needed a clearer idea of how the collected responses provided by participants would correlate with the general hypothesis of the utility of an African-centered education in a non-homogenous student body. Drawing from the collected surveys of over 100 students helps lay the foundation for understanding the need for an inclusive educational model in social science courses at PWIs, dispels misinformation that the one-size-fits-all teaching model is an effective teaching technique, and highlights the importance of pedagogical and curriculum inclusivity. Currently, there are no studies that investigate the impact of African Centered Education on non-minority students. Generally, when searching for new or relevant scholarship on this subject matter it was very elusive. Commonly, most research or data that was reviewed looked at the impact of African Centered Education's effect, predominantly on people of African descent. This research project is unique because it offers a window into the impact of African Centered Pedagogy within the walls of higher education at non-predominantly Black intuitions.

Biography

Dr. Clarence George III's research focuses on Afrocentric pedagogy and African historiography. In addition to the study of Afrocentric pedagogy, Dr. George III has a strong concentration in the study of classical civilizations such as the early civilizations of the Great Lake region of central Africa and early Nile valley civilizations. Dr. George III holds a bachelor's degree in Communication Studies from Sacramento State University, a Master's degree in Ethnic Studies from San Francisco State University, and received his Ph.D. from Michigan State University in the Department of African American and African Studies. He is also a member of the Ankh Maat Wedjau honor society

Well-Being on Prince Edward Island, Canada: A Statistical Case-Study of Well-Being Related Community Factors

Connolly Aziz[1], T. Lomas[2] and **S.Mattoli[3]**

[1]University of East London, Charlottetown, Prince Edeward Island, Canada
[2]University of East London, USA
[3]University of East London, UK

This research continues the advances in applied positive psychology by measuring and exploring the factors which contribute to the happiness among people living in Prince Edward Island (PEI), Canada. This research provides a province-wide account of subjective well-being (SWB), which is defined as a person's cognitive and affective evaluation of his or her life, by answering the questions: What is the measurable level of well-being of individuals in PEI? What are the relationships between community factors and components of well-being in PEI? Which quality of life factors most influence an individual's emotions and life satisfaction in PEI? Participation was voluntary, anonymous, and included just over 1% of the adult population of residents (n=1381). Data was collected online between October and November 2020. Demographic variables were collected and analyzed using variance of mean scores from three self-reported well-being measures, Satisfaction with Life Scale, Positive and Negative Affect Schedule, and the World Health Organization's (brief) Quality of Life Scale. Regression analysis was used to investigate contributions to well-being. Findings uncovered inequity in well-being among minority populations including, LGBT, gender diverse, Indigenous, disabled, and those living under the poverty line. This study provides a deeper understanding that Islanders view psychological health and a healthy environment as important aspects of quality of life influencing their well-being. Results build on existing theories on the influence of income, age, and education have on well-being. Finally, the research provides a starting point and methodology for the continuous measurement and tracking of both the affective and cognitive accounts of well-being on PEI, or in other communities, provinces, or islands. This research provides insight into happiness as an indicator of how our society is performing and adds momentum towards the adoption of sustainable development goals, such as national happiness.

Biography

Connolly holds a MSc in Applied Positive Psychology from the University of East London. In 2022 his research, Well-Being on Prince Edward Island, Canada was recently published in the International Journal of Community Well-Being. He has presented this research to multiple audiences, including to the Premier of PEI and at the 2023 Positive Psychology Worlds Congress in Vancouver. He is passionate about upstream, preventative interventions to strengthen the mental well-being and resilience of individuals, families and communities. Connolly lives in Atlantic Canada and serves as the Research and Evaluation Officer at the PEI Alliance for Mental Well-Being.

Can You be Cured if the Doctor Disagrees?: A Case Study of 27 Prayer Healing Reports Evaluated by A Medical Assessment Team in the Netherlands

Dirk Kruijthoff

Amsterdam University Medical Center, Netharlands

The setting: 27 reports of prayer healing in the Netherlands were evaluated by a medical assessment team between 2015 and 2020.

Objectives: Three research questions were formulated. What are the medical and experiential findings? Do we find medically remarkable and/or unexplained healings? Which explanatory frameworks can help us to understand the findings?

Methods: The reported healings were analysed using both medical files and patient narratives, as part of a case study research design by a multidisciplinary research team. An independent team of five medical consultants, representing different fields of expertise, evaluated the files of 27 cases. According to criteria these were selected out of a larger group of 83 received reports. Experiential data were obtained by in-depth interviews and analysed. Instances of healing could be classified as 'medically remarkable' or 'medically unexplained'. Subsequent analysis was transdisciplinary.

Results: Eleven of the 27 healings assessed were evaluated as 'medically remarkable', none was labelled as 'medically unexplained'.

Recurrent characteristics were seen to some degree in all healings, whether or not 'medically remarkable': a temporal connection with prayer, instantaneity and unexpectedness of healing, strong emotional and physical manifestations, and a sense of 'being overwhelmed' and transformed. The healings were invariably interpreted as acts of God. Positive effects have persisted for 5 to 33 years, with 2 relapses.

Conclusions: Our findings about remarkable healings do not fit well in the traditional biomedical conceptual framework. All healings showed important non-medical aspects, whether or not they were assessed as medically remarkable. We need a broader multi-perspective approach in which equal weight is given to experiential and objective data from different sources. A so-called horizontal epistemology may be helpful when trying to understand the findings, and it may bring about mutual understanding between patients, health practitioners and relevant disciplines.

Golden Ratio and Cardiovascular System

Yetkin E

Türkiye Hospital Division of Cardiology, Turkey

Golden ratio, which is an irrational number and also named as the Greek letter Phi (φ), is defined as the ratio between two lines of unequal length, where the ratio of the lengths of the shorter to the longer is the same as the ratio between the lengths of the longer and the sum of the lengths. The so-called formula is a mathematical ratio and there exist a variety of examples in natural and man-made structures of great beauty. Moreover, golden ratio is expressed throughout the human body in some ways, including digits, uterus, teeth, and cardiovascular system.

Although the association of Fibonacci series or golden ratio with systems and organs of human being has not been assessed in depth yet, the mainstream regulation of cardiovascular system seems to be associated with golden ratio. Cardiovascular system in particular has revealed enthutiastic results associating these concepts with anatomy, physiology, electrocardiogram and echocardiogram of the heart and pulmonary vasculature as well. Reflection of GR has been reported by calculating the systolic blood pressure (SBP) to diastolic blood pressures (DBP) both in systemic and pulmonary circulation. Recently it has been demonstrated that both SBP to DBP and DBP to pulse pressure (PP) ratios measured by ambulatory blood pressure monitoring are close to the GR (9). This raises the idea that there might have been a fine and subtle regulator in our body and cardiovascular system. To understand the beautiful harmony of our body with spiritual or subtle regulators would help us to understand our physiology or pathophysiology with a new aspect and would improve our physiological and physicological well beings. Accordingly

golden proportions might inherently yield a variety of diagnostic and prognostic implications in cardiovascular era with the support of further studies.

Biography

Professor Ertan Yetkin, is currently working at Türkiye Hospital Department of Cardiology, in Istanbul, Turkey. Professor Yetkin received his medical degree from the Hacettepe University Faculty of Medicine in Ankara Turkey in 1994. He afterwards completed his residency training at Turkiye Yuksek Ihtisas Hospital Department of Cardiology in 1999. Dr Yetkin worked as a research scientist in the Department of Cardiology at the Maastricht University Medical Center, at the Cardiovascular Research Institute Maastricht (CARIM), the Netherlands in 2006-2007. His research focuses on vascular biology, valvular heart disease and coagulation system. Dr Yetkin is a member of European Vascular Biology Organization and president of Society of Vascular and Molecular Cardiology. He has obtained 2 "Young investigator awards" from the European Society of Cardiology and published more than 250 scientific publications.

Pharmacologic Management of Weight Regain Following Bariatric Surgery

Eugene Lucas, Okeefe Simmons, Beverly Tchang and **Louis Aronne**

Weill Cornell Medicine, USA

While bariatric surgery results in significant long-term weight loss for most patients with obesity, post-surgical weight gain affects a considerable percentage of patients to varying degrees of severity. Furthermore, a small but significant percentage of patients experience inadequate post-surgical weight loss. Although many studies have examined the role of anti-obesity medications to address post-operative weight regain, an evidence-based consensus has not yet been achieved because of the heterogeneity of populations studied and the heterogeneity within the studies themselves. This review addresses the gap in guidelines for perioperative weight optimization and the pharmacologic management of post-operative weight regain. Regular weight monitoring and timely intervention at the weight loss plateau are needed to optimize outcomes for patients with a history of bariatric surgery. Observational studies in the post-bariatric surgery population consistently demonstrate the benefit of medical weight management after bariatric surgery, with the strongest evidence currently supporting the use of liraglutide, topiramate, and phentermine/topiramate. More recently introduced gut peptide modulators like semaglutide and tirzepatide have been associated with significantly greater amount of weight loss relative to older anti-obesity medications, but there is limited data on their use and effectiveness in post-bariatric patients. The paper concludes by acknowledging the importance of considering medical comorbidities and contraindications in selecting anti-obesity medications both generally and within the post-bariatric surgery population, and the potential role for surgical or endoscopic revision in select cases of post-operative weight regain. Ultimately, bariatric surgery is a very effective intervention for achieving weight loss in patients with obesity and the use anti-obesity medications have an important role in both maximizing the success of bariatric surgery and helping patients to further optimize their weight and improve outcomes.

Biography

Dr. Eugene Lucas is a specialist in Obesity Medicine and Clinical Informatics. Dr. Lucas completed an Internal Medicine Residency at the Zucker School of Medicine at Hofstra/Northwell and an Obesity Medicine Fellowship at New York Presbyterian Hospital/Weill Cornell Medical College. His interest in clinical informatics developed during residency, with a recognition that technology can be used to improve patient care and the clinician experience. To this end, he also completed a fellowship in Clinical Informatics at New York Presbyterian Hospital/Columbia University. Dr. Lucas had long been interested in optimizing weight and body composition in his patients and also completed a fellowship in Obesity Medicine at Weill Cornell Medicine. Dr. Lucas currently works for Weill Cornell Medicine as a Weight Management Specialist and at the NewYork Presbyterian-Weill Cornell Medicine-Columbia University Irving Medical Center enterprise as an Assistant Medical Director of Clinical Information Services.

The Role of Muslim Religious Leaders in Mental Health: A Community-Based Participatory Research Study in the San Francisco Bay Area

Fairuziana Humam[1], Aminah McBryde-Redzovic[2], Iman Mahoui[3], Sara Ali[4], Heba Abolaban[5], Belal Zia[6] and **Rania Awaad[7]**

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[2]School of Public Health, University of Illinois Chicago, USA
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[6]Department of Psychology, University of Manitoba, Canada

Muslim religious leaders provide guidance to their communities on social and spiritual aspects of life. Previous studies suggest that religious leaders (imams) may also offer counseling and mental health support for Muslims. Research has not investigated the extent to which Muslims rely on religious leaders to fulfill this role. This study explores the perceptions of Muslims in the San Francisco Bay Area, California, regarding the role of religious leaders in mental health care. The study utilizes a community based participatory research approach. A total of 40 participants across four demographic groups (male community members, female community members, young adult community members, and religious leaders) were recruited to participate in focus group discussions. Participants were given six case scenarios illustrating various mental health problems and asked to share their thoughts regarding the role of religious leaders in the management of each case. Focus groups were audio recorded, transcribed, and analyzed using thematic analysis. The themes included participants' expectations of religious leaders' qualifications and limitations as well as the perceived distinction between a religious leader and a mental health professional. The findings of this study provide insights into Muslims' perceptions of the roles that religious leaders play in mental health.

Biography

Fairuziana Humam is a third-year PhD student in Community Well-being and an international student from Aceh, Indonesia. She has done some community work with youth in rural areas to reduce teenage marriage and pregnancy. Fairuz actively advocates for women and youth mental health awareness through various platforms in Indonesia and Southeast Asia. She has also done some research and publications regarding her Acehnese community and Muslims in the U.S. She is currently exploring the area of Muslim mental health, particularly related to patriarchal culture, gender norms, and well-being.

Wellbeing as Need Fulfillment

J. D. Pincus[1,2]

[1]*Employee Benefit Research Institute, USA*
[2]*AgileBrain, USA*

The most prominent clinical endpoint concept championed by public health and health care professionals, is the construct of holistic well-being. Despite the tremendous attention focused on well-being, the concept lacks theoretical consensus among its proponents. There is a clear need to embed the concept within a theoretical framework, allowing theory development to avoid the prolific category errors of the past 50 years. This paper argues for a more sophisticated approach to the concept of well-being, grounding it in the vast psychological literature on human motivation. We argue that the apparent diversity of operational definitions employed by academics and practitioners can be understood as tentative attempts to draw ever nearer to key motivational concepts, without ever quite getting there. We review the leading definitions of well-being in the literature and find that they are reducible to a core set of human motives, each backed by full research traditions of their own, which populate a comprehensive model of twelve human motivations. We propose that there is substantial value in adopting a comprehensive motivational taxonomy over current scattershot approaches.

Biography

J. D. Pincus, Ph.D. is Senior Psychologist at Leading Indicator Systems focusing on emerging methods for measuring emotion and motivation. He developed the unified pyramid model of human motivation and the image-based AgileBrain measurement technique. He recently published the unified motivational model in the peer-reviewed journal Integrative Psychological and Behavioral Science, and the application of the pyramid model to the concept of holistic well-being. He is a Fellow of the Employee Benefit Research Institute, a Washington DC-based think tank. He was named Researcher of the Year by PMRG and named to the Power List by Senior Market Advisor magazine.

Virtual Event

4th International Conference on
Future of Preventive Medicine & Public Health
March 18-19, 2024

Financial, Occupational and Physical Challenges and Blood Glucose Monitoring in Type 2 Diabetes

Jacob Marvin[1] and **Nicolette Powe**[2]

[1]*Ohio Northern University, USA*
[2]*Youngstown State University, USA*

Background: Blood glucose monitoring effects are changing for people living with type 2 diabetes. However, there is a lack of recent data surrounding financial, occupational, or physical stressors that affect the adherence of diabetes self-management practices. This article looks to examine specific financial, physical, and occupational challenges in adherence to blood glucose monitoring in type 2 diabetes.

Methods: Data from the National Health and Nutrition Examination Survey (NHANES) 2017–2020 Pre-Pandemic data of adults 18+ were analyzed. These data were used to examine the relationships between insurance coverage, health status, occupation, and self-monitoring of blood glucose levels in the United States.

Results: This study found that respondents had a statistically significant association with five variables: prescription drug coverage (in-part or full), occupation status, gender, age, and three race subcategories (non-Hispanic White, Black, and Other-Multiracial) with blood glucose monitoring.

Conclusion: This study may help certified health education specialists (CHES) and diabetes care and educator specialists (DCES) to better identify which groups of individuals are at highest risk for poor adherence to specific blood glucose monitoring in type 2 diabetes.

Biography

Jake Marvin has completed his PhD at the age of 24 years from Youngstown State University. He is the director of the Public Health Program at Ohio Northern Univeristy. His current research interests include: Type 2 Diabetes Blood Glucose Monitoring Adherence Strategies, LGBTQIA+ Mental Health Outcomes on College-Aged Students, Chronic Disease and Infectious Disease.

Towards Fully Self-Powered Wireless Sensing and Medicine

Jikui Luo

Zhejiang University, China

Wearable wireless physiological sensors, medical devices and implants are becoming essential and common devices nowadays, and they play important roles in preventive medicine and public health. However, the requirement for power supplier for long-term wireless sensing, operation of the devices remains extremely challenge, and has become a bottleneck for Internet of Medical Things (IOMT). In this presentation, I will introduce our recent work on a couple of novel concepts to fully power these devices and systems. Human body is an excellent energy source as it is in motion and is in contact with objects all the times, meanwhile human body is an electrical conductor which is suitable for transmitting electrical power. We have developed a couple of body-based energy generators and collectors, and then used the body to transmit the generated electricity to wearable sensor systems and implant devices, performing wireless physiological sensing as well as electrical stimulation to assist wound healing and curing. We have also developed parity-time symmetry based ultrasensitive wireless sensing and high-efficiency wireless energy transmission technologies, and applied them for precise intercranial pressure sensing and electrical stimulation. These technologies demonstrated great potential and usefulness for IOMT applications.

Biography

Prof. Jikui Luo received his PhD degree from the University of Hokkaido, Japan in 1989. He worked in Cardiff University as a research fellow, in Newport Wafer Fab. Ltd, Philips Semiconductors Co. and Cavendish Kinetics ltd as an engineer, senior engineer, and manager/director. He became a senior researcher in University of Cambridge in 2000, a professor in MEMS in University of Bolton, UK, in 2007. He then became a full professor at Zhejiang University, China, in 2020, a director of bioelectronic research Centre. His current research interests include nanomaterials & nanodevices, physical and biochemical sensors, microfluidics and lab-on-a-chip, flexible electronics, bioelectronics, energy harvesting technologies, and self-powered wireless sensors and microsystems. He has published over 350 papers in peer-reviewed international journals and gave over 230 talks and presentations at international conferences, among them over 40 were invited talks, plenary and keynote speakers.

An Effectively Preventative Method to Prevent Oral Self- Mutilation in Lesch–Nyhan Syndrome and Other Developmental Disabilities Patients

Joseph Shapira

The Hebrew University-Hadassah School of Dental Medicine, Israel

Self-injurious behavior (SIB) is an act directed toward oneself that results in tissue damage. It is frequently seen in Lesch–Nyhan Syndrome and other spe¬cial needs populations, affecting 10% to 17% of individuals diagnosed with intellectual and/or developmental disabilities.

A modern, creative and innovative appliance is presented here which effectively limits the damage caused by SIB and permits rapid healing of existing injuries. The appliance provides a stable, retentive, and comfortable device on infant's teeth, under-erupted and non-retentive, as well as for all permanent teeth in children, adolescents, and adults.

In addition, the appliance meets the expectations of parents who ask us as caregivers to find every possible way to save the teeth and not to extract them, in order to preserve the appearance of the child's smile and self-esteem.

The appliance has been successfully employed for the past 10 years in patients with SIB who have attended for treatment in the Special Needs Clinic in our Department.

Biography

Dr. Joseph Shapira is a Professor Emeritus in Pediatric Dentistry and was the Chair of the Depart. of Pediatr. Dentistry, at the Hebrew University-Hadassah Faculty of Dental Medicine, Jerusalem, Israel.

Following his graduation with distinction, at the Hebrew University - Hadassah Faculty of Dental Medicine, he had specialized at CHOP the Children's Hospital of Philadelphia, University of Pennsylvania, for two years residency program in Pediatric Dentistry with special emphasis on dentistry for Special Needs and High risk Medically Compromised Patients.

Prof. Shapira dedicates his professional life to education, treatment and research for children with special needs and high risk medically compromised children, including the use of varies sedative agents for the management of anxiety and behavior control.

He has published more than 110 articles in refereed International Journals, and has lectured on these subjects around the world.

The Role of Statistical Time Series Modelling in Informing Public Health Policy for Infectious Disease

Wooi-Chen, Khoo and **Yan-Mun Lau**

Sunway University. No. 5, Jalan Universiti, Malaysia

Infectious disease modelling with a statistical time series approach is significant in providing a useful interpretation of real-life situations. It provides critical insights to informed decision-making and contributes guideline for public health policy. Since 1990, hand, foot, and mouth disease (HFMD) has been a common viral illness primarily affecting infants and young children below 12 years old, mostly in Asia countries including China, Thailand, Singapore, and Malaysia. This disease is caused by several enteroviruses, most commonly known as Coxsackievirus, and is characterized by fever, sore throat, and distinctive rashes on hands, feet, and inside mouth. Existing prevention and control promoted by the authority mainly focus on personal hygiene and home quarantine. Limited matured surveillance systems and policy interventions have been found for effective control strategies. On the other hand, COVID-19 is a highly contagious respiratory illness caused by the severe acute respiratory syndrome coronavirus 2 has become a pandemic in the past three years. Public health policies and interventions have been focused on travel restrictions, lockdown measures, social distancing, mask-wearing, and vaccination campaigns. However, the socioeconomic impact of these policies has been devastating, and post-pandemic feasibility needs to be assessed Comprehensive studies analyzing transmission dynamics, potential impact, spread patterns, and healthcare capacity are essential to provide valuable insights for policymakers. A mixture time series regression model can be employed to analyze confirmed cases for both infectious diseases. This model assesses the contagiousness of the virus and predicts future case counts. It also evaluates the influence of location and weather on disease transmission. The findings offer useful insights for policymakers to balance protecting public health and minimizing social and economic disruptions. Moreover, these models aid in effectively allocating healthcare resources and promoting overall population health.

Biography

Dr. Khoo Wooi Chen is a highly educated and passionate professional with a strong background in mathematics and data analysis. She holds an undergraduate degree in Pure Mathematics, a Master's degree in Mathematical Modelling, and a PhD in Applied Probability and Statistics.

Throughout her career, Dr. Khoo has worked on consultancy projects in various industries, including public transport, shopping malls, and government agencies. Her responsibilities have included leading a team in data collection, analysis, and interpreting results to make informed decisions for strategic planning.

Dr. Khoo is proficient in utilizing statistical software packages and programming languages. She possesses advanced skills in statistical techniques such as regression analysis, time series analysis, computational statistics, and predictive modeling. These skills have proven instrumental in driving evidence-based solutions and improving business outcomes.

In addition to her academic pursuits, Dr. Khoo is actively involved in university management. She serves as the data manager at the University level, working closely with the government. Currently, she holds the position of Head of Department of Applied Statistics at the School of Mathematical Sciences in Sunway University. She is enthusiastic about sharing her knowledge and building networks with industry practitioners, and she aspires to collaborate with international researchers.

