

16TH WORLD CONFERENCE ON MIDWIFERY, NURSING & PRIMARY HEALTH CARE

JULY 22-23, 2025

AMSTERDAM, NETHERLANDS

EXHIBITOR



Venue: Holiday Inn Express Arena Towers
Address: Hoogoorddreef 66b, Amsterdam-Zuidoost,
Amsterdam, 1101 BE, Netherlands

Day 1

Scientific Program

08:30–08:45: Registrations

08:45–09:00: Opening Ceremony

July 22, 2025 | Amsterdam, Netherlands

Keynote Presentations



09:00–09:40

Title: Autism spectrum: Electrical Epileptiform Condition. Integration of functional neuropsychological testing and EEG neurofeedback/anticonvulsants future treatment. Overlap ASD, ADD, ADHD, Tourette's, PTSD, Dyslexia

Michael R Mitcheff

Michiana Neuroscience, United States of America



09:40–10:20

Title: Stress and Depression Across the Lifespan: The Role of Inflammation in Onset and Treatment Response

Annamaria Cattaneo

Fatebenefratelli Institute, Italy

Session Introduction

Session Chair: Michael R Mitcheff, Michiana Neuroscience, USA

Tracks

Midwifery Nursing | Women Health Nursing | Community Health and Public Health Nursing | Mental Health and Psychiatric Nursing | Primary Healthcare Innovations in Nursing Education | Nursing Research and Evidence-Based Practice | Brain-Behavior Interactions | Mental Health | Neuroscience & Neurology | Aging and Cognitive Decline | Neuroscience & Technology Integration | Women Mental Health | Neuroplasticity and Brain Repair | Neurodevelopmental Disorders and Interventions

Oral Presentations

10:20–11:00

Title: From Takohpinawasowin to Wāsākāmā (make a circle) - traditional birthing education for indigenous communities in rural Saskatchewan, Canada

Dr. Brenda Green

Dr. Carrie Lavallie

Bethany Thomas

Cheryle Bellerose

First Nations University of Canada, Canada

Group Photo | Coffee Break 11:00-11:20

11:20–11:40

Title: The importance of nurses in chronic pelvic pain management

Melek Hava Köprülü

Kastamonu University, Türkiye

11:40–12:00

Title: The Neuroactive Steroid Pregnanolone Glutamate: antiepileptic, neuroprotective, and anti-inflammatory effect in perinatal focal cerebral ischemia model

Grygoriy Tsenov

National Institute of Mental Health, Czech Republic

Exhibitor Demo

12:00–12:20

Malte Ståps

Labster, Denmark

12:20–12:40

Title: A vulnerable group after disaster: Challenges of older individuals

Sabri Okan Demiryürek

Kastamonu University, Türkiye

Lunch Break 12:40-13:40

13:40–14:00

Title: Positive Impact On Paulina Bottle for Fetal Movement Counts Among Pregnant Womenh

Safiatsu Ibrahim

Our Lady Of Grace Hospital, Ghana

14:00–14:20

Title: Analysis of the progress of AI models for EEG processing

Evgenii Shuranov

ITMO University, 49 Kronverksky prospect, Russian Federation, Amsterdam, Netherlands

14:20–14:40

Title: Advances and Challenges in Parkinson's Disease: Integrating Multidisciplinary Insights for Therapeutic Innovation

Obydul Huq

Consultant Physiotherapist & Managing director Doctor's Physiotherapy center, Bangladesh

14:40–15:00

Title: Will be Updated Soon..
Atta Ur Rahman
Pakistan

Panel Discussion & Certificate Felicitation
Day –1 Ends

Day 2

Scientific Program

July 23, 2025 | Amsterdam, Netherlands

Virtual Mode Zoom Meeting
(GMT+2) Time in Amsterdam,
Netherlands

Keynote Presentations



09:00–09:40

Title: Namaste Care: Helps people with advanced Dementia live not just exist
Joyce Simard
University of Minnesota, USA



09:40–10:20

Title: Autism & Mental Health – how different individuals are impacted
Kerryne Burgoyne
CEO/Founder of 6 self-help life courses at KTalk, Australia



10:20–11:00

Title: Dietary Exposure to Neurotoxic Mycotoxins in Cameroon: Implications for Brain Development and Neurodevelopmental Disorders in Children
Wilfred Angie Abia
University of Yaounde, Cameroon, Central Africa

Oral Presentations

11:00–11:20

Title: Mitochondrial DNA in Glioblastoma: A Systematic Review
Bilal Amin
University of Cambridge, United Kingdom

11:20–11:40

Title: Mental Health issues affecting Immigrant women
Gihane Endrawes
Western Sydney University, Australia

11:40–12:00

Title: Eyeballing the Brain with Neuroinformatics
Pankhuri Sharma
Manav Rachna International Institute of Research and Studies, India

12:00–12:20

Title: Using cultural simulation in nursing education to promote empathy
Gihane Endrawes
Western Sydney University, Australia

12:20–12:40	Title: Is Cognitive Neuroscience a pseudo-science ? Gabriel Vacariu Bucharest University, Romania
12:40–13:00	Title: The correlation between speech therapy and neuroscience from the perspective of a speech therapist Omar Ghaboura Speech and language pathologist, Kuwait
13:00–13:20	Title: Cultural perspectives on mental health: A study design Gihane Endrawes Western Sydney University, Australia
13:20–13:40	Title: From Designs for Autonomous Adaptive Agents to Clinical Disorders: Linking Cortically-Mediated Learning to Alzheimer’s Disease, Autism, Amnesia, and Sleep Stephen Grossberg Boston University, United States
13:40–14:00	Title: Metabolic Pathway Alterations in Glioblastoma Stem Cells Under Hypoxia: Computational Analysis of Hypoxia-Activated Pathways Shivi Kumar Mind Matters Foundation, Marcus High School, United States
14:00–14:20	Title: Technological Advancements in the Detection and Quantification of Parkinsonian Tremor: A Scoping Review Paula Abola University of Jamestown, United States of America
14:20–14:40	Title: Neurodynamics and Clinical Implications of Heart-Brain Coherence and Non-Sleep Deep REST Katelyn Lehman The Chicago School of Professional Psychology, USA

Panel Discussion



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ABOUT:

UbiSim™ is transforming nursing education through immersive virtual reality (VR) simulation, helping prepare the next generation of nurses for real-world clinical challenges. Designed specifically for nursing programs, UbiSim allows students to build critical thinking, clinical judgment, and empathy through lifelike patient care scenarios in a safe and controlled virtual environment. Nursing educators can easily customize simulations, track student performance, and facilitate meaningful debriefings—all aligned with international nursing standards.