Clinical Approaches to Drama: "Cripple Billy" in Martin McDonagh's the Cripple of Inishmaan

Maha Alatawi

Prince Sattam bin abdulaziz University, Saudi arabia

There has been an increasing tendency among practicing physicians and health care professionals to pay a close attention to the study of literature and literary narrative. They have started to investigate how the study of literature could help them with skills such as attentive listening, responsive engagement and critical thinking. There has been an important cooperation between the literary scholars and the medical professionals in the field of literature and medicine. The cooperation has highlighted the power of literary texts that help the medical and pre- medical students to develop practical skills. Literature—both in discussion and in writing—can instill habits of attention and empathy which are of immense significance for clinical encounters where the relationship between the patients and the healthcare professionals is quite pivotal. Furthermore, cognitive psychology has realized that the study of literature can foster stronger empathetic responses to patients' needs. Literature helps in finding ways in which one can garner strong empathic response in order to better understand the nature of their patients. The insight gained by literature on the human nature enables the medical student to perform their jobs in a much better and more aware way. This also raises the standard of their performance. In the medical study and training, examining experiences of illness through both presentation and content such as is found within literature develops the professional skills required for communication, ethical responses and accurate diagnoses. This paper will explore the benefits to patient-physician interactions of such presentation and content as can be read or enacted within The Cripple of Inishmaan by Martin McDonagh.

Biography

Dr Maha Alatawi finished her Ph.D. in drama studies at University College Dublin in Ireland where she also worked as a tutor. She is currently an assistant professor at Prince Sattam bin Abdulaziz University in Saudi Arabia. She has two book articles published in The Palgrave Handbook of Contemporary Irish Theatre and Performance, and The Theatre and Films of Conor McPherson: Conspicuous Communities. A journal article published in May, 2021 by The Harold Pinter Review. She signed a contract with Peter Lang to publish an edited collection on Justice in Literature, drama, and Film. She has abstracts and articles published or accepted for publication as book and journal articles. She has papers presented in conferences in Dublin, Galway, Madrid, London, and New York. She won the award for best paper/ best presentation in the conference in Madrid.

Evaluating satisfaction of the Radiologist Assistant within an Academic Pediatric Institution: Comparing Reviews from Staff Radiologic Technologists, Radiologists, Radiology Residents, Radiology Fellows, and Patient Satisfaction Surveys

Jason K. Lee[1] and **Dani Bokhari**[2]

[1]*Radiologist Assistant in the Pediatric Division at Johns Hopkins School of Medicine, USA*
[2]*Radiologist in the Pediatric Division at Johns Hopkins School of Medicine, USA*

I plan to evaluate how my position as a Radiologist Assistant (RA) has influenced a busy fluoroscopic department at an Academic Pediatric Institution. Both the staff radiologists and staff radiologic technologists will be given a satisfaction survey to judge my performance. First year radiology residents (R1's) from academic years 2018-2019 and 2019-2020 will also be given a satisfaction survey to judge my skills at training within the fluoroscopic suite.

Biography

Jason K. Lee, MSRS, R.R.A., R.T. (R) (CT) (ARRT), RPA (CBRPA) is a Registered Radiologist Assistant practicing in the Pediatric Division for Johns Hopkins Hospital in Baltimore, Maryland. He performs fluoroscopic procedures as well as contributes to the fluoroscopy training of Radiology residents, Radiology fellows, Radiologist Assistants, and med-students. He enjoys giving lectures at the hospital, local, national, and international level, as well as publishing various radiology articles, including case studies. He is currently working on his Doctorate in Health Sciences with anticipated completion in May of 2025.

COVID-19 Mortality in Two Waves of the Pandemic in Cali, Colombia, Before and During Vaccination Roll-Out

Pablo Roa, Carlos Reina, Anthony Garcés, Andrés Valencia, Miyerlandi Torres and **Alberto Concha-Eastman**

Secretaría de Salud, Colombia

Objectives: Was to describe the COVID-19 mortality variation due to the effect of vaccination on the residents of Cali in the 2nd wave, without vaccines, and in the 4th wave, with vaccines in process and to estimate deaths avoided, taking into account the variation of deaths, sex, age groups, comorbidities, and days between onset of symptoms and death, and to estimate the number of deaths avoided by vaccination.

Method: cross-sectional study of 2nd and 4th wave vaccination coverage and deaths. The analysis begins by comparing the frequencies of deceased population characteristics in the two waves. Machado's method assumed that the 4th wave's expected deaths were similar to the 2nd wave's. Variables like comorbidities were analyzed.

Results: In the 2nd wave, 1,133 deaths occurred, while in the 4th wave, 754 deaths occurred. Nonetheless, our calculation showed that approximately 3.763 deaths were expected to occur in the fourth wave in Cali if no vaccines were applied.

Conclusions: The decline in COVID-19-associated mortality provides support for the continuation of the vaccination program. Due to a lack of data to explain other possible reasons, such as the novel variations and their severity, the discussion focuses on the study's limitations.

Biography

My name is Pablo Roa, and I hold a Master of Science in epidemiology from the Faculty of Medicine at the Universidad de los Andes in Bogotá, Colombia. Presently, I am employed by the Secretary of Health in Cali, Colombia. I have experience identifying outcomes of health-related events of interest using data science, taking into consideration the design of epidemiological studies, descriptive and inferential analyses for public health decision-making. I have experience in the public sector, specifically in the surveillance of acute respiratory infectious diseases (SARI), such as influenza and COVID-19. In addition, I have experience analyzing events involving vaccine-preventable outcomes and mental health.

Virtual Event

4th International Conference on
Future of Preventive Medicine & Public Health
March 18-19, 2024

Stress Reduction Interventions for Patients with Chronic Diabetic Foot Ulcers: A Qualitative Study into Patients and Caregivers' Perceptions

Sandro Sousa[5], M. Graça Pereira[1,2], Susana Pedras[3], André Louro[4], Alberto Lopes[5] and **Margarida Vilaça[1]**

[1]*Psychology Research Centre (CIPsi), University of Minho, Portugal*
[2]*A School of Psychology, University of Minho, Portugal*
[3]*Centro Hospitalar, Universitário Porto (CHUP), Portugal*
[4]*Health & Family Research Group, Psychology Research Centre (CIPsi), University of Minho, Portugal*
[5]*Portuguese Association of Clinical Hypnosis and Hypnoanalysis (APHCH), Portugal*

Background: The present study aimed to assess the perceptions of patients with chronic diabetic foot ulcers (DFUs) and their family caregivers regarding the impact of two stress reduction interventions on DFU and psychological wellbeing. The intervention included progressive muscle relaxation and hypnosis sessions.

Methods: This study used a qualitative exploratory design and included individual interviews with eight patients with chronic DFUs and six family caregivers, using a semi-structured interview guide. Transcript analysis employed the-matic content analysis.

Results: Four key themes common to patients and their caregivers were found: 1) perspectives regarding the intervention; 2) intervention effectiveness; 3) perceived importance of psychology in the DFU treatment; and 4) emotional consequences associated with DFUs. Although themes were common to both intervention groups, sub-themes from the last two themes differed for patients that received muscle relaxation versus those who received hypnosis.

Conclusion: Patients and caregivers reported perceived benefits from both interventions, regarding DFU healing and emotional wellbeing. Patients who received hypnosis and their caregivers also reported lasting effects. Participants suggested that psychological interventions such as stress reduction interventions could be included in the DFU standard treatment as an adjuvant to the clinical protocol for DFU treatment, preferably offered early on, when patients begin treatment at the diabetic foot consultation.

Biography

Graduated in Psychology from Instituto Superior da Maia, Portugal;

Master in Clinical Neuropsychology from Instituto Superior da Maia ;

Member of the Order of Portuguese Psychologists (nº13097);

Member of the General Assembly Portuguese Association of Clinical Hypnosis and Hypnoanalysis (APHCH), Porto, Portugal;

Invited trainer at several Universities and Schools to address the topic of Applied Hypnosis; Guest Researcher in several studies using Hypnosis .Clinical Hypno Psychotherapist.

Virtual Event

4th International Conference on
Future of Preventive Medicine & Public Health
March 18-19, 2024

Evaluating the Hepatitis B Vaccination Impact in the Republic of Moldova: A Nationwide Representative Serosurvey of Children Born in 2013

Michael Brandl[1],[2] Alexei Ceban[3] Octavian Sajin[4], Victoria Bucov[4], Alina Cataraga[4], Silvia Stratulat[4], Nicolae Furtuna[4], Veaceslav Gutu[4], Stela Gheorghita[3], Martyna Gassowski[1], Liudmila Mosina[5], Antons Mozalevskis[6], Sandra Dudareva[1] and **Siddhartha Sankar Datta[5]**

1Department of Infectious Disease Epidemiology, Robert Koch Institute, Germany
2Charité–Universitätsmedizin Berlin, corporate member of Freie Universität Berlin and Humboldt-Universität zu Berlin, Germany
3WHO Country Office in the Republic of Moldova, Republic of Moldova
4National Agency for Public Health, Republic of Moldova
5WHO Regional Office for Europe, Denmark
6WHO Headquarters, Switzerland

Objectives: The WHO European Region set targets for the control of hepatitis B through immunization, including prevalence of hepatitis B surface antigen (HBsAg) at ≤ 0.5% in vaccinated cohorts. The Republic of Moldova implemented universal hepatitis B vaccination since 1995. We conducted a nationwide representative serosurvey to estimate HBsAg seroprevalence in children born in 2013 to validate hepatitis B control targets.

Methods: We used probability-based sampling and a two-stage cluster design. All children born in 2013 and registered in primary healthcare facilities were eligible for participation. We tested blood samples of all participants for hepatitis B core antibody (anti-HBc), using Enzyme-Linked Immunosorbent Assay (ELISA). Anti-HBc-positive samples were tested for HBsAg and HBsAg-positive samples confirmed, using ELISA. We obtained information on hepatitis B vaccination from vaccination cards.

Results: Of 3352 sampled children, 3064 (91%) participated. Most participating children were 7 years old (n = 3030, 99%), 1426 (48%) were girls. The weighted, national seroprevalence estimate was 3.1% (95% confidence interval = 2.1-4.5) for anti-HBc and 0.21% (95% confidence interval = 0.08-0.53) for HBsAg.

Conclusion: The study demonstrated the impact of hepatitis B vaccination and allowed the Republic of Moldova to validate regional hepatitis B control targets. Other countries with high vaccination coverage could use hepatitis B serosurveys and apply for validation. Sustained efforts in the Republic of Moldova will be crucial on the path to hepatitis B elimination.

Biography

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Addressing Inequality in Maternal Care: A Study of Alabama's Healthcare Deserts and Policy Implications

Vrushali Thakkar

Department of Anthropology, Emory University, Georgia

This study conducts an analysis of maternity care deserts, with a specific focus on Alabama, to reflect the broader context of escalating health disparities and issues related to Medicaid and insurance coverage across the United States. Employing a mixed-methods approach, the research combines quantitative data analysis of healthcare availability and insurance coverage statistics with qualitative interviews from healthcare providers in these deserts. The primary objective is to understand the extent of maternity care deserts in Alabama, while also drawing parallels to similar challenges nationwide, and their impact on maternal and infant health outcomes, particularly among low-income and uninsured populations. Data from state health departments and insurance providers in Alabama serve as a microcosm for understanding the significant gaps in maternity care prevalent in rural and underserved areas across the U.S. These gaps are further exacerbated by state-specific Medicaid policies and the general insurance landscape in the country. Interviews with healthcare providers highlight challenges in delivering consistent and comprehensive maternity care, citing limited resources and insufficient insurance coverage as key barriers, a trend observed not just in Alabama but in many parts of the U.S. The study found a correlation between the lack of accessible maternity care and increased health risks for mothers and infants, a situation particularly dire for low-income women and those without adequate insurance coverage. This underscores the critical role of Medicaid expansion and health policy reforms, not just in Alabama but across the nation. Additionally, the research plans to analyze the emergence of maternity care deserts globally, placing this phenomenon within the context of a changing global economy. This broader perspective aims to highlight the universality of the issue and encourage a more holistic approach to addressing these disparities in maternal health care, both in the United States and around the world.

Biography

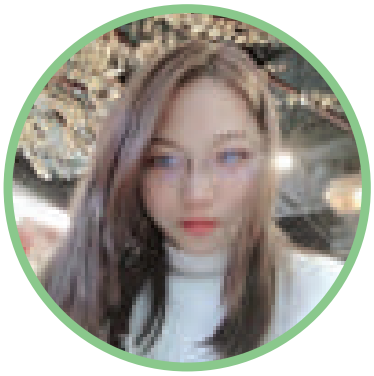
Vrushali Thakkar is a student at Emory University studying English and Global Development studies. Additionally, she serves as a Health Associate at the International Rescue Committee in Clarkston, Georgia, where she plays an integral role in connecting newly settled refugee families to medical services. Vrushali has experience conducting research in health policy and migration at the Council on Foreign Relations, Emory School of Medicine, Rollins School of Public Health, and Weill Cornell Medical College.

Expression of Hsa-miR-877-5p in Acute Ischemic Stroke Based on Bioinformatics Analysis and Clinical and Animal Validation Analysis

Ya-Han Wang[1], Si-Shuo Zhang[1], Ji-Wei Zhang[2], Kai-Xin Zhang, Wen-Qiang Cui[1], Hong-Wei Zhi[1], Hai-Tao Li[1] and **Hong-Yun Wu[1]**

[1]Department of Neurology, Affiliated Hospital of Shandong University of Traditional Chinese Medicine, China
[2]School of Acupuncture-Moxibustion and Tuina, Shandong University of Traditional Chinese Medicine, China
[3]First College of Clinical Medicine, Shandong University of Traditional Chinese Medicine, China

Inflammation and immunity play important roles in the pathogenesis of ischemic stroke. This study aimed to explore key regulatory genes in acute ischemic stroke (AIS) and their underlying mechanisms to provide new research targets for the diagnosis and treatment of ischemic stroke. We searched for differentially expressed mRNAs and miRNAs in patients with AIS and healthy populations in GEO databases, constructed a miRNA–mRNA network, and screened key miRNAs using least absolute shrinkage and selection operator regression and the support vector machine-recursive feature elimination model. Correlations between key miRNAs and infiltrating immune cells and inflammatory factors were analyzed using CIBERSORT and immunoassays and verified using clinical experiments. Bioinformatics analysis identified hsa-miR-877-5p as a key regulatory miRNA in AIS that can modulate immune and inflammatory responses. In clinical studies, it was verified by quantitative PCR analysis that the expression of hsa-miR-877-5p in the blood of AIS patients was higher than that of the healthy group. Then, enzyme-linked immunosorbent assay revealed that the expression of IL-23 and TNF-α related to inflammation in AIS patients was higher than that of the healthy. Quantitative PCR further found that the relative mRNA expression of IL-23, CXCR3 and TNF-α in AIS group was higher than that of the healthy group. This study may provide a basis for a more comprehensive understanding of the potential mechanism of the occurrence and development of AIS, and hsa-miR-877-5p and its downstream effectors IL-23, CXCR3, and TNF-α may be potential intervention targets in AIS.



Rethinking Artificial Intelligence from the Perspective of Interdisciplinary Knowledge Production

Lu. Chan

University of Georgia, USA

In an era where artificial intelligence (AI) profoundly transforms how knowledge is produced and disseminated, this commentary paper explores AI's evolution and its burgeoning capabilities from the standpoint of interdisciplinary knowledge production. With its increasing prominence in higher education and societal functions, interdisciplinary approaches to knowledge production are essential in understanding and leveraging AI's potential. The commentary argues that a comprehensive framework is crucial for ensuring that AI's integration into knowledge production adheres to ethical standards and contributes positively to societal advancement. Through this examination, the paper calls for a concerted effort to navigate the complexities of AI in interdisciplinary knowledge production, highlighting the importance of responsible innovation and the ethical stewardship of AI technologies.

Biography

Chan Lu is a doctoral candidate in Education Policy and Administration at the University of Georgia, USA, with a specialization in higher education policy and AI education organization. Her research interests are centered on understanding the organizational impacts of artificial intelligence on higher education institutions. Chan is committed to exploring how AI technologies can transform administrative and educational practices, aiming to contribute valuable insights into the integration and management of AI within the higher education sector.

Extent and Determinants of Nutritional Challenges and Morbidity Pattern among Sickle Cell Children of Chhattisgarh, India

ASHISH SINHA

Pt JNM Medical College, India

Background: Sickle cell disease (SCD), a common single gene disorders. Role of nutrition is now said to be linked with the severity of the disease. Dietary supplementation for treating SCD is considered for these patients. Hence, this study was conducted with an objective to ascertain extent and determinants of nutritional challenges among SCD patient registered in Chhattisgarh.

Methods: Clinical data of a cohort of 671 SCD children was reviewed through clinical record who were registered at sickle cell institute Chhattisgarh, Raipur.

Results: Out of all 671 children included in the study. Majority (73.92%) were diagnosed beyond 5 yrs of age. Under weight, stunting and wasting were 58%, 37.7% and 38.9% respectively and significantly higher proportion (44%) of underweight pt needed hospitalization as compared to stunted and wasted Pt.16% children had chronic malnutrition and significantly high proportion of Pt had Hb < 10 mg/dl (P < 0.01). Older children (11-18 Yrs) were significantly more (62.04%) in comparison to younger children (1-10Yrs) (P <0.01). More of all older children (64%) needed hospital care (P < 0.01). Chronic malnutrition was significantly higher (39.81%) among O +Ve blood group in comparison to other blood groups. More than one fourth (26.68%) sought care in hospital before diagnosis either for blood transfusion (BT) or for Vaso-Occlusive Crisis (VOC).

Conclusion: Significant proportion of SCD children had chronic malnutrition. Older children with identified blood group, underweight and low Heamoglobin had increased risk of hospital admission. Nutritional intervention can be used as adjunct treatment in SCD children.

Biography

Dr Ashish Sinha is an Associate Professor in Dept of Community Medicine at Pt JNM Medical College Raipur. He got Graduated and Post Graduated in Pt JNM Medical College Raipur. He is also Director Medical in Sickle Cell Institute in Chhattisgarh India. He got Fellowship in Canada. He published 25 research paper in National and International Journals. He also presented 3 research papers in International Conferences. Previously He worked for World Health Organization, National AIDS Control Organization and PGIMER Chandigarh in various positions. Research Interest: TB HIV and Public Health Nutrition. I had taken various suveys of Public Health nutrition in the province of Chhattisgarh. Also Published 25 papers in Public Health Journals with 3 International Research paper presentation at New Delhi, Liverpool and Rome Italy

Post-Traumatic Stress Disorder and Associated Factors Among Adult War Survivors in Northwest Ethiopia

Assefa Agegnehu Teshome

Debre Tabor University, Ethiopia

Background: A person may endure or witness a traumatic incident, such as being exposed to war, and, as a result, develop post-traumatic stress disorder (PTSD).There is a lack of information about post-traumatic stress disorder in low and middle-income countries such as Ethiopia. However, armed conflict, abuse of human rights, and violence motivated by race are becoming more commonplace. This study aimed to assess the prevalence of PTSD and associated factors amongwar survivors in Nefas Meewcha Town, South Gondar Zone, Ethiopia, 2022.

Methods: A community based cross-sectional study was carried out. 812 study participants were chosen using a multi-stage sampling process. A face-to-face interview used a post-traumatic stress disorder checklist (PCL-5) to evaluate PTSD. The association between PTSD and other demographic and psychosocial characteristics was investigated using bivariate and multivariable binary logistic regression analysis. A P-value of 0.05 was declared as statistical significance

Result: The prevalence of PTSD in this study was 40.8% with a 95% CI of 36.2to 46.7. The likelihood of developing PTSD was significantly associated with the fallowing factors. A close family member killed or seriously injured (AOR = 4.53,95% CI = 3.25–6.46), being female (AOR = 1.98, 95% CI = 1.3–3.0), moderate(AOR = 3.51, 95% CI = 2.52–4.68) and high perceived stress (AOR = 5.23, 95%CI = 3.47–8.26), depression symptoms (AOR = 4.92, 95% CI = 3.57–6.86), anxiety disorder symptoms (AOR = 5.24, 95% CI = 3.72–7.63), a chronic medical illness(AOR = 3.51, 95% CI = 2.52–5.41), physical assault (AOR = 2.12, 95% CI = 1.05–3.72) and being in a war fighting situation (AOR = 1.41, 95% CI = 1.21–3.14).

Conclusion: This study reported that the prevalence of PTSD was high. Being female, having a previous history of chronic medical illness, depressive symptoms, anxiety symptoms, history of a family member or friend was injured or killed, poor social support, high perceived stress, physical assault, and being in a warfighting situation were statistically associated with PTSD. Hence, regular patient assessment by mental health organizations for those with a history of trauma and facilitation of ways to support such residents is highly recommended.

Biography

He is a senior lecturer and researcher at Debre Tabor University, Ethiopia. He is interested in neuroscience research. He graduated from the University of Gondar with masters in human anatomy and Debre Berhan University in public health.

Virtual Event

4th International Conference on

Future of Preventive Medicine & Public Health

March 18-19, 2024

Assessment of Ear Infection in Children Attending Dalhatu Araf Specialist Hospital, Lafia

Augustine Daniel Abah[3], Hassan Ikrama[1] and **Aleruchi chuku[2]**

[1,3]Dalhatu – Araf Specialist Hospital, Nigeria
[2]Federal University, Nigeria

Bacterial infection of the ear, especially among children from low-income countries, is a major cause of hospitalization, presenting in different forms and severity. The prevalence and antibiotic profile of bacteria associated with ear infection amongst children between the ages 0–10 years presenting with symptoms was determined using standard microbiological procedures and Kirby-Bauer disk diffusion methods. The results showed an 89.6% prevalence rate of bacterial ear infections, with males and children aged 0–1 year accounting for 53.7% and 28.9% of cases respectively. Pseudomonas spp. was the most prevalent (32.6%) bacteria isolated, while Klebsiella spp. was the least prevalent (8.9%). Male children had higher distribution and presence of bacterial growths than their female counterparts. The antimicrobial assay revealed high susceptibility rates as well as multidrug resistance of the bacterial isolates to the antibiotics tested. Cefuroxime and Augmentin were most effective against all isolates. This study showed a high prevalence of bacterial-associated ear infections dominated by Pseudomonas spp. and more prevalent in males and children between 0 and 3 years old. This calls for improved postnatal care education and child hygiene by nursing mothers, midwives and nannies to forestall and prevent any public health challenge that might arise from the uncontrolled spread and increase in pathogenicity of infections caused by the isolates.

Biography

I am Augustine Daniel Abah born on the 31 December 1984 at Ipole-Oko Orokam in Ogbadibo local government of Benue State of northcentral Nigeria.