Developed by Labster®, UbiSim combines advanced VR technology with evidence-based educational design. Used by nursing schools and healthcare institutions across the globe, UbiSim is trusted to improve learner outcomes while reducing the logistical challenges of in-person clinical training. In 2024, TIME Magazine recognized UbiSim as a Best Invention, spotlighting its impact on improving nurse preparedness and supporting more compassionate, effective patient care.

Visit: <https://www.ubisimvr.com>



Our Purpose:

UbiSim's mission is to empower nursing educators with cutting-edge tools to train students in clinical decision-making and soft skills before they encounter real patients. By simulating complex healthcare situations—from emergency responses to culturally sensitive care—students gain the competence and confidence to handle diverse clinical scenarios. Educators benefit from flexible simulation design, collaborative debriefing tools, and data insights that support targeted instruction and competency-based education.

Our Commitments:

Nursing Simulation, Reimagined:

Simulation is a cornerstone of nursing education, but traditional approaches can be expensive and logistically complex. UbiSim offers a scalable, accessible alternative that maintains high fidelity and realism, supporting both individual learning and multi-user collaboration.

Equity in Nursing Education:

UbiSim breaks down barriers to quality training by enabling access to realistic simulation experiences, regardless of physical campus infrastructure or geographic limitations. Students from diverse backgrounds can engage in the same high-quality learning, supporting equitable education across nursing cohorts.

Nursing is STEM:

UbiSim reinforces that nursing is a science-driven profession, grounded in STEM competencies like anatomy, pharmacology, and decision science. Through immersive, hands-on learning, UbiSim helps bridge the gap between theory and practice, elevating both educational and patient care outcomes.



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KEYNOTE PRESENTATIONS

DAY 1



Michael R Mitcheff

Michiana Neuroscience, Mishawaka, Indiana United States of America

Autism spectrum: Electrical Epileptiform Condition. Integration of functional neuropsychological testing and EEG neurofeedback/anticonvulsants future treatment. Overlap ASD, ADD, ADHD, Tourette's, PTSD, Dyslexia

Autism spectrum disorder (ASD) is a neurological and developmental disorder. An abnormal EEG occurs in about 2-4% of the general population. 70-80% of those with autism have abnormal EEG. Estimated 40% of ASD diagnosed clonic tonic seizures (generalized). It appears isolated Gamma with multi-focal heavy hertz wavelength oscillations often occur. Those with ASD often have unique gifts valuable to society. ASD can be multifocal with parietal lobe stimulation and perceptual pattern recognition. The categorization/synthesis pattern recognition is most evident on Block Design scores on the WAIS-IV/WISC-5. This pattern recognition is highly useful to society. This allows focus upon future thought processes. Every strength is weakness so perceptual/sensory overstimulation is a strong challenge for the spectrum.

Autism "stimming" appears to be a way of grounding the parietal lobe and perceptual overstimulation. Stimming appears to be a type of neurofeedback self-regulation, but it is not clear what impact this has upon EEG. Psychoanalytically, stimming in ASD appears a form of reaction formation along with undoing defense mechanisms.

Treatments: Neurofeedback has demonstrated unique ability to treat neurological and mental health conditions. Medications largely treat symptoms, however medications like Lamictal (lamotrigine) do focus upon underlying biochemical etiologies. Lamictal is largely a glutamate and aspartate antagonist. This has proved an important treatment tool. This appears to relax CNS and PNS. This has also been shown to be neuroprotective protecting the nerve from excitotoxicity and cell loss. Lamictal is used heavy in mental health heavy and valuable tool.

Biography:

Dr. Michael R Mitcheff has a Doctor of Psychology (Psy.D.) degree with specialization in Clinical Neuropsychology & Psychopharmacology. He completed his Pre-Doctoral and Behavioral Health Residency at Franciscan St. James Hospitals and Medical Centers. Dr. Mitcheff completed 2-year post-doctoral fellowship in Clinical Neuropsychology at Diamond Headache Unit at St. Joseph Hospital in Chicago. He is Owner and Director of Neuropsychology & Neuropsychiatry at Michiana Neuroscience. He oversees his company's contracts in hospitals, acute rehab, sub-acute rehab and assisted living. Michael focuses upon clinical work and sees patients based upon complexity/need. Not ability to pay. Dr. Mitcheff also teaches neuropsychologists in training.



Annamaria Cattaneo

Associate Professor, University of Milan, Department of Pharmacological and Biomolecular Sciences, Milan, Italy

Stress and Depression Across the Lifespan: The Role of Inflammation in Onset and Treatment Response

Introduction: TStress during gestation is well recognized as a significant factor that increases the risk of developing depressive symptoms in mothers with consequences also on the offspring. Precise biological pathways dysregulated by stress during gestation, which may contribute to the development of such dysfunctions in mothers and to negative outcomes in the offspring still require more knowledge, although abnormal central and peripheral inflammatory responses have been reported, alongside with placental dysfunction. I will discuss data from pregnant dams exposed to stress during the last week of gestation and euthanized either on the last day of gestation or 21 days postpartum to examine short- and long-term stress-related consequences. Stressed pregnant rats exhibited enhanced inflammatory status at peripheral and central levels, along with metabolic alterations and Hypothalamic–pituitary–adrenal axis dysregulations. Moreover, stressed mothers showed significant impaired ability in maternal care, which correlated with altered levels of oxytocin. Stress experienced by mothers during pregnancy also affected placental morphology and functioning, via inflammatory responses, suggesting an important role of placenta in mediating the negative effect of stress exposure in pregnancy on the offspring.

Overall, these data are crucial for a better understanding of the biological mechanisms disrupted by stress during pregnancy that may have mental health consequences for women during this sensitive life stage and that could also explain an enhanced risk for the offspring to develop negative outcomes. Interventions targeting those mechanisms could be also able to shape the neurodevelopmental trajectories in the offspring, reducing their risk for altered behaviors.

Biography:

Annamaria Cattaneo is Assistant Professor at the University of Milan and she is also heading the Laboratory of Biological Psychiatry, at the IRCCS Fatebenefratelli Institute, where she is also Deputy Scientific Directors.

She coordinates different projects aimed at the identification of predictors for the development of mood disorders and of treatment response. She is particularly interested in perinatal psychiatry, evaluating how stress early in life or exposure to depression in utero can shape the brain trajectory.

She has more than 134 publications in PubMed, leading to SCOPUS H-Index = 48, and more than 8200 citations.