I obtained my bachelor's degree in medical laboratory sciences in 2010 from the University of Calabar and a registered member of the Medical Laboratory Science Council of Nigeria.

I have been in the service of medical laboratory sciences for twelve (12) years and am an Assistant Director in Nasarawa state, Nigeria public service as a medical laboratory scientist in the quality management system (QMS), supervision of lower cadre as well as training of middle manpower such as medical laboratory technologist in the medical laboratory sciences.

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March 18-19, 2024

Microbial Assessment of Drinking Water Contamination: A Case of The Wassa Internally Displaced Persons Camp in Federal Capital Territory, Abuja, Nigeria

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[3]National Universities Commission, Nigeria
[4]Department of Chemistry and Microbiology, Faculty of Science, National Open University of Nigeria, Nigeria

The number of internally displaced persons (IDPs) and camps have been on the increase in Nigeria the recent times. One of the challenges of the IDPs is the access to clean water for drinking and domestic activities. Microbial contamination of water is a major public health concern also in many IDP camps. This study therefore aimed to investigate the microbial contamination of water consumed by the IDPs of the Wassa Camp (The largest IDP by population size) in the Federal Capital Territory, Abuja, Nigeria. Four water sources were selected (Borehole, 1 dug-out pond and two stream locations) for the study. Water samples were collected in triplicates and processed for microbial analysis according to standard methods. Data generated was subjected to descriptive statistics using SPSS. The total aerobic bacteria load ranges from 1.14 x102 ± 0.35 CFU/ml to 1.53 x102 ± 0.12 CFU/ml. No bacteria contamination was detected in the borehole water. The results obtained were compared with the standard most probable number (MPN) values and the results of the presumptive test showed that the overall coliform count ranged from 9.2 cells/100mL to 33 cells/100mL. The coliform bacteria identified included Escherichia coli, Salmonella spp., Proteus mirabilis, Enterobacter spp., and Shigella spp. Consumers of the water in the study area are vulnerable to health risk associated with water contamination. Therefore, there is an urgent need for greater water source protection, community-led sanitation, hygiene education and government intervention if the sustainable development goal (SDG) 6.1 on clean and healthy water for all is to be achieved.

Biography

Dr. Ayodeji O. Idowu holds a B.Sc., M.Sc. and PhD degrees in Biochemistry with specialization in Biochemical and Environmental Toxicology. He is a researcher and lecturer at the Department of Environmental Health Science, Faculty of Health Sciences, National Open University of Nigeria, Abuja and with over 10 years' experience in research and teaching. Dr. Idowu was also a postdoctoral fellow from the Centre of Functional Foods and Gastronomy, Prince of Songkhla University, Thailand. His research publications are in the areas of functional foods, phytomedicine, antioxidant, cytotoxicity and toxicology. Dr. Ayodeji Idowu has published impactful scientific articles in both local and international reputable journals include Scopus and Web of Science indexed.

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TOPSIS Approach for MCGDM Based on Intuitionistic Fuzzy Rough Dombi Aggregation Operations

Azmat Hussain[1], Tahir Mahmood[2], Florentin Smarandache[3] and **Shahzaib Ashraf[4]**

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1Islamic Girls School and College Parachinar, Pakistan
[3]University of New Mexico, USA
[4]Khwaja Fareed University of Engineering and Information Technology, Pakistan

Atanassov presented the dominant notion of intuitionistic fuzzy sets which brought revolution in different fields of science since their inception. The operations of t-norm and t-conorm introduced by Dombi was known as Dombi operations and Dombi operational parameter possess natural flexibility with the resilience of variability. The advantage of Dombi operational parameter is very important to express the experts' attitude in decision making. This study aims to propose intuitionistic fuzzy rough TOPSIS method based on Dombi operations. For this, first we propose some new operational laws based on Dombi operations to aggregate averaging and geometric aggregation operators under the hybrid study of intuitionistic fuzzy sets and rough sets. On the proposed concept, we present intuitionistic fuzzy rough Dombi weighted averaging, intuitionistic fuzzy rough Dombi ordered weighted averaging and intuitionistic fuzzy rough Dombi hybrid averaging operators. Moreover, on the developed concept we present intuitionistic fuzzy rough Dombi weighted geometric, intuitionistic fuzzy rough Dombi ordered weighted geometric and intuitionistic fuzzy rough Dombi hybrid geometric operators. The basic related properties of the developed operators are presented in detailed. Then the algorithm for MCGDM based on TOPSIS method for intuitionistic fuzzy rough Dombi averaging and geometric operators is presented. By applying accumulated geometric operator, the intuitionistic fuzzy rough numbers are converted into the intuitionistic fuzzy numbers. The massive outbreak of the pandemic COVID-19 promoted the challenging scenario for the world organizations including scientists, laboratories and researchers to conduct special clinical treatment strategies to prevent the people from COVID-19 pandemic. Additionally, an illustrative example is proposed to solve MCGDM problem to diagnose the most severe patient of COVID-19 by applying TOPSIS. Finally, a comparative analysis of the developed model is presented with some existing methods which show the applicability and superiority of the developed model.

Biography

AZMAT HUSSAIN was born in Para Chinar, Pakistan, in 1987. He received the M.Sc. degree in mathematics from Hazara University Mansehra, and the M.Phil./M.S. and Ph.D. degrees in mathematics from International Islamic University, Islamabad, Pakistan, in 2016 and 2020, respectively. Recently, he is Assistant professor in department of mathematics Islamic Public School and College Parachinar. He has published 23 research articles with 60 plus impact factors in well reputed international journals. His research interests include fuzzy algebraic structures, decision making, rough set theory, soft set theory, and aggregation operators.

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March 18-19, 2024

A critical analysis of health system in Nepal; Perspective's based on COVID-19 response

BS Kuikel[1], A Shrestha[1,2,3], DR Xu[4], BB Shahi[5], B Bhandari[5], RK Mishra[6], N Bhattrai[7], K Acharya[8], A Timalsina[9], NR Dangaura[1], B Adhikari[10], R Dhital[11] and **BM Karmacharya[1]**

[1]Department of Public Health and Community Programs, Kathmandu University School of Medical Sciences, Nepal
[2]Institute for Implementation Science and Health, Nepal
[3]Center of Methods for Implementation and Prevention Science, Yale School of Public Health, USA
[4]Southern Medical University, China
[5]Ministry of Social Development, Nepal
[6]Ministry of Health and Population, Nepal
[7]Nepal Public Health Foundation, Nepal
[8]New ERA, Nepal
[9]Department of Health Services, Nepal
[10]HERD International, Nepal
[11]Rural Development and Empowerment Center, Nepal

Background: Nepal moved from a unitary government to a federal system of government in 2015 under its constitution. Nepal is a federal democratic republic governed by three levels of government: a federal, provincial, and local level. The response to COVID-19 in Nepal has been majorly led and controlled by the federal government. All three levels of government are performing their responsibilities; however, they face various challenges in responding to COVID19. This study aimed to critically analyse Nepal's health system in the context of the COVID-19 response.

Methods: We conducted semi-structured in-depth interviews by telephone among the policymakers, health workers, and stakeholders at the federal, provincial, and local levels (n = 41) between January to July 2021. The interviews were audio recorded, transcribed into English, and coded using inductive-deductive approaches.

Results: COVID-19 considerably impacted routine health care, mainly maternity services and immunization. Inadequate financial resources, inadequate human resources, and the lack of ventilators, ICUs, and X-ray services were the significant challenges in tackling and managing COVID-19 effectively.

Conclusion: The study found that all three levels of government perform their roles and responsibilities and effectively manage the pandemic. The federal and provincial

governments focused more on the plans and policy development, while the local government demonstrated greater accountability in implementing those plans and policies. Therefore, all three tiers of government need to coordinate together for preparing and communicating information in times of emergency. Besides, it is imperative to empower local governments to maintain Nepal's federal health system.

Biography

Bihari Sharan Kuikel, a public health scholar from Nepal, holds a master's degree in public health specializing in epidemiology from Kathmandu University and a master's degree in health care management from Pokhara University. As a public health professional, he is involved in developing tools to address determinants of disease, conducting epidemiological studies, and producing analytical health reports with practical solutions. He plays an important role monitoring and evaluating many public health programs. He is interested in a wide range of topics, including epidemiological research, health economics, and healthcare systems and policies.

Analysis of COVID-19 Vaccinations and Symptom Mapping Diagnostic Technique for Viral Diseases: Using Data Analytics, Machine Learning and Artificial Intelligence

Chikezie K. Kalu

Jiangsu University, China

Background: The increasing challenge of modern medicine to continually improve to meet up with the evolving viruses, viral diseases and other forms of human diseases; requires urgent and a thorough approach for the good of humanity. Therefore, innovative measures must be applied in vaccination production and distributions, which have been identified as a most potent method to curb viral diseases and of current interest, the Corona Virus.

Objective: To analyse and measure the COVID-19 vaccination outlook in a developing country as Nigeria; and the non-clinical analysis, diagnosis, treatment and management of COVID-19 and other viral diseases, using Data/Machine Learning(ML)/Artificial Intelligence (AI) tools and Methodologies.

Methods: Using current and historical data from validated open source data stores, analysis was carried out on COVID-19 vaccination and related economic, demographic and geo-climatic data for a developing country, Nigeria and selected countries from all Continents of the World. The methodical and data-driven analyses were carried out using the following Data/Artificial Intelligence (AI) methodologies and algorithms: Multivariate Regression Analysis, Symptom Mapping Analysis, and Grey System Analysis.

Results: The COVID-19 vaccinations expectedly does reduce the number of active covid cases and the amount or number of vaccinations for a developing country as Nigeria is affected by a good number of economic, demographic and geo-climatic factors; and so COVID-19 vaccinations strategies must be unique to a Country and take into account influencing factors not only limited to number of active covid cases.

Conclusion: Medical practitioners can provide even more efficient diagnosis and treatment of viral diseases; and also patients can carry out personalised cost effective diagnosis and treatment/management of viral diseases, with also the advises of medical practitioners.

Biography

Dr Judicial Sebatana is a lecturer at the North-West University, in South Africa where he teachers Chemistry and supervises postgraduate studies. He is also a researcher at the same institution where his interests include Problem-Based Learning, Inquiry-Based Learning, Blended Learning and Pedagogical Content Knowledge under the Self-Directed Learning Research Unit. Dr Sebatana is a member of various organizations such as Golden Key International Honor Society, Southern African Association for Research in Mathematics, Science and Technology Education (SAARMSTE) and National Association for Research in Science Teaching (NARST). He is currently serving as an executive committee member of The UNESCO Chair on Open Educational Resources. Dr Sebatana was awarded with Fulbright Scholarship and have received other awards as an active partner with the Ministry of Education Mathematics, Science and Technology Unit in South African.

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Satisfaction with Preoperative Education and Surgical Services among Adults Elective Surgical Patients at Selected Public Hospitals in Addis Ababa, Ethiopia

Dereje Deressa[1], Tigistu Gebreyohannis[1], Abdisa Boka[1] and **Yomilan Geneti[2]**

[1]Department of Nursing, School of Nursing and Midwifery, College of Health Sciences, Addis Ababa University, Ethiopia
[2]Department of Nursing and Midwifery, College of Medicine and Health Sciences, Dire Dawa University, Ethiopia

Objectives: The purpose of this study was to determine the level of satisfaction with preoperative education and surgical services among adult elective surgical patients at governmental hospitals in Addis Ababa, Ethiopia.

Methods: Four hundred and twenty-two elective surgical patients at Addis Ababa's governmental hospitals took part in a facility-based cross-sectional study from 8 October to 8 November 2021. Based on past experiments, an instrument for structured data collection was modified and employed. The data were cleaned and sent to Epi data version 4.2 before being exported and analysed in SPSS version 25. Descriptive statistics were used to describe the participant characteristics, and logistic regression, which also included bivariate and multivariate analysis, was used to evaluate the association between the independent and outcome variables. The level of statistical significance was indicated by a p value of 0.05.

Results: 84.6% of the participants reported feeling very satisfied with their preoperative education. Preoperative education about surgery (adjusted odds ratios (AOR)=0.005; 95% confidence interval (CI): (0.000, 0.061)), previous surgery (AOR=2.7; 95% CI: (2.51, 6.85)), and preoperative anxiety (AOR=0.013; 95% CI: (0.003, 0.06)) were all significantly associated.

Conclusions: About 84% of survey participants reported being satisfied with preoperative education and services. Preoperative patient satisfaction was negatively predicted by preoperative anxiety, prior surgery, and preoperative information about surgery. The decrease of anxiety and enhancement of surgical patient satisfaction may be significantly impacted by proper preoperative education.

Community and Home Based Healthcare Services: The Key to Universal Health Coverage

Dianah Basirika[1,2], Anne Merriman[1] and **Rose Kiwanuka[2]**

[1]Hospice Africa Uganda, Uganda
[2]Lweza Community Health Programme, Uganda

Introduction: Community and home based healthcare services are gaining more recognition especially now where primary health care is important for universal access to healthcare services. Hospice Africa Uganda has exemplified the use of community and homebased palliative care services to reach the underprivileged populations and this approach is being adopted by a community initiative called, Lweza Community Health Program (LCHP) to promote primary health care.

Aim: To promote a healthy, informed and Productive Community.

Methods: LCHP works with community leaders particularly the local council 1 secretariat to address the health problems of the village. It does this through community mobilization, participation, capacity building, collaboration and Networking. The primary focus is on the family as it engages community volunteer workers, health workers, Local council leaders, the community, health facilities and other duty bearers.

Results: Through this approach, patients with serious illness including those with infectious diseases have been identified, initiated on treatment and are followed up. This approach has helped to bridge the divide between the rich and the poor but also helped to address other social-cultural factors including poor sanitation, domestic violence, child abuse, youth unemployment, insecurity and the lack of organized markets which influence the health of individuals and communities. It is hoped that the community initiative will become a model for many communities in Africa to improve equitable access to healthcare services in communities.

Conclusion/Lessons Learnt: social determinants of health play an important role on one's health. Using a multi-sectoral approach to address the social determinants of health can address social inequalities and improve the health of individuals, families and communities.

Biography

"Dianah Basirika is a Lecturer/Palliative Care Nurse at Hospice Africa Uganda (HAU) besides being a Part-time Lecturer at Uganda Christian University, School of Medicine. She holds a Master's degree in Public Health and Post-graduate certificate in health Protection from University College Cork, Ireland. She also carries a Bachelor's degree and a diploma in clinical palliative care besides being a Registered Nurse. As a clinician, trainer, mentor, researcher, leader, Dianah has advocated for improved access to palliative care services and opioids in Africa. She supports African countries to integrate palliative care in their health care system. She is the founding member and board secretary for Lweza Community Health Program and has since initiated, designed and supported the implementation of programs geared at addressing the social determinants of health in the community. She is an author in reputable journals and has presented papers in National and International conferences besides doing voluntary work.

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Dengue Cases among Patients admitted in a Tertiary Care Centre: A Descriptive Cross-Sectional Study

Dinesh Kumar Lamsal[1], Prem Shankar Chaurasiya[2], Akash Khatri[3], Swekchha Karki[3], Soniya Singh[3], Gomik Shilpakar[4] and **Raj Kumar Sangraula[5]**

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2Department of Internal Medicine, Kalaiya Provincial Hospital, Nepal
3Department of Internal Medicine, Civil Service Hospital, Nepal
4Department of Laboratory, Civil Service Hospital, Nepal
5Department of Public Health, Little Buddha College of Health Science, Nepal

Introduction: Dengue virus incidence has been increasing trends in every year due to the expansion of the vectors Aedes aegypti and Aedes albopictus. The objective of this study was to find out the prevalence of dengue among suspected patients admitted to the department of medicine of a tertiary care centre.

Methods: A descriptive cross-sectional study was conducted among 500 suspected dengue patients admitted to the intensive care unit and medical ward department from September 15 to November 14 2022 for a duration of 3 months after approval from the Institutional Review Committee (Protocol No: IRC-CSH-019/2022). Demographic, clinical characteristics and laboratory profiles were collected from dengue patients by using a structured questionnaire. Convenience sampling techniques was used.

Results: Among 500 patients, 242 (48.40%) (40.66-56.14, 95% Confidence Interval) were found to be dengue positive. The average age of the enrolled patients was 39.13±20.64 years. Most dengue fever patients were diagnosed in the category of dengue with a warning sign of 234 (96.69%). The mean hospital stay of dengue patients was 4.05±2.03 days, 229 (94.62%) of patients stayed less than 7 days before discharge.

Conclusions: The prevalence of dengue among suspected patients admitted to the department of medicine is found to be higher than in other similar studies done in similar settings. Patients with clinical symptoms and laboratory findings corroborating with dengue should undergo early diagnosis and facilitate prompt treatment in individual patients.

Biography

Dr. Dinesh Kumar Lamsal working as a Professor and Head of Department of Family Medicine (General Medicine) and Emergency Medicine at Civil service Hospital, Kathmandu, Nepal from April 2009 to till date. My main areas of expertise are Emergency Medicine and General Medicine. I serves as a visiting faculty in Nepal as well as China Medical College and to teach emergency medicine and also supervise the doctor of Medicine students. My research interests include Emergency Medicine, General Medicine, Infectious diseases and vector-borne diseases. I have published more than dozens of articles in peer-reviewed journals.

Do Mistake Rumination and Worry About Mistakes Mediate the Relationship Between Trait Perfectionism, L2 Anxiety and Willingness to Communicate?

Elyas Barabadi

University of Bojnord, Iran

This study aimed at examining the link between different aspects of perfectionism, mistake rumination, worry about mistakes, anxiety, and willingness to communicate. Based on convenience sampling, a total number of 1058 Iranian English learners from various public schools filled out the relevant questionnaires. To investigate the relationship between different variables, we applied structural equation modeling. As expected, the results of the correlation analysis indicated that negative aspects of perfectionism such as socially prescribed perfectionism, mistake rumination, and worry about mistakes were positively associated. In addition, the results of full structural models based on SEM analysis manifested that worry about mistakes and mistake rumination could mediate the relationship between the negative aspect of perfectionism, namely socially prescribed perfectionism and anxiety and also L2 achievement. Overall, the pattern of correlations attested to the need in this context to supplement trait perfectionism measures with more specific scales tapping facets of mistake orientation. Our analyses showed that both trait perfectionism measures had small but significant associations with worry over mistakes and rumination about mistakes. Socially prescribed perfectionism had a small but significant link with greater communication anxiety, while self-oriented perfectionism was linked with greater rather than less willingness to communicate. The most striking findings in this study were the robust associations found between communication anxiety and both mistake rumination and worry about mistakes. The clear implication here is that students who are vulnerable need to learn cognitive and emotional regulation techniques focused on their ability to manage mistakes. Attempts at intervention should be more effective to the extent that they help students cognitively reappraise the meaning and significance of mistakes. On a related note, there is bound to be some benefits associated with promoting a growth orientation in terms of mindset and limited a fixed mindset that would include the notion that mistakes reflect stable and unchanging deficiencies in the self (for a discussion, see Flett & Hewitt, 2022).

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Antimicrobial Potential of Imipenem/ Cilastatin Nanoliposomes Against Clinical Isolates of Pseudomonas aeruginosa

Faezeh Milani[1], Khosro Adibkia[1] and **Morteza Milani[2]**

[1]Department of Pharmaceutics, Faculty of Pharmacy, Tabriz University of Medical Sciences, Iran
[2]Infectious and Tropical Diseases Research Center, Tabriz University of Medical Science, Iran

Pseudomonas aeruginosa is associated with numerous human infections. This bacterium has inherent resistance to some antibiotics, so it is difficult to control Pseudomonas infections. Liposomal encapsulation of antibiotics is one of the effective strategies to control microbial infections.

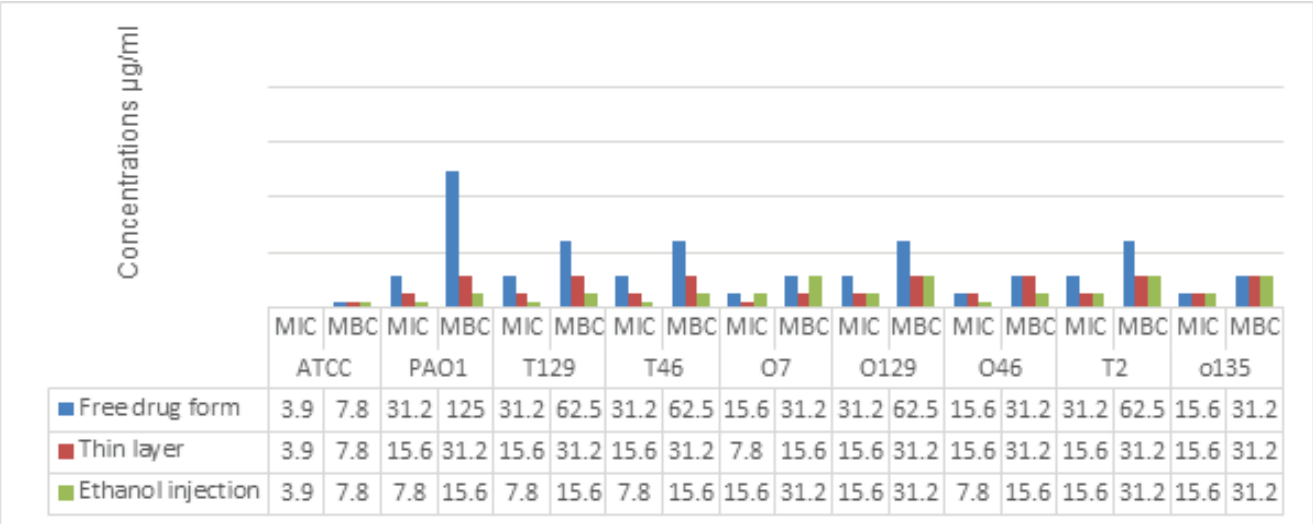
Objective: Investigating the anti-Pseudomonas aeruginosa effect of the imipenem/ cilastatin liposomal form in in-vitro conditions.

Methods: The antibiotic resistance pattern of isolates was identified by the disk agar diffusion technique. The encapsulated nanoliposome forms were prepared using thin layer and ethanol injection techniques. SEM and DLS were used to determine the size, shape, and zeta potential of the encapsulated drug form and the empty nanoliposome. Additionally, Imipenem/Cilastatin encapsulation in nanoliposomes was studied using FT-IR spectroscopy. The MIC, MBC, and MBEC of liposomal and free drug forms were determined in the microbial assay experiments.

Results: The nanoparticles were spherical, with a diameter ranging from 30 to 39 nm, and the EE% in the thin layer and ethanol injection procedures were 97 and 98, respectively. The results demonstrated the thermodynamic stability for the chemical structure of the drug enclosed and validated the encapsulation in the nanoliposomes with peaks at 3009 cm-1 and 1650 cm-1. Compared to free drug forms, nanoliposomes had lower MIC and MBC values in the majority of the isolates and had a greater ability to eradicate biofilm formation (Figure 1).

Discussion: In line with previous studies, our findings indicate that two nanoliposomes demonstrated greater efficacy in 80% of the isolates. Overall, the nanoliposomes exhibited stronger antimicrobial properties than the free drug form based on the evaluation of their MIC and MBC.

Conclusion: Nanoliposomes offer promising potential for controlling antibiotic-resistant microbial infections, providing a valuable route for future management strategies.



	MIC ATCC	MBC ATCC	MIC PAO1	MBC PAO1	MIC T129	MBC T129	MIC T46	MBC T46	MIC O7	MBC O7	MIC O129	MBC O129	MIC O46	MBC O46	MIC T2	MBC T2	MIC o135	MBC o135
Free drug form	3.9	7.8	31.2	125	31.2	62.5	31.2	62.5	15.6	31.2	31.2	62.5	15.6	31.2	31.2	62.5	15.6	31.2
Thin layer	3.9	7.8	15.6	31.2	15.6	31.2	15.6	31.2	7.8	15.6	15.6	31.2	15.6	31.2	15.6	31.2	15.6	31.2
Ethanol injection	3.9	7.8	7.8	15.6	7.8	15.6	7.8	15.6	15.6	31.2	15.6	31.2	7.8	15.6	15.6	31.2	15.6	31.2

Figure 1: *The MIC and MBC results of Imipenem/Cilastatin encapsulated liposomes and free drug form against P. aeruginosa isolates*

Biography

My name is Faezeh Milani from Iran. I am a pharmacist. I completed my pharmacy education at Tabriz University of Medical Sciences, where my passion for pharmacy and antibiotic resistance grew. As a result, I decided to pursue my doctoral thesis in this field. Currently, I am fulfilling my responsibilities at Tabriz Medical Centre, and I have plans to further my studies soon by pursuing a PhD.

Suppressing Alpha7 Nicotinic Acetylcholine Receptor Expression to Overcome Sorafenib Resistance in Hepatocellular Carcinoma Cells

F.Kheradmand[1], M.Afrashteh Nour[1,2], Y.Rasmi[1] and **B.Baradaran[2]**

[1]Urmia University of Medical Sciences, Iran
[2]Tabriz University of Medical Sciences, Iran

Hepatocellular carcinoma (HCC), the most common kind of liver cancer, is still one of the leading causes of mortality worldwide. The alpha 7 nicotinic acetylcholine receptor (7nAchR), a member of the nicotinic acetylcholine receptor family, has been linked to cancer and chemoresistance. The relevance of 7nAchR expression in the development of HCC, particularly in drug-resistant cells, remains unknown. As a result, the purpose of this study was to assess the effect of 7nAchR suppression in conjunction with Sorafenib (SOR) in SOR-resistant HCC cells. To begin, SOR-resistant HCC cells were created. The cells were treated with SOR after siRNA transfection to reduce 7nAchR expression. After calculating the IC50 of SOR and the effect of 7nAchR siRNA and SOR on resistant cell survival, qRT-PCR was used to assess the expression of 7nAchR and apoptosis-related genes. Flow cytometry was also used to analyze apoptosis, autophagy, and cell cycle in resistant HCC cells. Cell migration and colony formation tests were also utilized to validate the findings. Our findings suggested that suppressing 7nAchR might promote sensitivity in resistant-HCC cells. In addition, when siRNA and SOR were used together, there was a significant drop in 7nAchR mRNA gene expression in HCC-resistant cells. Furthermore, downregulation of 7nAchR in conjunction with SOR inhibits migration and colony formation. Apoptosis was also induced by altering the expression of apoptotic target genes during the G2-M and subG1 phases of the cell cycle. Because of the overexpression of 7nAchR in SOR-resistant-HCC cells, it may be considered a therapeutic target for treating HCC cell resistance.

Biography

After completing the course of general medicine, Fatemeh Kherdmand continued her studies in the field of clinical biochemistry at Iran University of Medical Sciences, Tehran. After finishing her studies, she started working at Urmia University of Medical Sciences. As a faculty member and professor, and also as a member of solid tumor and molecular cellular research centers, he has conducted numerous researches in the field of cancers, especially breast and colorectal cancers. She has published numerous articles in this field.

Bencao (Herbal) Small RNA Atlas for Treating Human Disease and Oligonucleotide Drugs Development

Fengming Huang

Department of Biochemistry, State Key Laboratory of Common Mechanism Research for Major Diseases, Institute of Basic Medical Sciences Chinese Academy of Medical Sciences, School of Basic Medicine Peking Union Medical College, China

Cross-kingdom herbal miRNA was first reported in 2012. Using a modified herbal extraction protocol, we obtained sequences by RNA-seq from more than 200 traditional Chinese Medicine (TCM). We constructed a Bencao (herbal) small RNA (sRNA) Atlas (http://bencao.bmicc.cn), which contained more than 20 million unique sequences, and created a nomenclature system for Bencao sRNAs. All human genes might be regulated by sRNAs from the Bencao sRNA Atlas, part of the predicted human target genes was experimentally validated. We established roadmaps for oligonucleotide drugs development and optimization of TCM prescriptions. We propose a Bencao (herbal) Index, including small-molecule compounds (SM), protein peptides (P), nucleic acid (N), non-nucleic and non-proteinogenic large-molecule compounds (LM) and elements from Mendeleev's periodic table (E), to quantitatively measure the medical effects of botanic medicine. The Bencao sRNA Atlas is a resource for developing gene-targeting oligonucleotide drugs and optimizing botanical medicine, and may provide potential remedies for the theory and practice of one medicine.

Biography

Fengming Huang, associate professor of biochemistry department at Peking Union Medical College and Chinese Academy of Medical Sciences (PUMC/CAMS). She obtained her B.S from Perking University, and PhD at PUMC/CAMS. Her research focuses on the diseases related to lung injury and the drug developments. She published peer-reviewed journals including Cell Discovery, Cellular & Molecular Immunology, Molecular Psychiatry, National Science Review, Nature Communications, Sci China Life Sci, PLOS Pathogens, mSystems, Scientific reports. Web of Science citation more than 1700.

A Randomized Controlled Trial Evaluating the Effectiveness of Narrative Therapy on Resilience of Orphaned and Abandoned Children Fostered In SOS Children's Village

Ncali Fanny

Clinical DirectorWihogora Psychosocial Centre, Rwanda

Background: Narrative Therapy is an efficacious treatment approach widely practiced for various psychological conditions. However, few studies have examined its effectiveness on resilience, a robust determinant of one's mental health, and there has been no randomized controlled trial in sub-Saharan Africa.

Objective: This study sought to evaluate the efficacy of narrative therapy for the resilience of orphaned and abandoned children in Rwanda.

Method: This study was a 'parallel randomized controlled trial' in which participants (n = 72) were recruited from SOS Children's Village. Half of the participants (n = 36) were randomly allocated to the intervention group and the rest to the delayed narrative therapy group. For the intervention group, children attended ten sessions (55 min each) over 2.5 months. Data were collected using the Child and Youth Resilience Measure (CYRM) and analysed using mixed ANOVA within SPSS version 28.

Result: The results from ANOVA indicated a significant main effect of time and group for resilience total scores. Of interest, there was a significant time by group interaction effect for resilience. Pairwise comparison analyses within-group showed a significant increase in resilience in the intervention group, and the effect size was relatively large in this group.

Conclusion: Our findings highlight the notable efficacy of narrative therapy for children's resilience in the intervention group. Therefore, health professionals and organizations working with orphaned and abandoned children will apply narrative therapy to strengthen their resilience and improve mental health.

Biography

Françoise KARIBWENDE is the Founder & Clinical Director of Wihogora Psychosocial Centre. With more than two decades of work experience in mental health, psychology and education, she is a specialized clinical psychologist passionate about the mental health wellbeing of children and adolescent.

With a master's degree in Clinical Psychology from University of Rwanda (2021), Karibwende Francoise has over the past 18 years specialized in child psychology using child-appropriate therapies including Narrative Therapy, Alternative Care of Children, Psychodrame des Enfants, Cognitive Behaviour Theraphy, Systematic Approach and other Foster and Family Care Approaches. Her Master's degree research focused on the role of narrative therapy in the healing process of behavioral disorders, PTSD and anxiety among abandoned children in Rwanda: A case study of SOS CVs of Byumba, Kigali and Kayonza. Prior to advanced university studies, she studied Clinical Psychology in her undergraduate educatio

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The Effect Of Phacoemulsification on Visual Function Among Filipino Cataract Patients Measured By A Validated Filipino Translation of Catquest-9SF

Geraldine Clare Marie P. Negre and **Jose Ma. D. Martinez**

East Avenue Medical Center, Philippines

Background: This study developed a validated Filipino version of the Catquest-9SF and administered it to cataract patients pre- and post- surgery.

Methods: This is a two-phase, single-center, cross sectional, questionnaire type study. The study included participants decked for surgery who are 18 years and above. Sampling was done purposively. The Catquest-9SF questionnaire was translated into Filipino, according to a standard procedure, and validated. The validated version was administered to the participants before and after unilateral cataract surgery. Data were analyzed using Rasch analysis.

Results: Sixty-one patients were enrolled in the study. The preliminary Rasch analysis showed misfit of item 2, which was subsequently excluded from analysis. The remaining eight items showed person separation index of 2.70, reliability coefficient of 0.88, infit of 0.66 to 1.17, outfit of 0.66 to 1.49, observed raw variance explained by measures of 55.3% and eigenvalues of 1.9, 1.4, 1.2, 1.0 and 0.9. There was slightly poor targeting (mean person location 1.24) and multidimensionality but no evidence of differential item functioning (DIF). High internal consistency of items were observed (Cronbach's alpha ≥ 90). Comparison of responses between pre- and post-surgery showed highly significant marginal homogeneity ($p < 0.001$).

Conclusion: The Filipino translation of Catquest-9SF, the Catquest-8SF-PH, was highly valid. It showed improved perceived visual outcomes among Filipino patients post-cataract surgery.

Biography

Dr. Geraldine Clare Marie P. Negre is currently affiliated with Makati Medical Center, ProVision Eye Care Network and Taytay Doctors Multispecialty Hospital. She finished her Ophthalmology residency training at the Department of Health Eye Center – East Avenue Medical Center, Philippines in 2019. On her senior year, she served as the Chief Resident of the department. In medical school, she rotated at Boston Children's Hospital under the international exchange program of Harvard Medical School, where she was supervised by Dr. David G. Hunter. It was during this time that she was first exposed to Paediatric Ophthalmology and Strabismus. She plans to pursue this subspecialty further as a fellowship and in research.

Helping Visually Impaired Persons in Indoor Environment, Using Transfer Learning and IoT

Samir. Hallaci[1,2], Hamid. Seridi[1] and **Brahim. Farou[1]**

[1]Department of Computer Science, University of 8 mai 1945, Guelma, Algeria
[2]Department of Computer Science, Univerity Badji Mokhtar, Algeria

Today, almost all intelligent systems use machine learning methods, especially deep learning algorithms, particularly in the fields of computer vision. Among these fields, object detection and recognition are prominent. Convolutional Neural Networks (CNNs) have achieved great success in object detection algorithms, providing speed and accuracy, especially in real-time object detection. The goal of this work is to design and apply an object detection algorithm using a deep learning model trained on well selected subclasses from benchmark databases, and deploy it on a an IOT based very famous hardware module popularly known as Raspberry Pi to assist visually impaired individuals by detecting objects in the inner environment through sound interaction. To achieve this, we select one of the most efficient detection models based on the trade-off between time and accuracy (YOLOv8). We retrained the model on subsets of databases such as MS-COCO, indoor dataset. This choice of the model and the sub-classes, combined with the hyper-parameters, and the strategy of training new weights consumes little computing time on RPi4 module, in order to describe the selected objects present in the indoor environment. This approach is implemented and tested on a number of real life challenging conditions, and compared over several training options and context in terms of classification accuracy quality and detection efficiency and response time in real-world

Biography

Permanent tassistant professor Class A in the computer science department at the University of GUELMA, since 2009. vice head of CS department in charge of teaching and graduation, since 2016. Member of LabSTIC laboratory, Automatic Management of Multimedia and Imaging Documents team. Member of many miniserial PRFU research projects. Supervision of a large number of Master's/Bachelor's degree dissertations. Organizer and rapporteur of many conferences. Responsible for internships for professional training students to carry out a client/server network creation and configuration (2017-2020). Responsible for internships for professional license students, as part of the agreement with Algérie Télécom (2018-2021) and the civil protection directorate (2021). Conference on cybercrime and computer security "for engineers and staff of Guelma professional training directorate", March 2019. Presentation on "AI" radio guelma. Conference on the dangers of electronic games on children "hospital oued zenati" December-2017.

Fields: computer-assisted vision, deeplearning, human machine interface, image processing, gesture interfaces, augmented reality, real-time systems, medical Imaging, etc.

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An Insightful Evaluation of Evodiamine Analogs Efect as DNA Topoisomerase I Inhibitors Using QSAR Method

H.Souf[1], M.Salah[1,2,3], S.Belaaouad[1] and **M.Moutaabbid[1]**

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[2]Team of Chemoinformatics Research and Spectroscopy and Quantum Chemistry, University Chouaib Doukkali, Morocco
[3]LS3MN2E, Department of Chemistry, Mohammed V University, Morocco

DNA topoisomerase I is one of the attractive anti-cancer molecule targets due to its vital roles in DNA replication, transcription and recombination. In this context, this study applied the multiple linear regression method to describe the quantitative relationship structure activity of sixty Evodiamine analogs, reported as DNA Topoisomerase I inhibitors. The validation metrics of the constructed model were found to meet the criteria of Golbraikh and Tropsha (R2=0.746, Q2cv=0.671, R2test=0.616). Furthermore, the developed multiple linear regression model showed that Pa,IR, log P (MN), TD, VDWV, and FuRC were the main factors impacting the DNA Topoisomerase I inhibitory activity. Finally, we have defned the applicability domain of the constructed model, in order to properly exploit it for the prediction of anticancer activities.

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Ashwagandha Root Extract's Phenolic Compound Counteracts Alloxan's Effects on Oxidative Stress, Inflammatory Cytokines, and Peripheral Neuropathy in Rats

Heba A. Hashem, Zohour I. Nabil and **Heba N. Gad EL-Hak**

Faculty of Science, Suez Canal University, Egypt

Despite advances in understanding the intricate pathophysiological mechanisms underlying peripheral nerve injury, there are still few proven cures. Finding potential alternative therapies is necessary because conventional therapies have associated side efects and poor efcacy. In this regard, a study was conducted that ofered substitute therapeutic agents in place of the alloxan injection. The target study pathway after alloxan injection is oxidative stress and infammatory pathways, according to the study point. It argues that multitarget therapies must be developed to combat infammation brought on by diabetic complications. Alloxan (150 mg/kg) was injected intraperitoneally to cause diabetes in the DC group. The treatment with ashwagandha root extract (100 and 200 mg/kg/day) began 6 weeks after the diabetes was induced and lasted for 6 weeks in total. After the treatment, behavioral tests known as the hot plate test (HBT) and narrow beam test (NBT) were conducted. Glucose and creatine phosphokinase (CPK) levels in the blood, as well as oxidative, antioxidant, and pro-infammatory cytokines, were measured. Histological analysis of the pancreas and sciatic nerve was conducted. Response times to thermal pain during HPT were signifcantly faster under ashwagandha root extract treatments. The total time required to cross the beam during NBT signifcantly decreased in both the treated diabetic groups with ashwagandha extract. About glucose level, CPK, oxidative stress biomarkers, and pro-infammatory cytokines, the treatment group receiving ashwagandha root extract attenuated the changes brought on by diabetes. Histological examination revealed that the pancreas damage caused by diabetic animals and the altered infltration of infammatory cells in the sciatic nerve were both reversed by ashwagandha root extract. As a result of our research, ashwagandha root extract, which is rich in phenolic compounds, may help with traditional therapeutic agents for the treatment of infammation brought on by diabetic complications.

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Eradicating Polio: A perspective from Pakistan

Irshad Ali Sodhar[1], Anum S Hussaini[2] and **Mary Jean Brown[3]**

[1]Government of Sindh, Pakistan
[2]Department of Global Health & Population, Harvard T.H. Chan School of Public Health, 6 Boston, Massachusetts, USA
[3]Department of Social and Behavioral Sciences, Harvard T.H. Chan School of Public Health, USA

The goal of global polio eradication remains elusive due to recurrent polio cases and persistent circulation of wild polio virus in the only two remaining endemic countries in South Asia including Pakistan. Though there has been consistent decline in the cases in Pakistan during last decade with many zero case periods, there are significant challenges to be tackled to achieve the elimination of disease. As the prevalence of disease is limited to certain geographical pockets and demographic groups having peculiar socio-cultural dynamics, it is imperative for the polio program to be adaptive to the local social norms and governance practices to generate community ownership. The communication strategies also need to be adjusted to have resonance with the people. This opinion article discusses the persistent problem of the recurring outbreaks to discover underlying impediments and offers actionable recommendations to overcome these challenges. As the disease eradication is an adaptive problem having multitude of socio-cultural fronts, the inclusive and participative approach with transparent and democratic process to empower the local communities can help in achieving the goal of polio eradication. Nonetheless, the sooner Pakistan's polio pro- gramme undertakes the reforms to transform its strategy, the more quickly Pakistan will cross the finish line and eliminate polio, it would also help shape the discourse of global public health debate on disease eradication.

Biography

A Civil Servant having diverse work experience in public administration and public health. His leadership in polio program was instrumental in stopping wild polio virus circulation in Peshawar in 2016 when Peshawar was the biggest reservoir of virus in the world. During the pandemic, he achieved highest covid vaccination rate in the country as Deputy Commissioner South Karachi. He has studied Global Epidemiology of Vaccines and Public Health Policy from Chan School of Public Health, Harvard University. He has also published articles on public health and polio eradication. He has been visiting faculty with National Polio Program for FELTP Team Leadership and Management. He is currently heading the Polio Program as Coordinator Emergency Operations Centre for Polio Eradication and Immunizations, Sindh Pakistan and remains committed to goal of global polio eradication.

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A Comparison of Unhealthy Lifestyle Practices Among Adults with Hypertension Aware and Unaware of their Hypertensive Status: Results from the 2013 WHO STEPS Survey in Burkina Faso

Jeoffray Diendéré[1], Jean Kaboré[1], William Kofi Bosu[2], Jérôme Winbetourefa Somé[1], Franck Garanet[1], Pingdéwendé Victor Ouédraogo[3], Abdoul Aziz Savadogo[3], Athanase Millogo[3] and **Augustin Nawidimbasba Zeba[1]**

[1]Research Institute for Health Sciences (IRSS), Burkina Faso
[2]Department of Public Health and Research, West African Health Organisation (WAHO), Burkina Faso
[3]Centre Hospitalier Universitaire Sourô SANOU, Burkina Faso

Background: We compared the prevalence of unhealthy lifestyle factors between the hypertensive adults who were aware and unaware of their hypertensive status and assessed the factors associated with being aware of one's hypertension among adults in Burkina Faso.

Methods: We conducted a secondary analysis of data from the World Health Organization Stepwise approach to surveillance survey conducted in 2013 in Burkina Faso. Lifestyle factors analysed were fruits and vegetables (FV) consumption, tooth cleaning, alcohol and tobacco use, body mass index and physical activity.

Results: Among 774 adults living with hypertension, 84.9% (95% CI: 82.2–87.3) were unaware of their hypertensive status. The frequencies of unhealthy lifestyle practices in those aware vs. unaware were respectively: 92.3% vs. 96.3%, p = 0.07 for not eating, at least, five FV servings daily; 63.2% vs. 70.5%, p = 0.12 for not cleaning the teeth at least twice a day; 35.9% vs. 42.3%, p = 0.19 for tobacco and/or alcohol use; 53.9% vs. 25.4%, p = 0.0001 for overweight/obesity and 17.1% vs, 10.3%, p = 0.04 for physical inactivity. In logistic regression analysis, older age, primary or higher education, being overweight/obese [adjusted odds ratio (aOR) = 3.2; p < 0.0001], intake of adequate FV servings daily (aOR = 2.9; p = 0.023) and non-use of alcohol and tobacco (aOR = 0.6; p = 0.028) were associated with being aware of one's hypertensive status.

Conclusion: Undiagnosed hypertension was very high among Burkinabè adults living with hypertension. Those aware of their hypertension diagnosis did not necessarily practise healthier lifestyles than those not previously aware of their hypertension. Current control programmes should aim to improve hypertension awareness and promote risk reduction behaviour.

Biography

Jeoffray Diendéré, MD, MSc, PhD

Research Assistant at Research Institute for Health Sciences, IRSS

399 Avenue de la Liberté, 01 BP 545 Bobo-Dioulasso, Burkina Faso

Education

2018: University Diploma, Addictology, Limoges University, France

2017: PhD degree, Public Health/Epidemiology, Limoges University, France

2017: University Diploma, Nutritional Epidemiology, Bordeaux University, France

2012: Master Neurosciences/ NeuroPsychoPharmacology, Bordeaux University, France

2011: Medical Doctorate, University Joseph Ki-Zerbo, Ouagadougou, Burkina Faso

Fellowship

2018: Fellowship Research Prize (€ 15, 000), Award by the "Société Francophone de Nutrition Clinique et Métabolisme" SFNCM (Nice, France 2018). Research field: "Nutritional and swallowing disorders in elderly: comorbidities and mortality at 12-month in Bobo-Dioulasso, Burkina Faso"

Fields of interest

Nutrition: clinical, epidemiology

Cardiovascular diseases and risk factors: epidemiology

Addictions: Psychoactive substance misuses and cardiovascular risk factors.