Dr Cattaneo received several Awards including the prestigious Rafaelsen Young Investigator's Award.

Name: Annamaria Cattaneo

Associate Professor, University of Milan, Department of Pharmacological and Biomolecular Sciences, Milan, Italy

Head of the Biological Psychiatry Lab, IRCCS Fatebenefratelli Institute, Brescia, Italy

Deputy Scientific Director, IRCCS Fatebenefratelli Institute, Brescia, Italy



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SPEAKER PRESENTATIONS

DAY 1



Dr. Brenda Green PhD¹, Dr. Carrie LaVallie PhD², Ms. Bethany Thomas³, Ms. Cheryle Bellerose⁴

¹Professor, Indigenous Health Studies, Asimakaniseekan Askiy Urban Reserve, First Nations University of Canada, Canada

²Program Coordinator and Acting Vice President-Academics, Professor, Indigenous Health Studies, Northern Campus, First Nations University of Canada, Canada

³BSW Birth Support Worker Program Coordinator Birth Support Worker Program Northern Campus, First Nations University of Canada, Canada

⁴Community Research Coordinator Touchwood Agency Tribal Council Lestock, First Nations University of Canada, Canada

From Takohpinawasowin to Wāsākāmā (*Make a Circle*) - Traditional Birthing Education for Indigenous Communities in Rural Saskatchewan, Canada

In 2019, we began conducting research takohpinawasowin, in a good way as a process that respects and honors the unique perspectives, knowledge systems, and values of traditional birthing practices within Indigenous rural communities in Saskatchewan, Canada. Recognizing the importance of voice and experience in shaping research outcomes, the partnerships established between research, First Nations University of Canada, and rural Indigenous communities, highlight the integration of academia with place-based knowledge. As a result, an academically credentialed Indigenous Birth Support Worker (IBWC), End of Life Support Worker, and Sexual and Reproductive Health Support Worker certificates emerged through the collective interests known as wāsākāmā (Make a Circle). These programs and the relationship established between the university and the community, work to enhance community well-being and interrupt systemic racism and bias by prioritizing the role of self-determination and local knowledge in Indigenous communities. This presentation highlights the importance of community involvement and leadership in creating place-based training for culturally safe, culturally responsive, and meaningful practices to enhance rural Indigenous health outcomes across the lifespan.

Key Terms: Indigenous People, Traditional Birthing, Land-Based Education, Community Based Research.

Biography:

Brenda Green Biography: Dr. Green background is in Mental Health Epidemiology and has been a professor at First Nations University of Canada since July 2006. Her research has primarily focussed on rural women experiences of aging and care, rural health services to northern Saskatchewan, and Indigenous women's experiences of birthing and caregiving. She has written on various subjects such as ethics and morality in nursing, traditional experiences of birthing, racism in health care, and more recently mental health process for Indigenous university students. Dr. Green's research focusses on collaborative and community based Indigenous research methods and teaches senior and graduate classes in this area. In particular, her current research is community driven, and community owned which has fostered and ongoing respectful relationship with various First Nations in Saskatchewan. Dr. Green is an active member of the College of Reviewers for the Canadian Institute of Health Research and has actively developed several courses on Indigenous Research Methodologies, Indigenous Research in Practice and has redeveloped Indigenous policy classes at First Nations University.

Carrie LaVallie Biography: Dr. LaVallie is a third-generation born, white Settler with Scandinavian and German Ancestral ties. As a Registered Psychiatric Nurse, they have over 30 years of experience, working in various non-profit organizations, private practices, the First Nations University of Canada, and with First Nation communities. They reside on Treaty 6 territory and the homeland of the Metis Nation of Saskatchewan, where they hold a small private practice and teach for the University in the Indigenous Health Program. They are currently the Interim VP Academic.

Bethany Thomas Biography: Tansi, my name is Bethany Thomas. I am a proud Cree woman born and raised on my home community of Big River First Nation Treaty Six Territory in Canada. I am a mother of two teenagers, a young man and a young woman. I am proud of my ancestral lineage and my Cree culture. I was fortunate to have been surrounded by my culture right into my adult years. I am currently completing my Masters of Indigenous Social Work studies to continue the work in being a part of our healing community.

Ninaskimon- I am grateful

Cheryle Bellerose Biography: Cheryle is a Community Research Coordinator for First Nations University of Canada and is the community organizer for the research study entitled: **Takohpinawasowin: Indigenous Elders Stories of Traditional Birthing and Child-Rearing Practices**. Cheryle is a Residential School Survivor, Anishinabe Language Keeper and Knowledge Holder and resides in Treaty #4 -Touchwood Agency Tribal Council.



Melek Hava Köprülü

Res. Asst., Kastamonu University, Faculty of Health Sciences
Department of Midwifery, Kastamonu, Türkiye

The importance of Nurses in Chronic Pelvic Pain Management

Chronic Pelvic Pain (CPP) is a non-cyclic pain lasting longer than six months, located in the pelvis and lower abdominal area. It affects 3-10% of women and is associated with numerous adverse outcomes, including reduced quality of life, difficulties in physical functioning, and significant economic burdens. The multifactorial nature of CPP, combined with the lack of a clearly defined pathophysiology, makes diagnosis and treatment particularly challenging. It is most commonly observed in areas such as the supra-pubic region, back, and hips, necessitating a multidisciplinary treatment approach.

Nurses play a critical role in the management of CPP. Alongside interventions such as analgesics, hormonal treatments, and physical therapies, individualized healthcare interventions that support lifestyle modifications for patients are pivotal. Through their long-term care relationships, nurses contribute significantly by assessing pain, enhancing self-care skills, educating patients, and coordinating with healthcare teams.

While planning treatments, nurses focus on factors such as the patient's mood, pain symptoms, and daily activities. Moreover, they encourage women to seek social and emotional support, aiding them in coping with stress effectively.

Today, professional nursing roles have expanded to include responsibilities such as research, education, and patient advocacy. Nurses contribute to the development of effective treatment methods for mitigating the impacts of CPP. Given that CPP negatively influences physical, psychological, and social aspects of an individual's life, the holistic approach adopted by nurses in patient care is of vital importance.