Regenerative Tools in Periodontium

Jishnu Krishna Kumar

Saveetha Dental College and Hospitals, SIMATS, Saveetha University, India

Endodontic treatment of young permanent teeth with necrotic pulp presents a clinical challenge for the dentist and conventional endodontic treatment will result in tooth fracture along with a poor prognosis. Regenerative endodontics is a new protocol that has been advanced in the last decades for managing immature permanent teeth. Rare successful management of immature permanent incisors using platelet-rich fibrin is a technique-sensitive procedure. An 08 years 04 months female reported the chief complaint of pain in the upper front tooth region for one week. A blunderbuss canal was identified on radiographic examination, and revascularization using platelet-rich fibrin was planned and adopted. After the treatment, apical closure and root lengthening were noted without complications during subsequent follow-ups. Complete periapical healing with greater than 1.5 cm of dentinal thickness was noted. Revascularization can be considered a viable treatment option for immature nonvital permanent teeth; with advancements in regenerative medicine and clinical practices, revascularization therapies could be developed as a novel mode of treatment in non-vital and dental traumatic cases. There is a huge scope for regenerative therapies to induce hard tissue formation thus sustain efficient function.

Biography

A passionate medical professional, with over seven years of experience in various domains of healthcare, clinical research, medical writing, research publication, and academics. Always been an out-of-the-box thinker, who looks out to improve and make the best possible use of opportunities through skill development and leadership quality. Throughout my tenure, I was able to manage and lead my team to accomplish targets within the prescribed timeframe. Possess excellent analytical and communication skills and a dedicated approach to working in a highly controlled work environment. The experience that I received from various institutions across India was wonderful. During my tenure, I came across many new people as well as grasped various techniques to handle medical emergencies in practice. Looking forward to equipping myself with the requirements of the biopharmaceutical industry and thus serving a greater human cause; an opportunity to challenge my skills, and enrich my knowledge and aspirations. For my long-term goal, I want to be a Programme Manager or Team Leader in the department.

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The Definition, Diagnosis and Treatment of Fever are Against Modern Science in the World Today! Why?

K. M. Yacob

Marma Health Centre, kaloor, India

There is no uniform definition, test, or treatment for fever alone. Today, the diagnosis and treatment of fever are similar to the diagnosis and treatment of its opposite, destructive hyperthermia.T he essence of today's fever treatment is fever can be cured by using fever-creating substances. No science or technology exists anywhere in the world that claims to cure fever with fever-causing substances. A claim to cure fever by using fever-creating substances is not called a treatment. It is a murderous attempt.

1.The current definition of fever is against modern science.

The current definition of fever is usually only a elevated body temperature above 100.4oF (38°C). It is not a scientific definition. Elevating the temperature is an action like walking and sitting.

In many medical books, we can see different types of fever definitions5,6.

It is against modern science to give different definitions for one thing (fever). A single criterion for a definition is not found in the current definition of fever.

The definition of fever does not even say why the temperature is elevated. Because it is not known what the temperature of the fever is, modern science has not investigated what our immune system does with the heat energy of fever.

The definition of fever is the basis of fever.

If the definition of fever is wrong, the diagnosis and treatment based on it will be wrong.

In modern science, no one can make a true definition, diagnosis, or treatment of fever without knowing the basics of fever. If made, it would be fundamentally against modern science.

The seriousness and danger of the definition of fever is recognized when the diagnosis and treatment of fever is not based on the current definition of fever.

Today, Fever is not tested according to the definition of fever. Today, hyperthermia is called fever.

A thermometer is a temperature-measuring device, not a fever-measuring device.

Conservative fever definition, diagnoses and treatment has no relation with what is happened in fever. The basic elements necessary for a scientific definition, diagnoses and treatment are not provided in conservative fever definition, diagnoses and treatment. It should be revised according to what is happening in fever.

A new fever definition, diagnosis, and treatment have been created according to modern science without any room for doubts and complaints.

Biography

A practicing physician in the field of healthcare in the state of Kerala in India for the last 35 years and very much interested in basic research. My interest is spread across the fever, inflammation and back pain. I am a writer. I already printed and published Ten books on these subjects. I wrote hundreds of articles in various magazines.

After scientific studies, we have developed 8000 affirmative cross checking questions. It can explain all queries related to fever.

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Bacterial Contamination of Single and Multiple-Dose Parenteral Injection Vials After Opening and Antibiotic Susceptibility of Isolates at Jimma Medical Center,Jimma, Southwest Ethiopia

Abay Tabor[1], Zewudineh S/Mariam[2], Yared Alemu[2] and **Kasahun Gorems[3,4]**

[1]Department of Biology,MizanTepi University, Ethiopia
[2]School of Medical Laboratory Science, Faculty of Health Sciences, Jimma University, Ethiopia
[3]Department of Microbiology, Immunology & Parasitology, St Paul's Hospital Millennium Medical College, Ethiopia
[4]Microbiology Laboratory of Jimma Medical Center, Ethiopia

Background: Single- or multiple-dose vials are prone to bacterial contamination after improper handling and use of parental medications and could be potential reservoirs of microorganisms that could be transmitted to the patient through the parenteral route. The present study aims to assess the magnitude of the problem and associated factors at Jimma Medical Center (JMC), Jimma, Southwest Ethiopia.

Methods: An institutional-based cross-sectional study design was conducted at JMC from July 2021 to October 2021. A total of 384 parental medications (61.5% multiple and 38.5% single-dose vials) that were administered in 11 wards and 3 intensive care units was included. Samples were processed onto appropriate bacterial culture media.

Results: The overall prevalence of vial contamination due to aerobic bacteria was 21(5.5%) among multiple-dose vials and none of the single-dose vials. The highest level of contamination (8, 38.1%) was found in the pediatric ward. P. aeruginosa 6(28.5%) and K. pneumoniae 5(23.8%) were the most common agents of vial contamination. A multidrug resistance rate of isolates was found among 95.2% of the isolates, with all gram-negative isolates showing a multidrug resistance rate against the tested antibiotics. In multivariate logistic regression analysis, vial contamination was strongly associated with reuse of syringe and/or needle, medication drawing environment, and storage conditions.

Conclusion: In this study, the prevalence of vial contamination was high. The bacterial isolates from vials were also highly resistant to commonly prescribed antimicrobial drugs. Healthcare professionals must strictly adhere to basic infection control practices as per standard guidelines to reduce the risk of vials contamination.

Biography

I was born in 1990 G.c and had completed primary and Secondary School here in Addis Ababa, Ethiopia. I have Master's Degree in Medical Microbiology from Jimma University.

I had started my job in July 2013 and have ample experience in team leader, infection prevention committee, laboratory transformation committee, COVID-19 surveillance team, Training and research work.

Currently, I have been working at St. Paul's Hospital Medical Millennium College as lecturer performing teaching, develop and perform research, Microbiology laboratory work, Microbiology data officer and equipment officer.

Regarding my family status and personal behaviour. I am married and have two children. I am free of any addiction and illegal acts. I prefer to work in a team sprit keeping in mind professional ethics and devote to accomplish my job in a planned and timely manner.

Moringa Oleifera Tree As Potential Medicinal Food In Asia

Khageshwar Singh Patel[1], Piyush Kant Pandey[1], Suryakant Chakraadhari[2], José Ángel Rufián-Henares[3] and **Magdalena Rudzińska[4]**

[1]*Amity University, India*
[2]*Pandit Ravishankar Shukla University, India*
[3]*Universidad de Granada, Spain*
[4]*Poznań University of Life Sciences, Poland*

Moringa oleifera is a fast-growing, drought-resistant multi-purpose tree belonging to family Moringaceae, native to the Indian subcontinent, and widely used as medicinal food due to rich dietary components i.e., minerals, vitamins, omega acids, sterols, toco-chromanols, flavonoids, glucosinolates, isothiocyanates, alkaloids, terpenoids and carotenoids. It has potential digestive, laxative, alkali, antioxidant, antibiotic and antibacterial constituents to prevent many diseases like diabetes mellitus, cancer, hypertension, ulcer, etc. In this work, enrichment of minerals, polyphenols and bioactive compounds from bark to fruit is discussed. Its seed is oily (31%) with rich content of omega acid, β-sterol, tocopherol and carotenoids. The mineral i.e., K, Mg, Fe, Ca, Zn, P and S in Moringa tree (bark to fruit) varied from 1151 – 4993, 261-642, 6.3 – 395, 125- 2543, 176- 549 and 260 – 1530 mg kg-1 with maximum value in the carpel, bark, leaf, and kernel, respectively. The polyphenol content was found in interval of 318 to 3014 mg 100g-1 with highest value in leaf. The seed is oily (31%) with abundant of linolic acid (75%), β-sterol (175.5 mg 100 g-1), tocopherols (47 mg 100 g-1) and carotenoids (3.5 mg 100 g -1).

Biography

Dr. Khageshwar Singh Patel is a Professor in Department of Applied Sciences, Amity University, Raipur, CG, India. He awarded PhD degree in year 1979 at Pandit Ravishankar Shukla University, Raipur, India. He published > 150 papers in the reputed journals and supervised 34 PhD students.

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MAIRNet: Weakly Supervised Anatomy-Aware Multimodal Articulated Image Registration Network

Xiaoru Gao[1], Woquan Zhong[2], Runze Wang[1], Alexander F. Heimann[3], Moritz Tannast[3] and **Guoyan Zheng[1]**

[1]Institute of Medical Robotics, Shanghai Jiao Tong University, China
[2]The Third Hospital, Peking University, China
[3]Department of Orthopaedic Surgery, HFR Cantonal Hospital, University of Fribourg, Switzerland

Purpose: Multimodal articulated image registration (MAIR) is a challenging problem because the resulting transformation needs to maintain rigidity for bony structures while allowing elastic deformation for surrounding soft tissues. Existing deep learning-based methods ignore the articulated structures and consider it as a pure deformable registration problem, leading to suboptimal results.

Methods: We propose a novel weakly supervised anatomy-aware multimodal articulated image registration network, referred as MAIRNet, to solve the challenging problem. The architecture of MAIRNet comprises of two branches: a non-learnable polyrigid registration branch to estimate an initial velocity field, and a learnable deformable registration branch to learn an increment. These two branches work together to produce a velocity field that can be integrated to generate the final displacement field.

Results: We designed and conducted comprehensive experiments on three datasets to evaluate the performance of the proposed method. Specifically, on the hip dataset, our method achieved, respectively, an average dice of 90.8%, 92.4% and 91.3% for the pelvis, the right femur, and the left femur. On the lumbar spinal dataset, our method obtained, respectively, an average dice of 86.1% and 85.9% for the L4 and the L5 vertebrae. On the thoracic spinal dataset, our method achieved, respectively, an average dice of 76.7%, 79.5%, 82.9%, 85.5% and 85.7% for the five thoracic vertebrae ranging from T6 to T10.

Conclusion: In summary, we developed a novel approach for multimodal articulated image registration. Comprehensive experiments conducted on three typical yet challenging datasets demonstrated the efficacy of the present approach. Our method achieved better results than the state-of-the-art approaches.

Biography

Xiaoru Gao is currently pursuing her doctorate in Biomedical Engineering at Shanghai Jiao Tong University. She holds a Bachelor's degree in the same field from Southern Medical University, from which she graduated in 2020. Her areas of research interest primarily revolve around Medical Image Segmentation and Registration. Moreover, she has a keen fascination for Deep Learning-based Multi-modal Image Processing. In her academic pursuits, Gao is committed to using her knowledge and skills to contribute significantly to the field of Biomedical Engineering.

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The Impact of Body Mass Index Changes on Traumatic Brain Injury Patients' Outcomes During Hospitalization

M. Shafiei[1], B. Aminmansour[1], S. Sameri[1], M. Mahmoodkhani[1] and **D. Sheibani Tehrani**

[1]Isfahan University of Medical Sciences, Iran
[2]Shahid Beheshti University, Iran

Introduction: Obesity is a complex multifactorial disease with increasing prevalence worldwide. The present study was conducted, since there were different results on the effect of obesity on the prognosis of patients with moderate and severe brain trauma, and the issue was less investigated.

Methods: The present descriptive-analytical study was conducted in 2 hospitals, Al-Zahra and Kashani in year 2022. Patients with Glasgow coma scale (GCS) score of 9 – 12 (moderate concussion) and patients with a GCS score of < 8 (severe concussion) who consented to participate in the study were included in the study. Patients who died; had serious injuries related to the chest, abdomen, pelvis, spine, and organs, in addition to the concussion; had a part of their body amputated during the same incident; received medications; or had diseases which caused obesity like diabetes were excluded from the study. Patients' height and weight were extracted for calculating the body mass index (BMI). Their functional independences were measured at admission and discharge according to the Glasgow outcome scale-extended (GOSE) scale.

Results: This study examined a total of 287 traumatic brain injury (TBI) patients (251 with moderate concussion and 36 with severe concussion). In total, 91 (36.3%) patients with moderate TBI had a lower BMI, and 14 (38.9%) patients with severe TBI had a constant BMI. There was a significant difference between the mean changes of BMI and the GOSE, functional independence measure (FIM) motor ($p = 0.006$), FIM cognitive ($p = 0.023$), and FIM total scores ($p = 0.002$) in patients with severe TBI; however, significant difference was found only between the mean changes of BMI, GOSE and FIM motor scores ($p = 0.001$) in patients with moderate TBI.

Conclusion: BMI is a risk factor affecting treatment results in patients with TBI, which should be controlled.

Biography

Mehdi Shafiei, Skull Base Neurosurgery Fellowship, Assistant Professor of Neurosurgery, Department of Neurosurgery, School of Medicine, Isfahan University of Medical Sciences, Isfahan, IRAN.

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A survey of demographic properties of patients who died in intensive care units and their association with the death hour

Mehran Kouchek

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Introduction: Poor sleep hygiene and the hour of changing shifts are among the most important factors which affect the quality of services in the intensive care unit. The present study aimed to investigate the demographic properties of patients who died in the intensive care unit and their association with their death hour.

Materials and methods: As a cross-sectional study, this study was performed by referring to the Statistics Center of Hazrat Rasool Akram Hospital and collecting the demographic information of dead patients at 12 intensive care units in this hospital. This information includes age, sex, the cause of death, and the exact time of death of these patients.

Results: In this study, the rate of mortality in intensive care units was assessed as follows; from 12 pm to 2 am (14.48%), from 2 am to 4 (5.49%), from 4 to 6 am (8.99%), from 6 to 8 am (11.32%), from 8 to 10 am (6.79%), from 10 am to 12 noon (8.03%), from 12 to 14 (6.04%), from 14 to 16 (6.93%), from 16 to 18 (7.41%), from 18 to 20 (9.47%), from 20 to 22 (8.1%), and from 22 to 24 hours (6.93%). The highest rate of mortality was between 12–2 AM and then 6–8 AM. In this study, a significant rate of deaths occurred during the night and the lowest rate was during normal work hours and in fact during the morning hours of visiting patients.

Conclusion: Since the highest rate of mortality was during night hours, during the hours of changing shifts, and at the beginning of midnight, the mortality rate could be decreased with the decrement in staff's working hours and paying more attention to patients during these hours, the overall mortality rate of patients could be decreased in ICU units.

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Effect of Web-Based Clinical Decision Support Systems (CDSS) on Management of Venous Thromboembolism (VTE) Prophylaxis in Medical Patients

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[1]Trauma Research Center, Shahid Rajaee (Emtiaz) Trauma Hospital, Shiraz University of Medical Sciences, Iran
[2]Anesthesiology and Critical Care Research Center, Shiraz University of Medical Sciences, Iran
[3]Health Human Resources Research Center, School of Management & Medical Information Sciences, Shiraz University of Medical Sciences, Iran
[4]School of Pharmacy, Shiraz University of Medical Sciences, Iran
[5]The Medical School, Shiraz University of Medical Sciences, Iran

Background and objectives: There are gaps between expert recommendations and clinical practices in venous thromboembolism (VTE) prophylaxis among nonsurgical patients worldwide. The rate of adherence to evidence-based practice is inadequate in the nonsurgical population. Therefore, this study aimed to evaluate the effect of clinical decision support systems (CDSS) on the appropriate VTE prophylaxis in nonsurgical patients in the intensive care unit (ICU).

Methods: We conducted a cross-sectional study, pre- and post-implementation CDSS for recommendation VTE prophylaxis order set, to analyze the effect of the CDSS within the Computerized provider order entry system (CPOE) on the appropriate VTE prophylaxis in three ICUs of the Nemazee hospital before intervention from 20 April to 21 November 2020 and post-intervention duration 7 April to 9 July 2021. The pre-intervention and post-intervention phase samples comprised 175 and 27 patients, respectively. P-value< 0.05 was considered a significant level. All statistical analysis was performed by SPSS version 24.

Results: Adherence to VTE prophylaxis guidelines after introducing CDSS for the recommendation of VTE prophylaxis within the CPOE systems in nonsurgical patients in ICUs increased from 48.6% to 77.8% (p-value<01). However, mortality rate of pre-intervention (13.80%) vs post-intervention (14.80%) (p-value=0.88) and means of length of stay of pre-intervention (13.66) vs post-intervention (13.63) (p-value=0.49) in ICU were not significantly changed after introduction of CDSS for recommendation of VTE prophylaxis order sets.

Conclusion: The results indicate that the CDSS for recommendation VTE prophylaxis within CPOE improves adherence to VTE prophylaxis in nonsurgical patients at ICUs, which assists the provider in selecting the most tailored VTE prophylaxis. Further studies are needed to evaluate implemented CDSS for the recommendation of the VTE prophylaxis in nonsurgical patients at the local and national levels.

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Physicians 'Attitudes and Acceptance Regarding COVID-19 Vaccines: A Cross-Sectional Study in Mid Delta Region of Egypt

Walaa M. Shehata[1], Ahmed A.Elshora[2] and **Mira M. Abu-Elenin[1]**

[1]Department of Public Health and Community Medicine, Faculty of Medicine, Tanta University, Egypt
[2]Department of General Surgery, Batterjee Medical College, Saudi Arabia

Objectives: This study aimed to examine the attitudes and acceptability of COVID-19 vaccines between working physicians at different healthcare settings, as well to address the underpinnings of reluctance to get vaccinated against COVID-19 infection.

Scope: Safe and effective vaccines became an important preventive tool against novel Corona virus disease infection. Physicians were prioritized for early vaccination since they are at higher risk for contagion of the infection, and they might affect the general populations 'uptake of the vaccine.

Methods: A cross-sectional study was conducted for 3 months, recruiting 1268 physicians in Gharbya province, Egypt using a snowballing random sampling technique. Data was collected using an anonymous self-administered electronic questionnaire. It was validated, where the test-retest reliability was good (0.82) and (Cronbachα=0.89). It covered three parts: (i) sociodemographic information; (ii) COVID-19 experience in the form of 3 questions related to personal/familial history of exposure to infection, self-perceived risk of infection, and contact with COVID-19 patients; (iii) the acceptance of the COVID-19 vaccine which was assessed by 4 questions, the responses were No, Wait for review, and Yes.

Results: 71.5% of respondents aged 31 to 40 years and 59.4% were females. About 56% of them worked in frontline positions. About 36.7% of studied physicians did not accept to uptake the vaccine, 39% would wait for further review, while only 24.3% accept to uptake it. We revealed that male physicians had a higher likelihood to take the vaccine than females. It was detected that the COVID-19 vaccine acceptance was more among frontline physicians and of primary surgical and surgical subspecialty with statistical significance (40.5%, 54.7% respectively p= 0.001). In addition, physicians who got influenza vaccine before, obese, and smoker accepted to take the COVID-19 vaccine more than their counterparts (p= 0.0001,0.02,0.01).

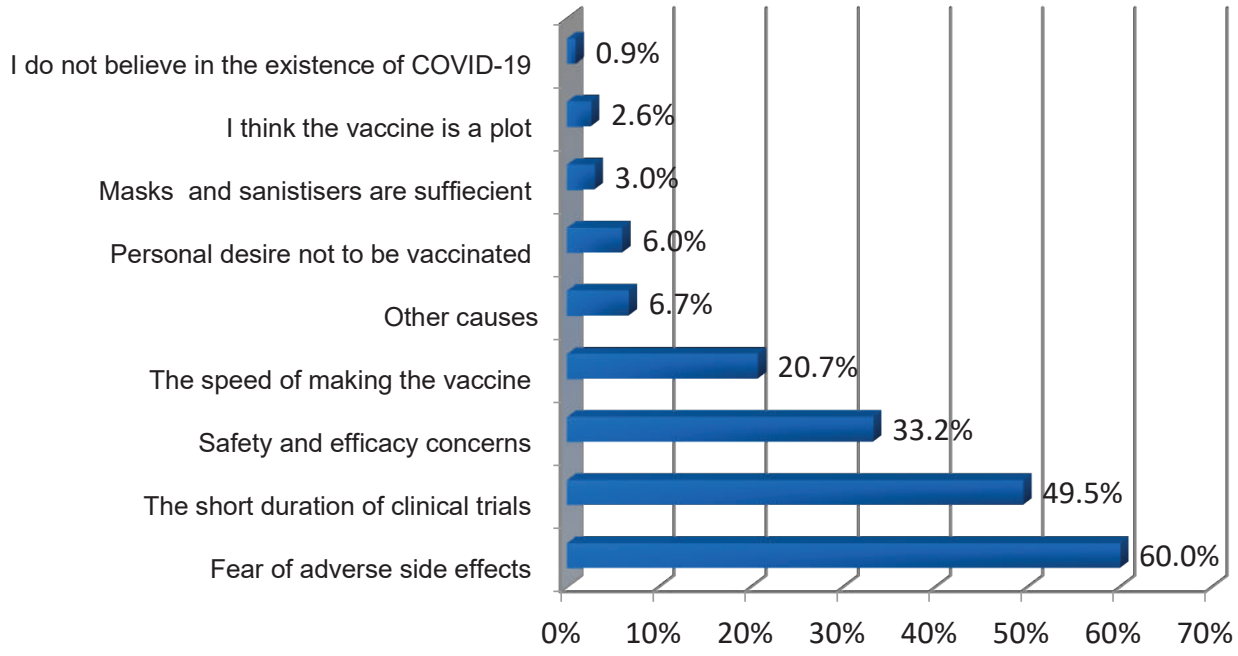

Figure 1: Reasons for COVID-19 vaccine unacceptance.

Conclusion: The level of acceptance of the COVID-19 vaccine among physicians is low; Female gender, increasing age, senior staff, less contact with COVID-19 patients, Working in rural healthcare facilities, and experience COVID-19infection were proved to be significant factors associated with vaccine unacceptance.

Biography

Dr. Mira Maged Abu-Elenin, an associate professor of Community Medicine in Faculty of Medicine, Tanta University ,Egypt. MBBCh of Medicine and Surgery 2004, MSc. of Preventive Medicine and Epidemiology 2009, PhD. of Community Medicine 2015. Fulbright Alumni, Fellow of SPH Indiana University, SPH City University of New York, U.S. 2016. Fellow of internal advanced medical education and medica research ASU-MENA FRI 2022. Consultant of Obesity Management by SCOPE. Research interest include epidemiology of communicable diseases, Women health, Mental health, and Nutrition.

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Sexual-Related Determinants of Life Satisfaction Among Married Women: A Cross-Sectional Study

Mobina Hosseini[2], Nasim Bahrami[1], Mark D. Griffiths[3] and **Zainab Alimoradi[4]**

[1]Social Determinants of Health Research Center, Research Institute for Prevention of Non- Communicable Diseases, Qazvin University of Medical Sciences, Iran
[2]Students' Research Committee, Qazvin University of Medical Sciences, Iran
[3]International Gaming Research Unit, Nottingham Trent University, UK
[4]Social Determinants of Health Research Center, Research Institute for Prevention of Non- Communicable Diseases, Qazvin University of Medical Sciences, Iran

Background and aim: Life satisfaction refers to the perceived satisfaction of individuals concerning various aspects of their lives. The present study investigated the predictive role of sexual-related determinants in life satisfaction among married women.

Methods: A cross-sectional study was conducted from August to November 2021. A total of 350 married women with at least six months of cohabitation with husbands were included in the study. The study utilized a multi-stage random sampling method from 10 comprehensive health centers in Qazvin, Iran. Scores on the Emotional Intimacy Questionnaire (EIQ), Dyadic Sexual Communication Scale (DSCS), Female Sexual Distress Questionnaire (FSDQ), Female Sexual Quality of Life Scale (FSQLS), Female Sexual Function Index (FSFI), and Life Satisfaction Scale (LSS) were assessed. Data were analyzed using univariable and multivariable linear regression models with a significance level of $p < 0.05$.

Results: The mean age of participants was 33.77 years (SD = 9.77) and they had been married for an average of 10.21 years (SD = 9.93). The mean scores on the LSS were 20.16 (out of 35; SD = 6.79). Based on the multivariable linear regression model adjusted for socio-demographic characteristics, the two strongest predictors of life satisfaction among Iranian married women were marital intimacy ($\beta = 0.49$, $p < 0.001$) and sexual functioning ($\beta = 0.17$, $p = 0.009$). Together, these variables explained 45% of variance in life satisfaction.

Conclusion: Given that marital intimacy and sexual functioning were the most significant sexual-related determinants of life satisfaction among married women, designing and implementing interventions which increase women's marital intimacy and sexual functioning might improve married women's life satisfaction.

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Age of Robotic Surgery and Telemedicine: Is Pakistan Lagging Behind?

Mohammad Zamrood Khan[2], Shanza Khan[1] and **Risham Saeed[3]**

[1]Dow University of Health Sciences, Pakistan
[2]Saidu Medical College, Pakistan
[3]Karachi Medical and Dental College, Pakistan

This article critically examines the state of robotic surgery and telemedicine in Pakistan, identifying key challenges impeding their widespread adoption. The analysis encompasses factors such as limited infrastructure, budget constraints, and insufficient awareness among healthcare professionals and the general public. The study underscores the transformative potential of these technologies, emphasizing their role in enhancing patient outcomes and expanding medical knowledge access.

In the context of Pakistan's healthcare system, characterized by suboptimal budget allocation, inadequate policy frameworks, and unequal resource distribution, the article advocates for urgent investment and policy reforms. The discussion explores the multifaceted benefits of embracing robotic surgery and telemedicine, including medical tourism, improved healthcare facilities, and the retention of a skilled workforce.

Robotic surgery, despite its slow growth in Pakistan, presents advantages such as decreased invasiveness and improved postoperative results. Telemedicine, particularly crucial in rural and underserved areas, can bridge gaps in healthcare delivery, offering remote consultations and chronic condition monitoring. The article contends that successful adoption of these technologies requires addressing issues like infrastructure, education, and regulatory frameworks.

The overview of Pakistan's healthcare system highlights persistent challenges stemming from inadequate budget allocations, leading to overcrowded and under-resourced public health institutes. The discussion delves into the slow progress of robotic surgery in Pakistan, citing economic constraints, maintenance issues, and the need for trained personnel. Similarly, the analysis of telemedicine reveals limited facilities, with a call for increased awareness, network connections in remote areas, and government involvement.

In conclusion, the article stresses the urgent need for Pakistan to catch up with global advancements in digital medicine. It envisions a healthcare future where strategic investments overcome current obstacles, unlocking benefits for both local patients and the broader healthcare landscape.

Biography

Born in North Waziristan District and a permanent resident of Peshawar, I am Mohammad Zamrood Khan. Known for my dedication to healthcare, I've been an official fundraiser volunteer at Shaukat Khanum Memorial Hospital, actively participating in Breast Cancer awareness programs like Pink Walks. My passion lies in Oncology, evident in my research contributions.

I've delved into topics like robotic surgery and telemedicine in Pakistan, publishing a short communication in the Springer Journal of Biomedical Engineering Society, accessible on PubMed. Additionally, ongoing works include a narrative review on caffeine's effects on heart failure and a meta-analysis on the drug Emricasan for NASH, liver fibrosis, and cirrhosis.

A published author, my book "Epilepsy and Genetics: Gene EJM1" is available on Amazon, along with three collaborative works. Beyond academia, I've crafted textbooks for MBBS students, enriching medical education globally.

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Applications of FTIR and chemometrics methods in authenticity analysis of walnut oil

Moulouda El Mouftari[1], I. Essafi[1], A. Khalidi[2], F. Kzaiber[1], Gomaa A. M. Ali[3], F. Z. Mahjoubi[1] and **A. Oussama[1]**

[1]Université sultan Moulay Slimane, Laboratoire d'ingénierie et de Technologies Appliquées (LITA),Morocco
[2]University Hassan II, Laboratoire de Chimie Physique et de Chimie Bioorganique,Morocco
[3]Al-Azhar University, Egypt

This study focuses on detecting and evaluating the adulteration in nut oil, which can cause health and food dangers. The two adulterants used during this study are cheaper vegetable oils and present a similar property with walnut oil, sunflower oil with a falsification percentage of 5.80–31.95%, and rapeseed oil with 4.33–29.37%. This adulteration was studied using Fourier transform infrared spectroscopy (FTIR) coupled with chemometrics, a new and specific approach. The spectra of the studied samples were determined by FTIR and were analyzed by PLSR and PCR with two sorts of pretreatment, normalization, and first derivation. The results showed different functional groups of the nut oil. The most appropriate pretreatment that provides reliable calibration values (RMSE) and prediction (RMSEP) is the normalization preprocessing in the range of 3050 to 700 cm−1. The chemometrics results give the best model selected in the PLSR with an R2 of 0.998 for sunflower oil and 0.999 for rapeseed oil. According to this study, we have solved nut oil falsification by developing a chemometrics model that can detect and evaluate this adulteration.

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Assessment of Calcium Oxalate By Sem/Edx in Nopal Opuntia Megacantha Powder

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Cactus cladodes powder, or nopal powder, derived from the Opuntia Megacantha plant, is a dietary supplement that is highly appreciated for its culinary and medicinal benefits, mostly due to its significant amount of antioxidants. However, the assessment of chemical bioactive compounds has revealed the existence of high levels of calcium oxalates. This could pose a risk of toxicity for vulnerable individuals, such as those with kidney failure or diabetes. Scanning Electron Microscopy (SEM) combined with an EDX (Energy Dispersive X-ray), EDX probe shows the presence of calcium oxalate that resemble sugar cubes. Additionally, the EDX spectrum has indicated the existence of calcium, carbon, and oxygen, along with some trace elements such as sodium, magnesium, and chlorine.

The powder of spiny variety cactus cladodes consists mainly of epidermal cells, parenchyma and chlorenchyma, similar to spiny variety cactus cladodes according to Boutakiout in 2015 and also Malainine in 2003.

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Dermoscopic Evaluation of Cutaneous Leishmaniasis

Muhsin A. Al-Dhalimi[1] and **Shadan Hussein Jasim**[2]

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Cutaneous leishmaniasis (CL) is an endemic disease in Iraq that is caused by protozoan infection. Dermoscopy has been applied to help in the diagnosis of multiple skin disease, including infestations. To evaluate the dermoscopic characteristics of CL lesions and their relationship with the disease duration, site, and pattern. Dermoscopic examination using (3 Gen Dermlite DL 100) at tenfold magnification of 91 lesions in 67 patients was elicited. This study was done from December 2019 to December 2020. The main dermoscopic features were generalized erythema (100%), hyperkeratosis with central erosion or ulceration (53.8%), white scar-like patch (41.8%), yellow tears (35.2%), white starburst sign (34.1%), and milia-like cyst (2.2%). We also observed vascular structures, including linear irregular (63.1%), dotted (57.1%), glomerular (38.1%), hairpin (22.6%), and comma-shaped vessels (16.7%). Linear irregular vessels were more commonly demonstrated on the face and upper limbs; while on the lower limbs, hyperkeratosis with erosion and ulceration were the most common finding. Hyperkeratosis with erosions/ulcerations (43.8%) was the most common finding in the papular pattern, linear irregular vessels (56.7%) in the nodular pattern, glomerular vessels (64.3%) was the most common finding in noduloulcerative pattern and linear irregular vessels (71%) was the most common finding in plaque pattern. The dermoscopic features would help in the diagnosis of CL lesions by dermoscopy, especially in endemic areas. There is a good relationship between the dermoscopic features and type of CL lesions.

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Future of Preventive Medicine & Public Health

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Selected Micronutrients Effect on Growth, Development, and Yield of Black Nightshade (Solanum nigrum)

Muneiwa Rumani, Taruvinga Badza, Alfred Oduor Odindo and **Fhatuwani Nixwell Mudau**

University of KwaZulu-Natal, South Africa

Black nightshade (Solanum nigrum) is an important indigenous leafy vegetable consumed in sub-Saharan Africa. The species is an important source of micronutrients for medicinal purposes. A controlled experiment was conducted at the University of KwaZulu-Natal, Pietermaritzburg, South Africa, to investigate the effect of zinc and boron applications on the growth, development, and yield of black nightshade. Each micronutrient (zinc and boron) was applied at five different concentrations, namely, 100 (T1), 200 (T2), 300 (T3), 400 (T4), and 500 (T5) ppm, including a control (T0) (distilled/high pressure liquid chromatography water spray), giving a total of six treatments. Treatments were arranged in a complete randomized design (CRD) with three replications, giving a total of 18 experimental units (pots). After 14 days of transplanting, the treatments were applied through foliar spraying three times over 24 h with an 8-h interval between each spraying event. Data collection started 14 days after transplanting, and thereafter, measurements were taken fortnightly. At harvest (70 days after transplanting), fruit number, fresh shoot weight, dry shoot weight, root fresh mass, and root dry mass were determined. The results showed significant growth and yield differences with respect to the different concentrations of zinc and boron ($p < 0.05$). The application of 500 ppm of boron performed significantly better than all other treatments, viz., zinc, and control across the measured variables ($p < 0.05$). Therefore, it is concluded that the application of boron at 500 ppm was found to be effective in enhancing plant growth and higher fruit yield (45 fruits) of black nightshade.

Biography

Muneiwa Rumani is an accomplished academic and researcher in agricultural sciences, she holds a Diploma in Agriculture with a major in Plant Production and an Advanced Diploma in Post Harvest and Technology, both obtained from the University of Mpumalanga in South Africa. Driven by a passion for crop science, she earned an Honors degree in Crop Science, demonstrating her commitment through research on the Selected Micronutrients' Effect on Growth, Development,

and Yield of Black Nightshade (Solanum nigrum). Rumani recently completed a Master of Science in Horticulture both at the University of KwaZulu-Natal in South Africa, her research focused on water use and nutritional water productivity, specifically in the context of bush tea (Athrixia phylicoides Dc.). Rumani's academic showcases dedication to diverse aspects of agricultural sciences, from plant production to horticulture, demonstrating a valuable blend of theoretical knowledge and practical expertise. As she continues to contribute to the academic and research community, Rumani remains a promising dedicated scholar in the field of agricultural sciences.

Enriched 1200 Puberphonia Patients Life with Ancestral Voice by an Innovative, Noninvasive Successful Uvula, the Accessory Speech Organ, Resonance Manipulation Treatment

Muthiah Kumaresan[1], Navin Bharath[2] and **Parameswaren Darling Elangovan[3]**

[1]Department of Otorhino laryngology, Siva ENT Hospital, India
[2]Department of Otorhino Laryngology, Saveetha Medical College, India
[3]Speech Therapist, Siva ENT Hospital, India

Introduction: We followed an innovative, important and relevant method of manipulating the uvula which had given the required low pitch voice in 600 puberphonia males in one small center. 50% of the reported cases had given the history of attempted suicide. The gravity of the problem and the number is so much which is under recognized, less estimated and ignored. We simplified our approach, treatment and got more number of patients, weakly on an average 3 puberphonia. We assess the pitch and confirm the diagnosis and show then them frequency expected to achieve which give confidence of the patient at the first consultation itself.

Method: The method we employ is direct voice therapy. While doing endoscope to examine larynx patient is asked to say few words with protrusion of tongue, cough, yarn or snore which give low pitch voice. This results in the change in the air flow and resonance, which is the physiological mechanism that reduces pitch. The selected case is taken to the minor operation theatre. Under xylocaine (10% w/v) spray surface anesthesia a silk thread is placed in the uvula by suturing or knots, followed by breath of fire of breath training in the theatre itself by ENT surgeon. On the first instance it-self 90% many resume lower pitch voice. We give group voice breathing training as it is a stimulating factor with their treated colleagues. Third day we remove the thread from the uvula. 4th to 21st day they are instructed to do breath of fire home breathing training to continue low pitch voice as a habit. 5% patients resist changing their voice in spite of the effort we put, even after review, probably, we think, due to some other unknown lifestyle or pathology.

Result: Our experience reveals that the puberphonia is not a disease, but it is a life experience. Our clients are able to overcome blocks and develop even quicker, which

ultimately benefits their careers and well-being in the society. As the treatment is done without any surgery in the vocal tract most of the clients get the ancestral voice that makes them and us happy!

Conclusion: Importance of uvula as an accessory organ for speech, as uvular trill, uvular consonant is brought out and its manipulated resonance treat puberphonia. First line of treatment is by Otorhino Laryngologist to fight puberphonia devastation. No problem with sexual activity! family life and can get married!! Confidently conform that they will have children!!!

Biography

Dr.M.Kumresan, President, Association of Pediatric ENT India ,AOI India L 39. has his expertise in evaluation and passion in improving the health and wellbeing of puberphonia. His open and contextual evaluation model based on responsive constructivists creates new pathways for improving speech. He has built this model after years of experience in research, evaluation, teaching and administration both in hospital and education institutions. The foundation is based on camps, articles in social media, 29 book publications , monthly local language magazine writing and conducting free medical voice care camps. Kumaresan Muthiah, M. S (ENT) D. L. O., F. I. C. S., F.I. M. S.A., F. R. S. H., (London), F. C. C. P., (USA), M. I.A. L. P., (Swiz). PhD, Member Pulitzers society, USA, Panel specialists – Indian Airlines, Specialist international Airport authority Civil surgeon (Retd), E. N. T Surgeon, Recipient of National and State Government Awards. He is the President pediatric ENT association of India. He took his MBBS DLO and M S ENT from Madras Medical College, Madras University in the year 1974. He published 4 research on rhinosporidiosis in international journals-Mycopathologia. His 6 original puberphonia works are published in Indian National and International Journals.

Innovative Application for the Mitigation of Airborne Pathogens

Nahla Eltai, Hana A. Abdelrahman, Mutassim A.Salih, Hashim Alhussain, Asmaa A Al Thani, Hadi Yassine and **Saud A. Abdu –Ghani**

Qatar University, Qatar

Introduction: The spread of respiratory illnesses, such as the recent COVID-19 pandemic, has posed a significant threat to millions of lives, leading to thousands of fatalities globally. This has sparked a concerning worldwide health crisis, underscoring the pivotal role of airborne transmission in the spread of infections.

HEPA filters are the current industry standard. Nevertheless, they must be used with other air cleaning methods as they present a high-pressure drop to the airflow and consume fan power. Additionally, HEPA filters are expensive and must be frequently changed. Here, a new device for air cleaning from microbes was developed and evaluated for its efficiency. The device uses Electrically Activated Water (EAW), which could be integrated into current Heating, Ventilation, and Air Conditioning (HVAC) systems in healthcare facilities.

Material and Methods: In this study, a modified integrated air cooling portable unit was developed to accommodate the EAW-wicking system and the HEPA filter that can be used to mitigate airborne diseases. A known amount of E. coli, Aspergillus spp., and Newcastle virus were nebulized in a contained space using an automatic nebulizer. The efficacy of the prototype and a combination of the developed prototype and HEPA filters were compared and assessed through different techniques. After each cleaning period, the bacteria were quantified by sampling into nutrient agar plates consuming Cascade Impactor. Newcastle virus was collected using an SKC aerosol sampler, and viral load reduction for SARS-COV-2 virus was determined using TCID50/ml and RT-qPCR, while antifungal activity was determined by inhibiting fungus growth.

Results: A lab air cleaning analysis demonstrated the significant efficiency of the novel prototype. The technology also showed efficacy in the simulated tertiary hospital and stadium environment.

Conclusions: The novel patented application will globally influence infection control strategies in hospitals and indoor public locations by providing a safe, pathogens-free environment.

Biography

Dr. Nahla Omer Eltai; is a researcher of infectious diseases at Qatar University, Biomedical Research Center (BRC), She received her Ph. D. from Humboldt University, Berlin, Germany. Dr. Eltai is currently leading the microbiology research at BRC. Her research and teaching experiences have been fostered by several years of intensive work at state-of-the-art and multidisciplinary institutions; Dr. Eltai has published over 45 papers in peer-reviewed journals and was awarded a patent on her discovery.

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Nurses' Experiences of the Social Stigma Caused by the COVID-19 Pandemic: A Qualitative Study

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[2]Disaster Management and Medical Emergencys Center, Mazandaran University of Medical Sciences, Iran
[3]Tehran Medical Sciences Branch, Islamic Azad University, Iran
[4]Comprehensive Health Research Center, Islamic Azad University, Iran

Background: One of the mental and psychological illnesses that health personnel face when treating COVID-19 patients is the societal stigma. This issue has not been addressed due to the disease's devastating impact on numerous sectors of society. This study aimed to learn more about how nurses deal with social stigma during the COVID-19 pandemic

Methods: Inductive qualitative content analysis was used to conduct this qualitative research. COVID ward nurses who had been subjected to social stigma were chosen as study samples. Granheim and Landman's inductive qualitative content analysis method was used to collect data through semi-structured and individual interviews simultaneously and continuously (2004).

Results: There are three themes and six sub-themes of social stigma experienced by nurses: 1) dual emotions (psychological stress and a positive attitude), 2) abandonment (isolation and total expulsion), and 3) adaptation coping strategies (self-awareness and the influential role of the media).

Conclusion: The findings of this study can help healthcare managers to improve the quality of care by enhancing understanding of the psychological needs arising from social stigma. Based on these findings, designing psychosocial interventions related to stigma can promote the mental health of this group and their families.

Biography

During my studies, according to my personality traits and interest, I chose the field of nursing for university studies. I completed the undergraduate nursing course at Shahid Beheshti University of Medical Sciences and received a bachelor's degree. Then I provided care at the hospital for a short time.

I became interested in psychiatry during my undergraduate studies, and after a few months, I continued my studies in the master's course in psychiatry at Shahid Beheshti University and received my master's degree. Then I became a member of the faculty of Islamic Azad University, Babol branch. After 5 years of experience, I continued my studies in specialized doctorate and got a degree. At the same time, I have worked part-time as a faculty member in nursing school of Islamic azad university-Babol branch. After graduating from PHD I'm working as a faculty member in nursing school of Islamic azad university-Babol branch.

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Delirium in a Child in Pediatric Intensive Care Unit

Nazanin Zibanejad[1,2]

[1]Imam Hossein Children Hospital, Isfahan University of Medical Sciences, Iran
[2]Child Growth and Development Research Center, Research Institute for Primordial Prevention of Non Communicable Disease, Isfahan University of Medical Sciences, Iran

Delirium is a syndrome with an acute onset that is accompanied by fluctuation and is associated with behaviors that indicate impaired consciousness and cognition. It is common and costly and is associated with severe functional decline and distress in an adult. However, its detection and diagnosis are so challenging in children. Herein, we report a 2 year old girl who was admitted in the pediatric intensive care unit (PICU) with pneumonia and was intubated because of respiratory failure. She needed a lot of benzodiazepine and opioid drugs to be sedated. During hospital course after extubation, she developed by agitation and restlessness and dissociation from environment. Electroencephalography was done and diffuse generalized slow wave was observed. Finally, by environmental factors' correction, benzodiazepine decreasing, and risperidone administering, she became well and discharged. Delirium should be considered as an important, underdiagnosed, and common condition in the PICU. It should be considered in altered cognition, consciousness, and circadian rhythm disturbance situation in children.

Biography

I'm Dr Zibanejad.I was born at Isfahan city in IRAN at 28 July, 1984

Sex: Female

Nationality: Iranian

Religion: Islam,Shia

Marital Status: Married

I'm pediatric intensivist and now I'm Faculty member of medical school, Isfahan University of Medical Science.