Definition and Epidemiology of Chronic Pelvic Pain: The American College of Obstetricians and Gynecologists (ACOG) defines Chronic Pelvic Pain (CPP) as "noncyclic pain lasting for at least six months, localized to the pelvis, lower abdomen below the umbilicus, lower back, or buttocks, and of sufficient severity to cause functional disability or require medical intervention" (ACOG, 2004). On the other hand, the Royal College of Obstetricians and Gynaecologists (RCOG) in the United Kingdom considers it a symptom and describes it as "intermittent or continuous pain in the pelvic or lower abdominal region, persisting for at least six months, and unrelated to menstruation, sexual intercourse, or pregnancy" (RCOG, 2012b). CPP may be experienced in the suprapubic, inguinal, urethral, penile, clitoral, perineal, rectal, lumbar, hip, and thigh regions (Vincent, 2009). This syndrome is frequently associated with dysfunctions of the lower urinary tract, genital, gastrointestinal, and gynecological systems. Additionally, cognitive, emotional, and behavioral disturbances may also accompany the condition (Engeler et al., 2014).

The classification of Chronic Pelvic Pain (CPP) is challenging due to its potential to involve multiple anatomical regions, various etiologies, and diverse pathophysiological mechanisms. According to the

European Association of Urology, the term “chronic pelvic pain syndrome” should be used when no identifiable cause related to a specific organ or pathology can be determined. Conversely, when symptoms related to a particular system or organ are present, the classification of pain should be based on the underlying etiology. This classification considers factors originating from urological, gynecological, gastrointestinal, neurological, psychological, sexual, and musculoskeletal systems (Engeler et al., 2019). Among these, musculoskeletal causes are reported to be the most frequently encountered in cases of chronic pelvic pain syndrome (Bradley et al., 2017).

Studies on the prevalence of chronic pelvic pain (CPP) highlight that this condition constitutes a significant public health concern. It has been reported that approximately 38 out of every 1,000 women aged between 15 and 73 experience CPP (Cichowski et al., 2018). Data from various countries indicate that the prevalence of this condition within the general population ranges from 5.7% to 26.6% (Rabia et al., 2018). Among women of reproductive age, this rate varies between 14% and 24%, and approximately 14% of women are estimated to experience CPP at least once in their lifetime (Ahangari, 2014).

Chronic pelvic pain (CPP) is a prevalent health issue that significantly impairs an individual's quality of life. Affected individuals often experience difficulties in performing daily activities, maintaining employment, and fulfilling social roles (Gökyildiz Bayrak, 2008). In a study conducted by Mathias et al., it was reported that approximately 25% of women experienced loss of work productivity for a full or half day each month due to pain, 58% faced difficulties in daily activities, and 52.7% reported that their family, social, or sexual lives were negatively affected by the pain (Mathias et al., 1996).

CPP may lead to functional impairment over time and can necessitate medical or surgical interventions. Even in cases where chronic pain cannot be completely resolved, it is possible to maintain functionality and improve patients' quality of life through appropriate interventions (Gökyildiz Bayrak, 2008).

Pathophysiology Of Chronic Pelvic Pain: The neurophysiological basis of chronic pelvic pain (CPP) is explained through two main mechanisms: nociceptive and non-nociceptive pain. Nociceptive pain arises from somatic or visceral structures and is associated with damaged or painful tissues. In contrast, non-nociceptive pain originates from neuropathic or psychogenic sources (Gökyildiz Bayrak, 2008).

Somatic pain originates from structures such as the skin, muscles, joints, and bones. It is typically well-localized and transmitted through sensory nerve fibers. In contrast, visceral pain arises from internal organs such as the intestines, bladder, rectum, uterus, ovaries, and fallopian tubes. This type of pain may be triggered by various processes, including dysfunction of hollow organs, abnormal muscle contractions, stretching of solid organ capsules, hypoxia, necrosis, production of algescic substances like prostaglandins, chemical stimulation of nerve endings, vascular compression, or inflammation (Gökyildiz Bayrak, 2008; Grace & Zondervan, 2006).

In fact, organs such as the uterus, ovaries, and intestines are relatively insensitive to many types of painful stimuli. This explains why pain originating from these organs is often perceived as “referred pain.” The pain accompanying CPP may be sharp, dull, throbbing, or colicky in nature (Gökyildiz Bayrak, 2008).

Factors Contributing To Chronic Pelvic Pain: Chronic pelvic pain (CPP) is a complex and multifactorial condition resulting from the interaction of various bodily systems. However, the underlying mechanisms have not yet been fully elucidated. In most cases of CPP, no clear infection or localized pathological cause can be identified (Berghmans, 2018). Common factors that may contribute to CPP are presented by system in Table 1 (Oral & Aygün, 2016).

Table 1. Differential Diagnoses of Chronic Pelvic Pain by System

System	Differential Diagnoses
Gynecologic	Endometriosis, adhesions, adenomyosis, pelvic inflammatory disease, endometritis, malignancies, ovarian retention syndrome, residual ovary syndrome, endosalpingiosis, chronic ectopic pregnancy, adnexal cysts, cervical stenosis, endometrial or endocervical polyps, cervical stenosis, intrauterine device, symptomatic pelvic floor dysfunction
Gastrointestinal	Irritable bowel syndrome, celiac disease, inflammatory bowel disease, diverticulosis, chronic constipation, chronic intermittent bowel obstruction
Urologic	Interstitial cystitis, bladder tumors, recurrent urinary tract infections, chronic urethral syndrome, urethral diverticulum, radiation cystitis, urolithiasis
Musculoskeletal	Myofascial pain, fibromyalgia, levator ani syndrome, piriformis syndrome, coccydynia, peripartum pelvic pain syndrome, hernia
Psychiatric	Depression, somatization disorder, substance dependence, physical and sexual abuse, sleep disorders
Neurologic	Neuralgia (iliohypogastric, ilioinguinal, genitofemoral, pudendal nerves), neuropathic pain, abdominal epilepsy, abdominal migraine, neurogenic tumor, disc herniation

Characteristics of Chronic Pelvic Pain: Chronic pelvic pain (CPP) may be localized to a specific region or extend across a broader area of the body. The most commonly affected regions include the suprapubic area, inguinal region, urethra, penis, clitoris, perineum, rectum, lower back, hips, and thighs. CPP can have an acute or chronic onset and may be described as a sensation of fullness or an urgent need for evacuation. The pain may occur spontaneously or be triggered by the stimulation of specific points. Common pain patterns include aching, burning, sharp stabbing, or electric shock-like sensations.

CPP is frequently accompanied by symptoms such as frequent or urgent urination, urinary or fecal incontinence, constipation, diarrhea, sensory hypersensitivity (hyperesthesia, hyperalgesia, allodynia), decreased libido, dyspareunia, and erectile dysfunction.

Musculoskeletal-related causes include pelvic floor muscle pain, abdominal muscle dysfunction, spinal issues, coccydynia, sacroiliac joint disorders, hip dysfunction, and neuropathic conditions affecting the lower thoracic, lumbar, or sacral nerve plexuses. Additionally, fibromyalgia, myofascial pain syndrome, trigger point pain, chronic low back pain, nerve entrapments, scar-related pain, connective tissue tumors, and hernias are also considered potential causes of CPP (Tosun, 2017).

Chronic pelvic pain (CPP) can adversely affect an individual's quality of life, potentially leading to issues such as depression, anxiety, mood disorders, insomnia, and chronic fatigue. Therefore, the management of comorbid psychological and physical conditions is also of great importance. It is recommended that the quality of life of individuals diagnosed with CPP be systematically evaluated (Engeler et al., 2019).

Various psychosocial factors such as increased pain sensitivity, personality traits, stress, social influences, depression, anxiety, post-traumatic stress disorder, somatization, and substance use disorders have been found to be associated with CPP. Consequently, it is essential that these factors are taken into consideration during the treatment process (Riegel et al., 2014).

Assessment of Chronic Pelvic Pain: The literature recommends the UPOINT classification system, which is suitable for interdisciplinary use, for the assessment of chronic pelvic pain (CPP). The evaluation components suggested by this system are outlined in the guidelines published by the European Association of Urology (EAU) (Table 2) (Engeler et al., 2014).

Table 2. UPOINT Classification of Pelvic Pain Phenotypes

Phenotype	Assessment
Urology	Urinary stream, frequency, cystoscopy, ultrasound, uroflowmetry
Psychology	History of pain, depression, anxiety, negative sexual experiences
Organ specific	Assess urological, gastrointestinal, anorectal, and sexual complaints. Perform gynecologic and rectal exams
Infection	Urine culture, Semen culture, vaginal swab, discharge evaluation
Neurological	Evaluate neurological symptoms (sensory loss, numbness, etc.). Perform physical exam to assess reflexes and motor strength
Tenderness Muscle	Palpate pelvic floor muscles, assess tenderness and tightness
Sexological	Evaluate erectile function, ejaculation, and post-orgasmic symptoms

Initial Assessment in Chronic Pelvic Pain: It is crucial to allocate sufficient time for the initial evaluation of women presenting with chronic pelvic pain (CPP). These women often seek an environment where they feel heard, where their pain can be expressed openly, and where their experiences are taken seriously. Many request an explanation for the source of their pain and are inclined to provide a detailed medical history accordingly. Concerns regarding the potential causes of the pain are common; therefore, a multidisciplinary approach that includes appropriate specialist input is essential during the assessment process (Bruckenthal, 2011; RCOG, 2012a; Stones, 2008).

The complex and multifactorial nature of CPP should be acknowledged from the outset, and the treatment plan should be developed collaboratively between the patient and the clinician. While the majority of cases initially present to primary healthcare services, if the underlying cause of the pain cannot be determined or effectively managed, referral to a specialized unit for further evaluation is warranted (RCOG, 2012a).

1. Detailed History: During the initial assessment, it is recommended that a thorough inquiry into the characteristics of the pain be conducted, followed by a comprehensive history encompassing all systems that may contribute to the development of the pain. Even if symptoms appear to be related to a single system, obtaining a detailed medical history for other systems facilitates the identification of potential comorbid conditions and allows for timely planning of necessary consultations (Renaer, 2012).

The following areas are suggested for systematic evaluation:

Gynecological/Obstetric History: Mode of delivery, menstrual patterns, contraceptive methods, infertility, dyspareunia, abnormal bleeding.

Gastrointestinal System: Bowel habits, weight loss, rectal symptoms.

Urological System: Dysuria, urinary frequency, history of infections.

Psychosocial Status: Anxiety, depression, history of trauma, family-related problems.

Neurological and Musculoskeletal System: Numbness, postural abnormalities, pain that varies with movement.

2. Physical Examination: In cases of CPP, the physical examination should be performed systematically and in various positions (standing, sitting, supine, and lithotomy). Postural abnormalities, abdominal wall tenderness (Carnett's sign), surgical scars, and abdominal masses should be assessed (Loos et al., 2008).

During the gynecological examination in the lithotomy position, abnormalities such as infections, prolapse, or bleeding should be observed. Vaginal, cervical, and pelvic muscle tenderness should be evaluated through palpation. A bimanual examination should be conducted to assess the uterus and adnexa (Renaer, 2012; Tu et al., 2008).

3. Laboratory Tests: In women of reproductive age, a β -hCG test should be performed to rule out the possibility of pregnancy. Complete blood count and erythrocyte sedimentation rate are valuable for detecting inflammation and infection (Arnold et al., 2012; Tokushige et al., 2006). In sexually active individuals, testing for sexually transmitted infections such as chlamydia and gonorrhea may be recommended. Additionally, urinalysis, urine culture, and urinary cytology can be utilized to investigate potential causes such as urinary tract infections, urolithiasis, and malignancies (Oral & Aygün, 2016).

4. Imaging Methods: Transvaginal ultrasound is the primary imaging modality for evaluating adnexal masses and lesions that may cause chronic pelvic pain (CPP), such as endometriomas, hydrosalpinges, ovarian cysts, and fibroids (Fauconnier & Chapron, 2005; Tokushige et al., 2006). In the diagnosis of adenomyosis, it has been suggested that, when performed by experienced practitioners, transvaginal ultrasound can be as effective as MRI (Raab & Plate, 2007).

Computed tomography (CT) may provide additional information in cases where malignancy is suspected or when lesions are non-gynecological in origin; however, it carries a risk of radiation exposure. Magnetic resonance imaging (MRI), on the other hand, is radiation-free and has superior sensitivity in detecting small endometriotic foci (e.g., in the rectovaginal septum or bladder wall). Therefore, it is often preferred in patients with negative transvaginal ultrasound findings (Oral & Aygün, 2016).

5. Endoscopic Methods: Diagnostic laparoscopy is a reliable method, particularly for identifying endometriosis and adhesions, and was previously considered the "gold standard" in the evaluation of chronic pelvic pain (CPP). Today, however, it is more commonly recommended as a second-line approach when other treatment modalities have proven ineffective (RCOG, 2012a).