Exploring the Moderating Role of Institutions in the Poverty-Environment-Growth Nexus in British and French Countries in Africa

Ndzembanteh Aboubakary N and **Dobdinga Cletus Fonchamnyo**

University of Bamenda, Cameroon

The United Nations has placed a strong emphasis on environmental issues and highlights that environmental degradation is one of the biggest barriers to social welfare and sustainable development. This makes enhancing environmental quality a very important decision at the global scale. As a result, this study aims to investigate the moderating role of institutions in the poverty-environment-growth nexus in 26 British and French ex-colonies in Africa using the panel ARDL estimation technique. In this study, poverty is measured using the multidimensional poverty index, a robust proxy recently introduced by the United Nations Development Programs. This index is multifaceted and covers health, education and standard of living as three broad dimensions of poverty. The estimated result of the pooled mean group reveals that a long run relationship exists between the variables of institution, environmental sustainability and poverty. The interesting insight of this paper is that institutional quality may degrade the quality of the environment but may pass through the growth channel to enhance environmental sustainability and mitigate poverty. As a policy implication, institutional quality needs to be strengthened both in British and French ex-colonies.

Biography

I began my undergraduate academics with a specialization in Economics. As I progressed I came across this interesting topic called Climate change and sustainability. I began my research about the irregularities and discrepancies that we as human beings are causing to our Mother Earth. As a responsible citizen, I decided to pursue a Master's in Economics. During my course, I came to know what all is happening all around the globe and what we as responsible citizens can do to counter the ill-effects we have caused to our Mother Earth over the years. That's how I decided to study environmental economics at my PhD level. I am currently working as a Lecturer at the University of Bamenda-Cameroon. I have authored more than 11 papers in reputable journals and my recent publication focus on "Exploring the energy-environment growth nexus in francophone Africa in presence of institutions"

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The Effect of the Global Health Crisis on Organizational Marketing and Culture of Innovation

Farouk Kofar Naisa

Beijing Institute of Technology, China

The study examined how SME's particularly in emerging economies should choose and implement marketing innovation strategies based on external factors, internal advantages, and their own characteristics, enriching crisis management literature and providing new scenarios for research on marketing innovations, consumer behavior and patterns during and after the global crises. The survey included 217 SME's in Nigeria. The 'A' priori sample size calculator for structural equation models determines the sample size. Data was analyzed using PLS-SEM to appropriately estimate study latent construct relationships. The findings of the study indicated that the global health crisis has affected organizational innovation, consumption, and behavior. Due to technological adoption and complexity, market innovation methods have not been severely impacted by the epidemic. This study also examines how organizations might develop and execute pandemic strategies and concludes with a discussion of the theoretical and practical consequences that may guide future research. Using the global health crisis to understand shifts in the culture of innovation, consumer behaviors, and market innovation strategies in an organization to improve performance and ensure firm continuity, this study identified several business performance options, a suitable path to explore, and the impact of using it to retain market space in line with consumption patterns. This research examines how the global health crisis affects organizational cultures of innovation and performance. This is accomplished in light of the significance of SMEs' creative efforts in Nigeria in achieving the goals of idea-driven enterprises. Finally, the study recommended four marketing innovation strategies for SME's and organizations to choose from for crisis management and control in the pandemic and post pandemic crisis

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Influence of Participatory Monitoring and Evaluation on Decision-Making in Maternal and Newborn Health Programs in Mombasa County, Kenya

Pauline Adhiambo Oginga, Alfred Owino Odongo and **Julius Njathi Nguku**

College of Health Sciences, School of Public Health, Mount Kenya University, Kenya

Improving Maternal and Newborn Health (MNH) is crucial to attaining the Sustainable Development Goals and Kenya Vision 2030. Both demand and supply-side challenges exist in environments where maternal and neonatal mortality is high. Participatory Monitoring and Evaluation (PM&E) systems are critical for recognizing these challenges, which may then be minimized to save lives. Participatory M&E of health programs enables information collecting and sharing with community stakeholders, service providers, and county and national decision makers. As a result, this impacts decision-making and action by numerous stakeholders in order to achieve community emancipation, effective administration of health systems, resource allocation based on need, and responsibility for meeting health obligations. The study assessed the utilization of PM&E approaches and their influence on decision-making in MNH programs in Mombasa County, Kenya. In particular, we assessed how quality of decision making was influenced by utilization of PM&E approaches at the program initiation phase, design and planning phase and implementation phase of MNH programs. We conducted a cross-sectional study with a sample of 390 participants and used a structured questionnaire, modified Quality of Decision-Making Orientation Scheme, and an interview guide to collect data. We analyzed quantitative responses using descriptive statistics and binary logistic regression (at significance level of 0.05) and qualitative responses using content analysis. The study established that quality decision-making was more likely to occur in MNH programs in Mombasa County that used PM&E approaches at the initiation (OR 1.73, CI 1.02-2.92, $p<0.05$), design and planning (OR 2.98, CI 1.38-6.42, $p<0.05$), and implementation (OR 5.67, CI 1.57-20.46, $p<0.05$) phases of MNH programs than in those that did not use the PM&E approaches. This study shapes a persuasive case for improving the provision of maternal and newborn health services.

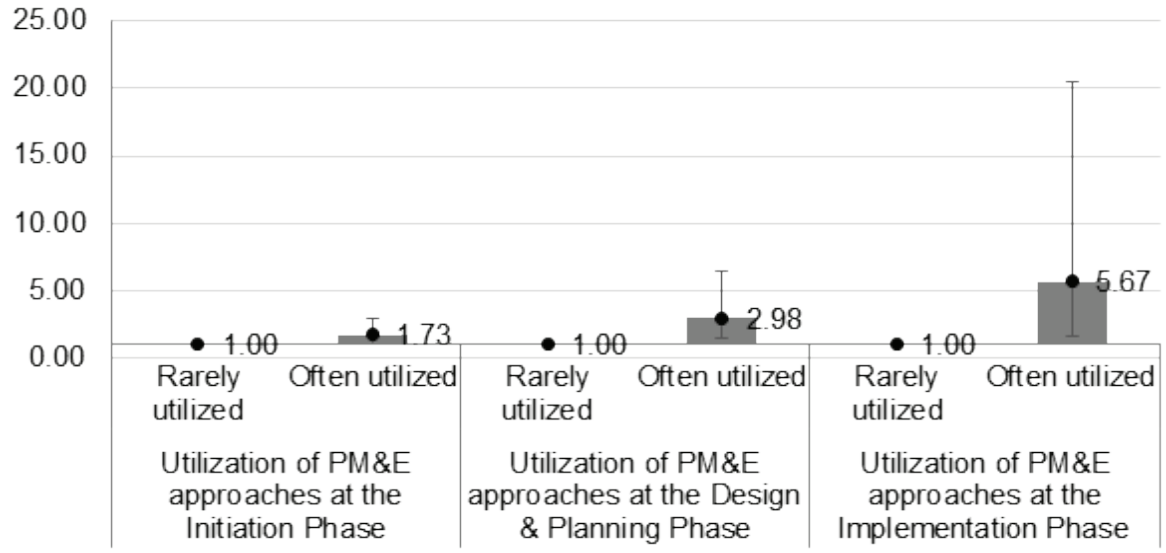

Figure 1: Odds Ratio Plot

Biography

Pauline Adhiambo Oginga is a graduate student at the College of Health Sciences, School of Public Health, Mount Kenya University, Thika, Kenya. She received a Bachelor's degree in Public Health from Jaramogi Oginga Odinga University of Science and Technology and a Master's degree in Public Health, with a specialization in monitoring and evaluation, from Mount Kenya University. Her current field placement is with the County Government of Mombasa, Kenya, as the County Chief Officer Public Health. She has previously served as Assistant Director Monitoring and Evaluation, Department of Health, County Government of Mombasa. She is interested in health systems and services, monitoring and evaluation, maternal and newborn health, gender-based violence prevention, and global health.

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How to Improve the Most Important Part of Life *Sleep*, from Burden to Relief?

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[2]Sleep medicine Research Center, Imam Khomeini Hospital Complex, Tehran University of Medical Sciences, Iran
[3]Occupational Sleep Research Center, Baharloo Hospital, Tehran University of Medical Sciences, ran
[4]Otorhinolaryngology Research Center, Amiraalam Hospital Complex, Tehran University of Medical Sciences, Iran

Objective: Managing and treatment of obstructive sleep apnea remain a catastrophic topic which based on each country insurance and accessible treatment and cultural issues has different approaches for diagnosis and treatment, this study aimed to assess the impact of Continuous Positive Airway Pressure (CPAP) and expansion sphincter pharyngoplasty(ESP) treatments on the quality of life (QOL) in patients with moderate obstructive sleep apnea (OSA). OSA, characterized by sleep state–dependent upper airway collapse, can significantly reduce QoL and morbidity and mortality. While CPAP has been a conventional treatment, ESP has emerged as an effective option, especially for non-adherent patients. The prospective study included patients with moderate OSA confirmed by polysomnography for one year, offering CPAP and ESP treatments based on patient preferences. The Sleep Apnea Quality of Life Index (SAQLI) questionnaire was utilized to assess QoL before and after treatment.

Methods: The study compared changes in QoL between the CPAP group and surgical treatment. Additionally, QoL was compared among these groups and a control group of patients who did not receive any treatment.

Results: The treatment groups included 40 patients using CPAP, 38 undergoing ESP treatment, and a control group of 10 untreated patients. Both CPAP and ESP treatments significantly improved QoL ($p < 0.001$), with UPPP treatment showing superiority ($p = 0.042$) over CPAP. Post-treatment BMI, Respiratory Disturbance Index (RDI), and age had poor correlation (0.037, 0.096, and 0.022, respectively) with post-treatment SAQLI score.

Conclusion: The findings suggest that both CPAP and ESP treatments contribute to improved QoL in patients with moderate OSA. ESP treatment, in particular, stands out as an effective management approach within this study population.

Biography

Throughout my academic course, I consistently excelled, pursuing educational milestones at Beheshti University of Medical Sciences for my general physician degree and later specializing in otorhinolaryngology and sleep medicine fellowship at Tehran University of Medical Sciences as I always interested in surgical procedures and this specialty had wide variety of diseases that can be managed both medically and surgically. My commitment to excellence and always try my best in residency program led me to secure the second-best rank in Iran's otorhinolaryngology board exam, granting me the privilege of joining Tehran University's esteemed faculty (which has very strict criteria for women surgeon) in the field of sleep surgery, an area critically needed in our country and many patients who need this kind of surgery couldn't use a standard management and surgery.

Recognizing the dearth of expertise in sleep apnoea surgery locally, I pursued a fellowship in sleep medicine and further enhanced my skills through an intensive three-month observership at Stanford University. Subsequently, as a faculty member, I dedicated six years to training medical students and residents while extensively diagnosing and treating patients from across the country for sleep apnoea surgery. This journey was supplemented by self-driven learning from various resources, shaping my expertise in sleep surgery.

Moreover, I aspire to explore synergies between surgical interventions and medication for treating this condition leveraging my background in sleep medicine and extensive patient interactions.

Preliminary Findings of the PERSIAN Birth Cohort in Isfahan

Roya Kelishadi, Motahar Heidari-Beni and **Seyede Shahrbanoo Daniali**

Child Growth and Development Research Center, Research Institute for Primordial Prevention of Non-Communicable Disease, Isfahan University of Medical Sciences, Iran

Objectives/Scope: The primordial prevention of non-communicable diseases is supported by the scientific evidence on Developmental Origins of Health and Diseases (DOHaD), and it underscores the importance of health promotion interventions from early life. Birth cohorts play an essential role in generating basis and advancing the knowledge regarding different aspects of DOHaD.

Methods: The Prospective Epidemiological Research Studies in IrAN (PERSIAN) Birth cohort is a multi-center birth cohort aiming to study various factors of DOHaD in Iranian population. The enrolment of PERSIAN birth cohort participants was in five cities of Iran, and here we present some preliminary findings of this study in Isfahan. Inclusion criteria for participation in Birth Cohort in Isfahan were pregnant Iranian women who have lived in Isfahan for at least one year, and did not have any history of infertility, those in the first trimester of pregnancy and those who intended to give birth in hospitals of Isfahan city. Of the main factors assessed in this study were dietary habits of mothers, breastfeeding, complementary feeding, and dietary habits of children.

Results: Significant association existed between maternal dietary patterns, weight gain during pregnancy, maternal blood levels of some essential and toxic elements and environmental pollutants with neonatal birth size and further growth and development of their children. We also found inverse interaction between maternal dietary fat intake and breast milk omega-3 fatty acids with infant weight at 4 and 12 months of age.

Conclusion: The current and future findings of this undergoing cohort will provide comprehensive information about primordial prevention of chronic diseases.

Biography

Roya Kelishadi is a Professor of Pediatrics in Isfahan University of Medical Sciences, Iran. She has more than 1000 publications in English peer-reviewed journals. She is the chair of the Research Institute for Primordial Prevention of Non-Communicable Disease. She has presented her scientific works in several international conferences.

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Learning Environment and its Relationship with Quality of Life and Burnout among Undergraduate Medical Students in Pakistan

Saadia Shahzad[1] and **Gohar Wajid**[2]

[1]*Shalamar Medical and Dental College, Pakistan*
[2]*University of Lahore, Pakistan*

Objective: It is important to measure the Learning Environment (LE) and its effect on Quality of life (QoL) and burnout (emotional exhaustion – EE and depersonalization – DP) in undergraduate medical students. This study aimed to determine the association of LE with Quality of life and burnout in students in selected public/ private medical colleges.

Design: Analytical associational study

Methods: The single-stage cluster sampling was applied, and a sample size of 3400 (50%) of the total population of the selected medical colleges was taken as acceptable. Undergraduate medical students' first-final year classes were included. Data was collected through Google form after ethical approval from all the selected colleges' management. Data analysis plan: descriptive stats, mean ±SD calculation; associations between LE and QoL, burnout; and Logistic Regression analysis was applied.

Results: QoL mean score 7.0±1.9; burnout (emotional exhaustion – EE and depersonalization - DP) mean score 21.0±13.8 and 17.5±9.0 respectively. A significant correlation p-<.05 was found between the overall JHLES mean score and QoL, EE, and DP. The logistic regression model resulted in: Odds of higher QoL was less with a higher level of class AOR 0.679 (0.51-0.91) p- 0.010 and with a higher JHLES score AOR 0.9 (0.89-0.91) p-0.0001. Odds of higher EE are less likely in females AOR- 0.764 (0.65-0.90) p -0.001 and very minimal rise in EE with higher JHLES score AOR- 1.05 (1.04-1.06) p- 0.0001. Whereas Odds of higher EE are there with successive higher class and boarder status of the students. The odds of having higher DP are minimal with a higher JHLES score. Conclusion: Students are less likely to have high QoL even if they gave a higher JHLES rating of the LE. Whereas, they are more likely to have higher EE with every successive higher class and their being boarders; and minimally high DP.

Biography

I am Maj (R). Dr. Saadia Shahzad, the first author of this research work; currently working as an Associate Professor in the Department of Community Medicine at Shalamar Medical and Dental College, Lahore, Pakistan. I hold the qualifications of a Master in Public Health, a Master in Business Administration, an M. Phil Community Medicine, a Master in Medical Education, and a Diploma in Medical Ethics and Professionalism. At the professional level, I am involved in academic teaching, research, institutional Ethical review board, and many administrative and extracurricular responsibilities My research interests are in the areas of mental health, Down syndrome (challenges, inclusion, quality of life, family perceptions, family cohesion, etc), medical education, and bioethics. I have published and presented internationally in various medical journals and platforms respectively. At an individual level, I work with parents who have children with Down syndrome, and the founder of a parent support group by the name of 'Down Syndrome Meet' (WhatsApp).

Gastroesophageal Reflux Disease (GERD) Detection Based on A Bovine Serum Albumin and Squaraine Fluorescent Assembly

Shiguo Sun[1] and **Fengyu Liu**[2]

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[2]*State Key Laboratory of Fine Chemicals, School of Chemistry, Dalian University of Technology, China*

Screening for Gastroesophageal reflux disease (GERD) remains a great challenge due to the non-specific nature of the symptoms. Salivary pepsin detection has become an effective tool for diagnosing GERD due to its non-invasive and highly specific advantages. However, the diagnosis of GERD by detecting pepsin in saliva still has factors such as long reaction time, poor selectivity, and low detection sensitivity, which need to be improved. In this work, bovine serum albumin (BSA) and a squaraine dye (SQ) were employed to build a BSA-SQ assembly with a fluorescent "on-off" change for rapid and sensitive detection of pepsin. In a Gly-HCl (pH = 2.6) buffer, SQ had a significant aggregation caused-quenching (ACQ) effect. As SQ was embedded in the cavity of BSA, this improved its dispersion and inhibited the ACQ effect of SQ, resulting in enhanced fluorescence of the system. However, pepsin catalyzed the hydrolysis of BSA, leading to the aggregation of SQ and the quenching of the fluorescence of BSA-SQ. This makes BSA-SQ suitable for the qualitative and quantitative detection of pepsin, showing a good linear relationship in the range of 0.5–40 μg/mL with a detection limit of 97 ng/mL. The proposed method was utilized to detect pepsin in human saliva with relative errors between 0.4 and 5.5 %, in consistent with the conventional ELISA results, confirming the possibility for the rapid diagnosis of GERD.

Biography

Shiguo Sun is a professor and doctoral supervisor at the Shaanxi Key Laboratory of Natural Products & Chemical Biology, College of Chemistry & Pharmacy, Northwest A&F University, obtained his Ph.D. degree in 2003 from Dalian University of Technology, China. His research interests are centered around the application of functional materials in light and electrochemistry, including Transdermal Therapeutic (TTS), Systematic Targeting Pharmaceutics (STP), visible sensor guided drug delivery and targeting, fluorescent probes and imaging, detection of virus and tumor, etc. Fengyu Liu is an associate professor at the State Key Laboratory of Fine Chemicals, School of Chemistry, Dalian University of Technology, obtained her PhD degree in 2006 from Dalian University of Technology. Her research interests include functional molecules with special optical and electrochemical properties, electrochemiluminescence and luminescence sensors.

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Assessing the Performance of Public Health Surveillance Systems: A Systematic Review

Sileshi Demelash Sasie[1], Getinet Ayano[3], Fantu Mamo[4], Muluken Azage[5] and **Mark Spigt[2,6]**

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[2]Department of Family Medicine, CAPHRI School for Public Health and Primary Care, Maastricht University, The Netherlands
[3]School of Population Health, Curtin University, Australia
[4]Department of Epidemiology and Biostatistics, Institute of Public Health, College of Medicine and Health Sciences, University of Gondar, Ethiopia
[5]Department of Environmental Health, School of Public Health, College of Medicine and Health Sciences, Bahir Dar University, Ethiopia
[6]Department of Community Medicine, General Practice Research Unit, UiT the Arctic University of Norway, Norway

Background: Despite several studies evaluating public health surveillance system performance, no comprehensive synthesis of these studies is currently available. Therefore, our review aims to explore and analyze the existing body of international literature that evaluates the efficiency, accuracy, and overall operational capabilities of public health surveillance systems. By scrutinizing the performance of these systems, we aim to gain deeper insights into their ability to detect, monitor, and respond to public health threats, ensuring timely and effective implementation of preventive measures and interventions.

Methods: Following the PROSPERO CRD42022366051 protocol, we systematically searched PubMed/Medline, CINHAL, CABI, Web of Science, and Google Scholar for articles evaluating public health surveillance system performance. We included diverse study designs, such as observational/experimental studies and case studies, spanning the period from database inception to July 21, 2023. The Joanna Briggs Institute's quality assessment checklist was used to assess study quality. Thematic analysis categorized the findings into three key surveillance system functions. Our aim was to provide comprehensive insights into the effectiveness and functionality of these surveillance systems.

Results: In nine countries (Ethiopia, Uganda, Ghana, Kenya, Zimbabwe, Tanzania, India, Iran, and Norway), nine primary studies evaluated public health surveillance systems. These studies assessed core functions (case detection and registrations, case confirmations, reporting data management and analysis, outbreak detections, epidemic preparedness, response, and feedback), supportive functions (standard guidelines, training, supervision, resources, and coordination), and surveillance attributes (flexibility, data quality and completeness, acceptability, representativeness, timeliness, usefulness, and positive predictive values). Results varied, with some countries performing well overall, whereas others had poor performance in specific areas. Many countries' surveillance systems showed inadequate performance in key measures.

Conclusion: This comprehensive systematic review indicates large differences in performance among countries, with some excelling in most functions, while others lag in specific areas. However, most countries struggle with their surveillance systems in key performance measures, highlighting the need for further research to identify reasons for underperformance and inform policymaking.

Biography

Sileshi Demelash is a public health professional from Addis Ababa, Ethiopia. With a bachelor's degree in Public Health from the University of Gondar and a master's degree in Public Health Nutrition from Haramaya University. Currently a PhD candidate in Public Health at Maastricht University in the Netherlands, Sileshi has worked as a Public Health Expert at the Federal Ministry of Health as researcher on health and nutrition. He is currently employed as a Public Health Expert at the Ethiopian Public Health Institute and serves as a National Coordinator for the World Health Organization's EPR-flagship initiative. Sileshi has extensive experience in the field of public health. His expertise includes research, training, and project implementation in the areas of health and nutrition. He has published articles and a book on public health topics and possesses computer skills in MS Word, MS Excel, and SPSS.

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Wellness Programs an Employee Engagement Technique Pre and During Pandemic: A Systematic Literature Review

Swati Chawla, Puja Sareen and **Sangeeta Gupta**

Management Education and Research Institute, India

Employee Wellness Programs play a very significant role in the holistic development of an employee. Wellness Programs in the wake of COVID 19 have become an essential requirement for all employees. Living and working during a pandemic coupled with higher stress levels and a time-compressed schedule exemplifies the need for wellness programs as a predominant technique for employee engagement. The present study reviews the theoretical literature about wellness programs, an employee engagement technique, pre and during pandemic between 2017 – 2021 from refereed journals (Web of Science, Science Direct, SCOPUS, JSTOR, ERIC, DOAJ). To address employee issues through wellness programs, a comprehensive systematic review of literature has been done to redesign wellness programs in unprecedented times. The study aims to assess four key dimensions of wellness programs: emotional, intellectual, social, and financial that can help an employee live the best life possibly – mentally, emotionally, and professionally.