Treatment Options:

Pharmacological Treatment: As a first-line approach in the treatment of chronic pelvic pain (CPP), simple analgesics such as paracetamol, aspirin, and nonsteroidal anti-inflammatory drugs (NSAIDs) are recommended (Gökyildiz Bayrak, 2008). If these are insufficient, neuropathic agents such as tricyclic antidepressants and anticonvulsants may be initiated. Opioids are considered an alternative for treatment-

resistant cases (Engeler et al., 2019). Botulinum toxin type A may be beneficial for pelvic muscle spasms and dyspareunia. Patients who do not respond to neuropathic treatment should be referred to multidisciplinary pain clinics.

Given the multifactorial nature of CPP, treatment should be approached through a biopsychosocial model. Hormonal therapies—including combined oral contraceptives, progestins, GnRH analogs, and danazol—have been found effective in managing endometriosis-related pain; levonorgestrel-releasing intrauterine devices may be considered even in adolescents (Kroon & Reginald, 2005; RCOG, 2012a; Stones, 2008). In cases accompanied by irritable bowel syndrome (IBS), antispasmodics and dietary adjustments are recommended. Gabapentin and amitriptyline can also be used as adjunctive treatments for neuropathic pain (RCOG, 2012a).

Surgical Treatment: Surgical treatment is applied in cases where chronic pelvic pain (CPP) is associated with specific underlying causes and may include procedures such as hysterectomy, oophorectomy, myomectomy, excision of endometriotic lesions, adhesiolysis, and appendectomy. In addition, removal of abnormal tissues in cases of vulvodynia and vestibulitis, as well as nerve ablation techniques such as laparoscopic uterosacral nerve ablation (LUNA) and presacral neurectomy (PSN), may also be performed. However, surgical treatment has certain limitations, including cost, the risk of complications, and the potential for inadequate diagnosis in some cases of endometriosis (Kal & Beji, 2013; Oral & Aygün, 2016).

Other Treatment Approaches: Non-pharmacological and non-surgical interventions play a significant role in the holistic management of chronic pelvic pain (CPP). Psychological approaches such as psychotherapy, cognitive behavioral therapy, group therapy, and somatocognitive therapy may help reduce symptoms by addressing the psychosocial dimensions of pain (Güvey, 2018; Won & Abbott, 2010). Among neuromodulation techniques, transcutaneous electrical nerve stimulation (TENS), sacral/peripheral nerve stimulation have been shown to reduce pain, enhance quality of life, and have beneficial effects on sexual dysfunction (Akgün & İşler, 2019; Carey et al., 2017; Gökyıldız Bayrak, 2008; Sharma, 2015). Trigger point injections are more effective when combined with physical therapy and behavioral therapies, and pelvic floor muscle injections using agents such as botulinum toxin have been reported to provide long-term pain relief (Adelowo et al., 2013; Oral & Aygün, 2016). Nerve blocks (e.g., inferior hypogastric plexus, paraspinal blocks) are also employed in managing the localized neuropathic components of CPP, offering short-term but meaningful relief (Amin et al., 2015; Hunter et al., 2018; Rosa et al., 2015).

Complementary and alternative therapies such as acupuncture have been shown to reduce chronic pelvic pain (CPP) symptoms, while yoga contributes to pain reduction and improves quality of life by enhancing pelvic floor muscle control (Huang et al., 2017; Ozel et al., 2011; Saxena et al., 2017). Additionally, functional approaches including lifestyle modifications and the low FODMAP diet may help manage symptoms, particularly in CPP patients with comorbid irritable bowel syndrome (IBS) (Barrett, 2013; Carey et al., 2017). It has been demonstrated that women with CPP frequently turn to methods such as vitamin and mineral supplementation, phytotherapy, specialized diets, and physical exercise. These alternative treatments serve as supportive strategies within multidisciplinary care models and hold potential for enhancing patients' overall quality of life (Chao et al., 2015).

The Impact of Chronic Pelvic Pain on Women's Lives: Chronic pelvic pain (CPP) is a significant health issue that adversely affects various aspects of women's quality of life. Research has shown that CPP imposes considerable limitations not only on physical health, but also on women's daily activities, social relationships, emotional well-being, sexual functioning, and professional life (Ahangari, 2014; Mellado et al., 2016; Siqueira-Campos et al., 2019). Women with CPP are at increased risk of work productivity loss, and in some cases, the severity of pain compels them to completely withdraw from professional life (Ahangari, 2014). Studies have demonstrated that individuals with CPP score lower than those without CPP in quality-

of-life domains such as physical health, psychological well-being, pain severity, and social functioning (Luz et al., 2018).

Studies have found that women with chronic pelvic pain (CPP) exhibit higher rates of depression and anxiety, along with significantly reduced overall quality of life (Aaron et al., 2025; Siqueira-Campos et al., 2019). Research examining the impact of CPP on sleep has shown that women experience considerable deterioration in sleep quality due to pain, which in turn negatively affects both physical and mental health. Therefore, it is recommended that sleep education programs be implemented for women with CPP, particularly within psychiatric and neurology clinics (Cosar et al., 2014; Merrill & Song, 2024).

Chronic pelvic pain (CPP) can also have a profound impact on social life. One study reported that women with CPP experienced significant social isolation, which led to notable psychological consequences. These findings suggest that chronic pain may impair an individual's social relationships and highlight the critical importance of psychosocial support in the care of these patients (Mellado et al., 2016).

Nursing Approach For Women With Chronic Pelvic Pain: In the nursing care of women experiencing chronic pelvic pain (CPP), adopting a holistic approach is one of the fundamental principles (P. D. Abercrombie & L. A. Learman, 2012). Nurses should address not only the physical symptoms but also the emotional, social, and psychological needs of the patients. In this context, developing a therapeutic relationship through empathy enables the creation of a safe environment where the individual can express her experiences related to pain (Babaii et al., 2021).

To develop an effective care plan for pain management, a comprehensive assessment should be conducted, including details such as the location, type, duration, intensity, and onset of pain, as well as the patient's description of the pain and factors that exacerbate or alleviate it (Oral & Aygün, 2016). Nurses should consider not only verbal expressions but also autonomic and nonverbal indicators of pain. The appropriate selection and use of pain assessment scales tailored to the patient's characteristics will enhance the quality of care (Saleh, 2023).

In nursing care, it is not only the assessment but also the planning and implementation of the treatment process that are of critical importance. Patients should be guided in learning how to cope with pain; for instance, maintaining a monthly pain diary may be encouraged (Toney-Butler & Unison-Pace, 2018). This method helps women become aware of their pain-related behaviors and facilitates the development of positive behavioral changes over time. In addition, the implementation of planned treatments and monitoring their outcomes fall within the nurse's responsibilities (Malak & Beji, 2015).