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Qualite Des Soins Obstetricaux et Neonatals D'urgence Dans Le Contexte De La Covid-19 Aux Cliniques Universitaires De Lubumbashi

Tabitha I.Mpoyi[1], A.M .Nkola[1], C.M. Matungulu[1], A Mahuridi[1], F.M Kaj[1,2], D.M Dièse[3] and **A.N Mukengeshayi[1,2]**

[1]St. John Institute of Pharmacy and Research, India

Contexte et objectif : L'amélioration de la qualité des soins des mères et des nouveau-nés demeure un grand défi en RDC à Lubumbashi précisément aux obstacles liés à la crise sanitaire de COVID-19. L'objectif était d'évaluer la qualité des SONU.

Méthode : Il s'agit d'une descriptive transversale au service de gynéco-obstétrique des Cliniques Universitaires de Lubumbashi de Mars 2020 à Mars 2022. La structure, l'équipement, les compétences, techniques, la disponibilité et la qualité des SONU ont été évaluées par rapport aux normes de L'OMS et de la FIGO. Les données analysées avec les logiciels Epi-info 7.2.

Résultats : La structure du service était inadéquate. Ne disposait pas d'équipements suffisants pour dispenser les soins en toute sécurité. Il n'y a pas eu d'aménagement, ni de modification de l'organisation des soins. Le service était en mesure de réaliser toutes les fonctions SONU. Les consultations et les accouchements se déroulaient dans les mêmes conditions d'avant la crise sanitaire. Les prestataires des soins étaient formés et avaient les connaissances requises pour la prise en charge des patientes dans le contexte de COVID-19. Les taux de mortalité maternelle et périnatale étaient respectivement de 400/100000 naissances et de 33,2/1000 naissances. Les principales complications obstétricales étaient la pré-éclampsie (34,81%), les complications de l'avortement (12,8%) et les dystocies (15,2%). Conséquences de la Covid-19 ont été observées; les plus fréquentes étaient la MAP (31,5%), les avortements (20,2%), les MFIU (18,2%) et les accouchements prématurés (11,8%). La quasi-totalité des accouchées était satisfaite des soins reçus durant la période de crise (90,3%).

Conclusion : La qualité des SONU offerts dans le contexte de la covid-19 aux Cliniques Universitaires de Lubumbashi était faible. L'infrastructure inadéquate, l'insuffisance en matériels et d'équipements essentiels ont négativement influencé la qualité des SONU offerts et méritent une attention.

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Histological Characteristics of Chronic Allergic Rhinitis Versus Non allergy: Is There a Diference in the Remodeling?

Tamara Acosta Castillo[3], Carlos Ríos Deidán[1], Maria Soledad Reyes[2], Edgar Escalante Fiallos[4] and **Diana Villacrés Silva[4]**

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[2]*Pathology Unit, Ecuadorian Institute of Social Security Sangolquí, Ecuador*
[3]*Otorhinolaryngology Unit, IESS El Batán, Ecuador*
[4]*Otorhinolaryngology Unit, Carlos Andrade Marin Specialties Hospital, Ecuador*

Demonstrate the histological remodeling changes in the turbinates, identify the frequency of the two forms of rhinitis in the samples studied and determine the remodeling diferences found in the two variants. Patients attended an otolaryngology service at the Social Security Hospital of city Sangolqui-Ecuador from February 2016 to June 2017. The allergic variant was determined when eosinophils were found by higher magnifcation feld and non-allergic when they were not found in the submucosal segment. Epithelial, infammatory, and stromal markers were analyzed. One hundred twenty histopathological samples were analyzed, 75% presented allergic rhinitis, the age averaged 36.2 years. When we compared between the allergic and non-allergic variants: epithelial and stromal markers we had signifcant diferences, as well as between each of its components; except fbrosis. In relation to the infammatory pattern, there were signifcant diferences between the number of mast cells and stromal markers with eosinophils>10 by feld. The allergic type corresponded to 75% of patients with persistent severe rhinitis who underwent turbinectomy. Regarding remodeling, there was a statistically signifcant diference in favor of the allergic variant. Eosinophilia greater than 10 was directly related to mastocytosis and subepithelial edema.

Table 1 Organization of qualitative data to carry out statistical calculations

Epithelial markers											
MB thickening				Globet cells				Squamous metaplasia			
0	x	xx	xxx								
<5 µm	5–10 µm	10–15 µm	> 15 µm	0–25	26–50	51–75	76–100	Absent	Mild	Moderate	Marked
0	1	2	3	0	1	2	3	0	1	2	3
Stromal markers											
Edema								Fibrosis			
Absent		Mild		Moderate		Marked		Present		Absent	
0		1		2		3		0		1	
Inflamatory markers											
Eosinophil number				Mast cells number				Eosinophil cumulus			
0	x	xx	xxx								
	< 10 eos	10–20 eos	> 20 eos	0	X	XX	XXX	Present		Absent	
0	1	2	3	0	1	2	3	0		1	

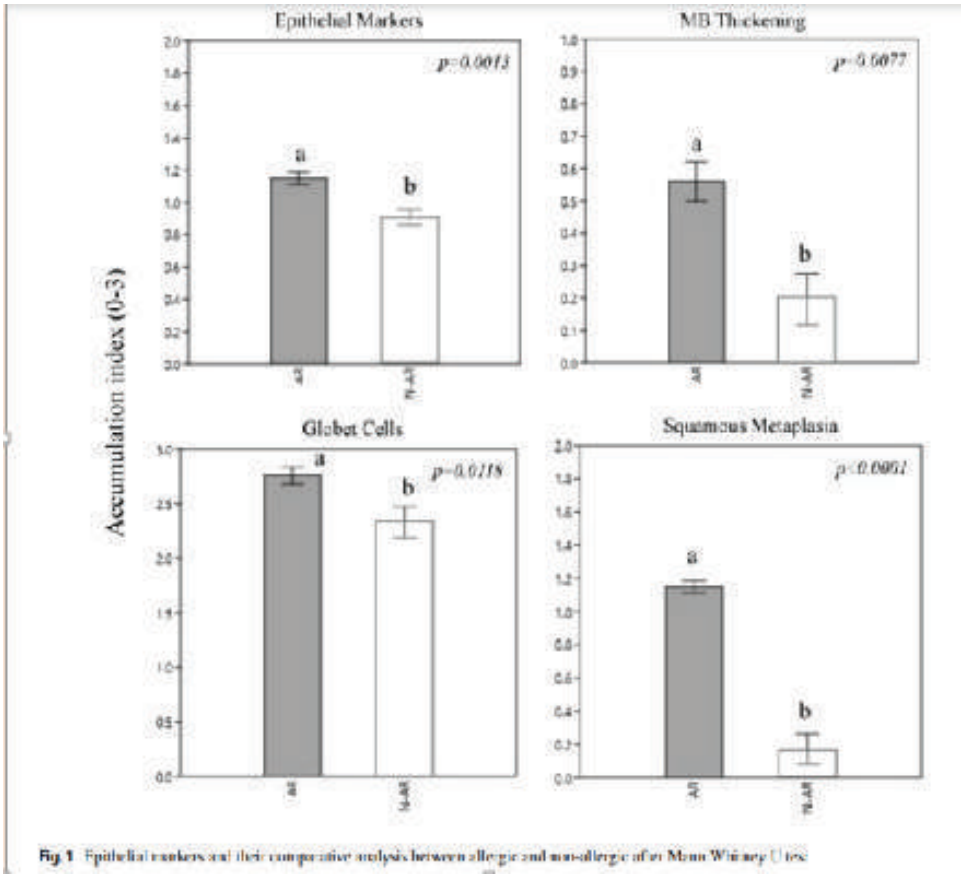

Fig. 1 Epithelial markers and their comparative analysis between allergic and non-allergic after Mann Whitney U test

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Implementing Health and Safety Strategy for Business Sustainability: The Use of Management Control Systems

Jayakumar[2], Wijesinghe[1], Gunarathne[1] and **Samudrage[1]**

[1]*University of Sri Jayewardenepura, Sri Lanka*
[2]*University of Peradeniya, Sri Lanka*

Despite a growing body of literature on organisational health and safety, little is known about how safety systems can be strategically implemented. This study, therefore, explored how organisations effectively adopt, implement, and sustain health and safety strategies. It employed a longitudinal case study method and utilised Simons' (1995) levers of control framework as a management control system. It looked specifically at the implementation of a safety strategy at a Sri Lankan mining company during three different time periods, using data from several sources. Due to the company's long-standing culture and lack of guidance, it had initially employed a diagnostic approach to monitor and achieve organisational safety. However, in the later phases, the company implemented several structural reforms in order to establish a safety policy with greater authority, responsibility, accountability, and communication. The interactive and diagnostic levers acted as a catalyst for change in the organisational safety transformation. They have also impacted the belief lever and contributed to achieving the boundary lever's goals. This study reveals how successfully executing a safety strategy allows an organisation to improve its corporate image while reaping both financial and non-financial benefits for the company and its employees.

Biography

Dr Vijayajothy Jayakumar received her doctorate in Accounting at RMIT University, Australia, with her work centred around Australian aged care business models and performance. She has been serving as a senior lecturer in accounting for more than a decade. Dr Vijayajothy is an Associate member of The Chartered Institute of Management Accountants (UK) and The Chartered Global Management Accountant. She is a recipient of the People's Choice Award 2021, in the 3 Minute Thesis (3MT) competition at the College of Business and Law, RMIT University, Australia.

Her research interests are not-for-profit business models, not-for-profit governance and performance, value-based health care, management control systems, occupational health and safety, and sustainable development goals. She currently resides in Melbourne with her husband and two children.

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Implementation of Lung Cancer Screening Programme Using Low-Dose Computed Tomography Among High-Risk Populations In Tunisia: Preliminary Results

Wafa dhouib[1],Ameni maatouk[1],Ahmed Azzouz[2], Meriem kacem[1],Cyrine Ben Nasrallah[1], Imen Zemni[1], Hela Abroug[1], Manel Ben Fredj[1], Ghada Nasri[1], Ines Bouanene[1], Ahmad Zrig[2] and **Asma Sriha Belguith[1]**

[1]Department of preventive medicine ,University hospital of Monastir,Tunisia
[2]Department of radiology University hospital of Monastir,Tunisia

Objective: Lung cancer is the most commonly diagnosed cancer worldwide(1). Its early screening can reduce by 20 % its specific mortality (2).The test of choice is Low-dose computed tomography (LDCT) (3,4). At this stage of our knowledge, the large-scale implementation of lung cancer screening in Tunisia is not yet recommended because of the current healthcare system difficulties. The objectives of our study were to describe the implementation of lung cancer screening programme using LDCT in Monastir and present preliminary results.

Methods: This is a prospective observational study among patients at high risk of developing lung cancer in Monastir (Tunisia) from 2023 to 2028. Patients were smokers with a high risk of developing lung cancer (PLCO m 2012 score ≥ 1.5% over six years).

Results : In total, 41 patients were included. All the study population were male (100%). Their median age was 60 years (Interquartile range (IQR): 58-65). Cardiovascular diseases were found among 36% of participants. The mean age of smoking initiation was 17.2 ± 3.1 years. Most of participants were heavy smokers (78.3%). The majority had high or very high nicotine dependence (58.3%). The Pulmonary Function Testing of the smokers found a median pulmonary age of 82 years (IQR: 71.7-90). Severe obstruction was detected among 11.1% of patients. The median of PLCO score was 2.4% (IQR: 17-4.5). The median delay of LDCT result retrieval was 122.5 days (89.7-135.5). LDCT identified one case with a lung mass and four cases with pulmonary nodules.

Conclusion: Our study demonstrated the feasibility of a lung cancer screening protocol in a Tunisian population with the possibility of discovering lung masses or nodules. Incorporation of strategies that reduce delays in both conducting screenings and obtaining the results is imperative.

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Modern Contraceptive Use Among Married Women: Further Analysis of Predictors and Trends, Based on the 2000-2016 Demographic and Health Surveys of Ethiopia

T. Wudalew Meselu

Clinton Health Access Initiative, Ethiopia

Background: Accessing family planning is a key investment in reducing the broader costs of health care and a significant proportion of maternal, infant, and childhood deaths. In Ethiopia, the use of modern contraceptive methods is still low. Identifying the contributing factors to the challenges in contraceptive use helps to design strategies to improve women's contraceptive use. This study aimed to analyze the trends and predictors of modern contraceptive use over time among married women in Ethiopia.

Methods: The study utilized data from four rounds of Demographic and Health Surveys (DHS) conducted in Ethiopia between 2000 and 2016. A total of 36,721 married women 15-49 years were sampled. Data was extracted from the DHS datasets with authorization from the DHS Program/ICF International. Descriptive and inferential statistics, including chi-square tests and logistic regression analysis, were applied.

Results: The prevalence of modern contraceptive use increased from 6.2% in 2000 to 35.2% in 2016 among married women aged 15-49 years. Factors such as higher education level (50.4% vs. 30.9% for no education), urban residence (49.5% vs. 32.5% for rural residence), and higher household wealth (47% in the highest wealth quintile vs. 19% in the lowest quintile) were associated with higher modern contraceptive use. Media exposure to family planning messages was positively correlated with modern contraceptive use, with 54.6% of women exposed to media using modern contraceptives compared to 32.8% of non-exposed women.

Conclusion: The study revealed an increasing trend in modern contraceptive use among married women in Ethiopia. However, disparities exist based on socio-demographic factors and media exposure. To enhance access to modern contraceptives, targeted interventions should address education gaps, urban-rural disparities, and improve media campaigns. Recommendations include empowering women, strengthening healthcare infrastructure, integrating family planning services into routine healthcare visits, and conducting awareness campaigns using various media channels.

Biography

Wudalew Meselu is a highly accomplished professional with a strong background in health research and consulting. He holds a Master's degree in Public Health. With a passion for improving population health, Wudalew has made significant contributions to the field through his expertise and experience.

Throughout his career, Wudalew has conducted extensive research on various health topics, utilizing both quantitative and qualitative methodologies. His findings have been published in reputable journals, contributing to the evidence base for effective public health interventions. In addition to research, Wudalew has worked with diverse organizations, providing strategic recommendations, and designing evidence-based interventions.

Moreover, Wudalew actively contributes to capacity-building efforts by guiding and inspiring the next generation of public health professionals. Beyond his career, Wudalew is involved in community engagement and advocacy, working towards promoting universal health coverage.

Overall, Wudalew is a respected public health professional who continues to make a meaningful impact on the field through his research.

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Relationship Between Tinnitus and Headache in Saudi Arabia

Alluhaymid, Yousef M[1], Alsiwat Lojain J[1], Basodan Sundus[2], Almomani and **Murad Omar[3]**

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[2]Department of Audiology, College of Medicine, King Abdulaziz University Hospital, King Saud University, Saudi Arabia
[3]Department of ENT, College of Medicine, King Abdulaziz University Hospital, King Saud University, Saudi Arabia

Objective: Our aim was to estimate prevalence rates of different headache forms among tinnitus patients in Arabia, to investigate whether there is a relationship between tinnitus laterality and headache laterality in patients with unilateral tinnitus and unilateral headache, to explore the relationship between tinnitus and headache over time, and to know the effect of headache pain medications in tinnitus in Riyadh, Saudi Arabia.

Method: The study is a quantitative observational cross-sectional study with a convenient sample by data from patients with tinnitus. The participants received a self-administrated electronic questionnaire measuring demographics, prevalence of an associated headache, and the relationship between tinnitus and headache.

Results: A total of 226 patients enrolled themselves into the study, and all of them came from the capital city Riyadh of Saudi Arabia. 58% were females, and the remainder of them were males. Females reported significantly more ear tinnitus than males, and patients aged 51 years or older were significantly less inclined to report ear tinnitus compared to those younger; however, those aged 20–31 years were found to be significantly more inclined to report ear tinnitus. There was a statistically significant association between patients experiencing headaches and those experiencing ear tinnitus. Surprisingly, patients who take medications of any type to alleviate their headaches were significantly less inclined to report ear tinnitus than those who do not take medications. However, patients with ear tinnitus experienced longer headache duration in years than those who had no history of tinnitus. Moreover, those people who experienced right-sided tinnitus tended to report significantly more right-sided headaches, and the same goes for left-sided headaches.

Conclusion: Our results showed that there is a relationship between headaches and tinnitus. Painkillers also showed a protective effect against tinnitus. High awareness about the relationship between headaches and tinnitus among physicians and patients may lead to early recognition and lead to early implementation of primary prevention, which is the cornerstone of family medicine practice, and treatment without referring to other specialties. However, the pathophysiology is still not clear. Further studies should be performed to know the pathophysiology.

Biography

Yousef Alluhaymid, Family Medicine resident , Master of healthcare management.

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Knowledge About Osteoporosis Among Postmenopausal Women

Denada Selfo

Department of Nursing, University Ismail Qemali of Vlore, Albania

Aim: To assess knowledge about osteoporosis among postmenopausal women.

Methods: A cross sectional study was done on total 129 postmenopausal women presented to any of the mentioned hospital settings. The study design was descriptive cross sectional and non-probability convenient sampling technique was used. Those women in which osteoporosis have not been diagnosed yet were included in the study, while women suffering from metabolic bone diseases were excluded. Data analysis was done by using SPSS version 21. Variables were represented in the form of tables and figures.

Results: According to OKAT questionnaire, 32.8% (n=42) participants had good knowledge, 56.3% (n=71) had average knowledge while some of the participants 10.9% (n=16) had poor general knowledge about osteoporosis.

Conclusion: From the current study it has been concluded that majority of participants had good knowledge regarding general information, while the knowledge regarding the risk factors complication and treatment perception was lacking in many women.

Biography

She has 14 years, profesional experience. She finished University degree in nursing at University of Vlora in 2000. She completed master studies in 2011 and doctoral studies in nursing science at Medicine University of Tirana in 2021. She is working as a lecturer in Health Faculty, teaching in the first cycle of bachelor,s studies Basic Principles of Nursing and Nursing Care in Ophthalmology and ENT. Also teaching in the second cycle of master,s studies in Surgical Nursing object of Advanced Surgical Nursing. She is authored of five textbooks university. She has participated in many project as a coordinator of the project and project member. She has authored multiple peer- reviewed articles for numerous high-impact nursing and medical journal. She is author and co-author of more than 150 professional and scientific papers published in peer-reviewed domestic and foreign scientific journal scientific proceedings.

Research Interest:

Nursing skills and procedures, nursing care in Ophtalmology and ENT, Advanced surgical nursing, health assessment.

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4th International Conference on
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Inclusion membranes for the facilitated extraction and recovery of Co (II)and Ni(II) ions form acid medium

Zakaria HABIBI[1], S. MAJID[1], Y. CHAOUQI[1,2], M. HLAIBI1 and **K.TOUAJ[1]**

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[2]Laboratory of Research on Textile Materials (REMTEX), Morocco

The growth of the lithium-ion battery industry requires a secure supply of raw materials and proper management of end-of-life batteries.

Functional recycling of lithium-ion batteries would meet both economic and environmental needs. It would ensure the continued availability of cobalt and nickel for industrial applications and allow waste reduction.

The majority of heavy elements are toxic and harmful to living organisms, even at low concentrations.

For this work, we prepared two Polymer Inclusion Membranes (PIMs), based on the polymer support Polyvinylidene difluoride (PVDF) and two extractive agents: Trioctylphosphine oxide(TOPO) andTrioctyl amin(TOA).

These membranes were characterized and have adopted to achieve the oriented processes for the facilitated extraction and recovery of Co (II) ions. The obtained results were used to determine the values of different parameters: macroscopic permeability (P), initial flux (J0) and microscopic apparent diffusion coefficient (D*) and association constant (Kass) relating to the substrate movement through the membrane. The influence of several factors, initial substrate concentration, acidity and temperature (C0, pH, T) was studied. The results indicate that the various parameters (P, J, D* and Kass) vary greatly with the temperature of the medium and the performance of the used membrane increases with temperature factor. Similarly, these studies made it possible to determine the values of activation parameters, (Ea, $\Delta H^{\neq}$ and $\Delta S^{\neq}$), and to elucidate a mechanism by successive jumps of Co (II) ions on fixed sites of the immobilized extractive agent molecules in the membrane phase.

Finally, we treated the filtrate of a type of Li-ion battery because we relied on the same membrane which showed good results in the first experiments.

Quantifying the Role of Health Financing, Demographic Features, and Freedom Cost on Environmental Preservation

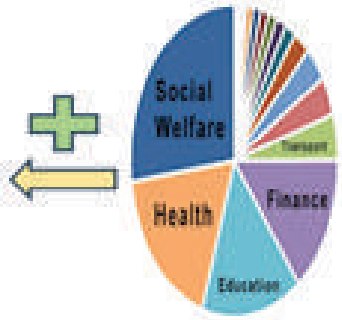
Zia Ur Rahman and **Shahid Majeed**

Department of Economics, Ghazi University, Pakistan

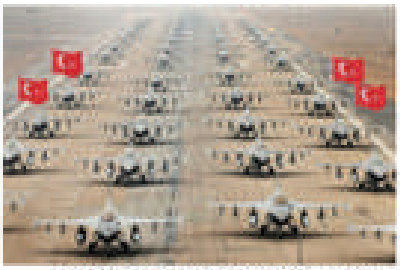
Environmental quality depreciates due to increased production, public welfare expenditures, and defense expenditures. To assess the deterioration in the environmental quality study, employ the time series dataset collected from 1990 to 2022 from the World Development Indicator. Modern econometric techniques, such as GKPSS, Gregory-Hansen regime shift, Kripfganz and Schneider (2020) and dynamic simulated auto regressive distributed lag model are employed. The analysis found the long -term affiliation prevails among the factors. While dynamic simulated ARDL states that demographic features, and freedom cost have a significant negative influence on environmental preservation, while health financing has a significant positive effect on environmental preservation. The findings illustrates that a 1 % increase in the health financing, environmental preservation increased by 1.02%, while demographic features, and freedom cost declines the environmental preservation by 0.877 and 0.11% respectively. Moreover, all diagnostic tests favored the current shape of the model. However, the generalized impulse response reveals that all the factors significantly influence environmental preservation with consistency in the future if measures are not formulated. However, the production process, public welfare expenditures, and human capital should be employed to improve environmental preservation because the global temperature is increasing along with ecological changes and environmental degradation.

Health Expenditures

Environmental Quality



Government Expenditures



Defense Expenditures

Gross Domestic Product

Human Capital Index

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