Educational programs designed for women with CPP should address not only pain management but also topics such as dietary regulation, stress coping strategies, sexual health, and emotional support (Toptaş & Aksu, 2017). Moreover, referring patients to structured support systems such as patient education programs or support groups should be considered part of the nursing approach. Such initiatives reduce feelings of isolation and contribute to women's psychosocial empowerment (Malak & Beji, 2015; Toptaş & Aksu, 2017).

Nurses can also contribute to the advancement of knowledge on chronic pelvic pain (CPP) through scientific research in this field. In particular, studies evaluating the effects of both conventional and complementary treatment methods help to enhance understanding of women's pain experiences. Such nursing-based research plays a vital role in raising awareness of the individual and societal impacts of CPP (Priscilla D. Abercrombie & Lee A. Learman, 2012; Toptaş & Aksu, 2017).

Conclusion: In conclusion, chronic pelvic pain (CPP) affects approximately one in six women in the adult female population. Although its exact etiology remains unclear, effective symptom management is essential. Alongside the physical impact of pain, its social and psychological dimensions must also be carefully

assessed. Women should be given sufficient time to share their medical history and pain experiences in detail. Nurses play a key role in the assessment, treatment, and ongoing support of women with CPP, helping them to maintain their daily functioning and overall well-being.

Keywords: Chronic Pelvic Pain, Nursing care

Biography:

Melek Hava Köprülü is a research assistant at Kastamonu University Faculty of Health Sciences, Department of Midwifery. She holds a master's degree in Obstetrics and Gynecology Nursing from Marmara University and a bachelor's degree in Nursing and Physiotherapy-Rehabilitation. Her academic interests focus on women's health, reproductive health, chronic pelvic pain, sexual health, and complementary and integrative care approaches. She has presented her research at various national and international congresses and has contributed to the organization of several scientific events related to maternal and public health. Dedicated to evidence-based practice and holistic care, she continues to work on projects that promote women's well-being across physical, emotional, and social dimensions.



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The Neuroactive Steroid Pregnanolone Glutamate: antiepileptic, neuroprotective, and anti-inflammatory effect in perinatal focal cerebral ischemia model

The present study aims to explain the mechanism of the therapeutic effect of synthetic $3\alpha5\beta$ pregnanolone glutamate ($3\alpha5\beta$ -PG) in a model of perinatal focal cerebral ischemia (FCI) using electrophysiological, immunohistochemical, and bioanalytical correlates. The effect of $3\alpha5\beta$ -PG on the course of FCI itself and on the changes induced by FCI was studied in 12-day-old rats.

FCI was induced by endothelin-1 infusion (ET-1; 40 pmol/1 μ l) into the right dorsal hippocampus. Electrodes were implanted contralaterally in the dorsal hippocampus and over the left sensorimotor cortex. The $3\alpha5\beta$ -PG (1 mg/kg, i.p.) was administrated 5 minutes after the end of ET-1 infusion. Animals were EEG-monitored for 2h and parameters of electrographic seizures and power spectral density (PSD) changes were evaluated. Animals were transcardially perfused 24 hours later, brains were sectioned, and stained for markers of neurodegeneration and inflammation. Another group of animals without electrodes was sacrificed 1h after $3\alpha5\beta$ -PG treatment, right hippocampi were harvested, and the steroidomic profile was analyzed by GC-MS/MS.

Significant increases in pregnanolone (~40-fold), 17-hydroxypregnanolone (~9-fold), and allopregnanolone (~1.5-fold) were found in the hippocampi of animals injected with $3\alpha5\beta$ -PG after ischemia. This confirms our previous findings that $3\alpha5\beta$ -PG is a prodrug for 17-hydroxypregnanolone. Pregnanolone-glutamate treatment attenuated ischemia-induced seizures (~90%) significantly decreased PSD in all EEG bands and distinctly reduced inflammation and neurodegeneration after 24 hours compared to non-treated ischemic animals. These results demonstrate that $3\alpha5\beta$ -PG can ameliorate the effects of ischemia in the immature brain.

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Keywords: neuroactive steroids, endothelin, cerebral ischemia, neurodegeneration, inflammation

Biography:

Grygoriy Tsenov has completed his PhD in Neuroscience from Charles University in Prague working on brain excitability changes in the perinatal status epilepticus model. Later, he focused on the role of endothelin receptors in the perinatal ischemic stroke model and treatment of perinatal ischemia outcome. He is the Leader of the Experimental Neurobiology group of the Preclinical Research Program at the National Institute of Mental Health (Czech Republic). He has published over 20 papers in renowned journals and supervises student diploma and dissertation theses at the Faculty of Science, Charles University.



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A vulnerable group after Disaster: Challenges of older individuals

1. Introduction:

According to the United Nations Office for Disaster Risk Reduction, a disaster is defined as “a serious disruption of the functioning of a community or a society at any scale due to hazardous events interacting with conditions of exposure, vulnerability and capacity, leading to one or more of the following: human, material, economic and environmental losses and impacts” (UNDRR, 2017). While the global population is increasing at an unprecedented rate, the factors determining its distribution have also changed. In order to meet the needs of the growing population, the use of natural resources has intensified, and human activities have spread across nearly all parts of the earth. As a result, pressure and stress on the environment have reached historically unparalleled levels (Dölek, 2021). Natural and human-induced disasters are events that pose a serious threat to human life, causing significant destruction and economic losses. The most prominent characteristics of natural disasters include their unpredictability, the scarcity of resources in affected areas, and the rapid alteration of environmental conditions. Such uncertainty complicates both emergency response efforts and resource planning, making it difficult to foresee variables such as population displacement and the extent of damage during a disaster (Celik & Corbacioglu, 2010; Penning-Rowsell, Sultana & Thompson, 2013; Yu, Yang & Li, 2018).

As a result of the globally shifting demographic structure, older adults now constitute an increasingly significant proportion of the population and are among the most vulnerable groups to the sudden and unexpected effects of natural disasters (Şevik, 2023). In disaster situations, older individuals tend to exhibit higher levels of vulnerability compared to other groups for various reasons. Some require assistance from others to evacuate hazardous areas or to access necessary support, while others face difficulties in reaching community resources. Moreover, certain older adults may have limitations in hearing, comprehending, or responding appropriately to evacuation warnings due to physical or cognitive impairments. Older individuals with physical or mental disabilities are among the most fragile and disadvantaged groups during disasters and in the subsequent days, weeks, or even months of crisis and societal disruption (Maltais, 2019).

The occurrence of disasters may disproportionately affect older adults with various impairments. In particular, those with one or more chronic illnesses—such as arthritis, hypertension, cardiovascular disease, diabetes, or respiratory conditions—are at elevated risk (Aldrich & Benson, 2008). These health conditions may hinder their ability to prepare for, respond to, and recover from disasters, thereby reducing their adaptability (Fernandez et al., 2002). Among especially frail older individuals, physical functional loss is more pronounced, and catastrophic events like disasters may pose life-threatening risks (Ngo, 2001; Wong, 2019).

This review broadly addresses the challenges encountered by older adults in the aftermath of disasters, drawing attention to the impact of physiological, psychological, and social vulnerabilities specific to aging on disaster-related processes. It emphasizes the importance of structuring post-disaster response planning to accommodate the unique needs of older adults, aiming to raise awareness based on current literature.

2. Post-Disaster Challenges of the Older People:

2.1. Physical Challenges: Sudden-onset disasters such as earthquakes may have devastating effects on older adults, particularly those with chronic illnesses or physical limitations. Individuals requiring continuous medication, routine follow-up, or specialized care are especially vulnerable to disruptions in health services following disasters. Damage to transportation infrastructure, the inoperability of healthcare facilities, and difficulties in accessing essential supplies may severely compromise the management of existing conditions, potentially leading to life-threatening complications. Moreover, physically disabled older adults often face significant challenges in evacuation and sheltering processes, which adds both physical and psychosocial burdens (Ghazanchaei et al., 2023).

Some older adults have pre-existing medical conditions that require consistent treatment, such as specific diets or regular medication use. However, these conditions may deteriorate post-disaster due to disrupted healthcare access (Ahmadi et al., 2018; Lavin et al., 2012). Limited communication and transport systems may hinder the supply of medications and medical equipment, transforming otherwise stable chronic diseases into acute emergencies. For example, individuals with cardiovascular diseases who are unable to take anticoagulants may experience strokes; diabetic patients without access to insulin may suffer from hyper- or hypoglycemia; and those with respiratory diseases may encounter severe dyspnea in the absence of oxygen support (Açkın & Tokem, 2023; Atalay & Çakır, 2021).

Additionally, older adults with impairments such as hearing or vision loss, cognitive decline, limited mobility, or reduced access to resources may experience heightened difficulties during emergencies. These limitations may prevent them from receiving, understanding, or responding to emergency instructions, reaching evacuation zones, or accessing essential items like food and water in the aftermath of disasters (Şevik, 2023).

Furthermore, for older individuals with diminished self-care capacity, overall life satisfaction is often influenced by a complex interplay of social, physical, psychological, and economic factors, including loneliness, anxiety, and limited financial means (Borg, 2006). Post-disaster access issues may intensify these vulnerabilities, with the lack of social support and healthcare access significantly diminishing quality of life.

2.2. Cognitive and Psychological Challenges: Cognitive impairments, including dementia as their most severe form, already pose a significant health challenge for the aging population and are projected to become a major public health concern globally as the proportion of older individuals continues to rise (GBD 2016 Dementia Collaborators, 2019; Montine, Bukhari & White, 2021). In the context of natural disasters, alterations in mental and emotional states among older adults are commonly observed. These changes should not be dismissed, as they may reflect an underlying psychological imbalance that requires attention to prevent disproportionate or uncontrolled reactions (Ahmadi et al., 2018).

Studies have shown that the post-disaster environment may exacerbate psychological challenges, such as displacement, agitation, sleep disturbances, increased substance use, difficulties with concentration, feelings of guilt and uncertainty, and pronounced loneliness—all of which may necessitate professional psychological support (Ahmadi et al., 201). Additionally, mental health needs in this group include addressing pre-existing psychiatric conditions, emotional distress, confusion, communication difficulties,

and cognitive deterioration, along with the essential need for social support systems that uphold the dignity of older adults (Rosenkoetter et al., 2007).

Equally important are social needs that contribute to psychosocial well-being. These encompass the desire for belonging, emotional connection, being loved and cared for, receiving empathy and help when needed, and sustaining meaningful interpersonal relationships (Elmore & Brown, 2007; Tuohy & Stephens, 2011). Disasters often disrupt these social structures, leading to abrupt community-level changes. The loss of familiar gathering places and shared routines may trigger feelings of grief and exacerbate the risk of social isolation among older adults (Claver & Dobalian, 2013).

Furthermore, the erosion of social support systems during disasters may intensify feelings of helplessness, especially when older adults perceive a lack of adequate response or recovery efforts from governmental or non-governmental bodies. Cui and Sim (2017) reported that older disaster survivors expressed a deep sense of abandonment when their peer networks—essential sources of mutual aid and daily companionship—were dismantled by recurring disaster events. The failure of recovery initiatives to restore these networks left long-lasting psychosocial consequences that were largely overlooked in post-disaster planning and reconstruction efforts.

The findings of Cui and Sim (2017) highlight the importance of incorporating social and psychological needs of older adults into post-disaster recovery strategies. It emphasizes that interventions should not only address material losses but also focus on rebuilding the disrupted social networks that are vital for the emotional resilience and daily functioning of older individuals. They argue that post-disaster recovery efforts frequently neglect the restoration of informal peer-based support systems, despite their critical role in fostering a sense of belonging and reducing feelings of helplessness. In particular, the authors recommend that recovery programs actively facilitate social reconnection among older survivors through age-appropriate community engagement activities and peer support mechanisms. Additionally, they stress the necessity of culturally sensitive psychosocial services tailored to the specific needs of older disaster victims. Such services should be developed in collaboration with older adults themselves to ensure relevance, effectiveness, and sustainability (Cui & Sim, 2017).

2.3. Social, Environmental & Infrastructure Factors: Individuals with older people and other vulnerable groups face profound and complex risks during disasters due to the structural barriers and social exclusion they encounter in everyday life. The lack of sensitivity in societal systems toward the specific needs of these groups results in inadequate disaster preparedness and a marginalized position during post-disaster recovery phases. In this context, it becomes evident that disasters produce not only physical destruction but also significant social consequences. Particularly, disasters such as earthquakes, droughts, and famines intensify competition over scarce resources, exacerbate local social conflicts, increase poverty levels, undermine social stability, and weaken the existing institutional response capacity (Maltais, 2019; Xu et al., 2016)

Among the most affected within these adverse social dynamics are older adults. Post-disaster social disruption, loneliness, marginalization, and limited access to essential services seriously threaten the physical and psychosocial well-being of the older people. The deterioration of already limited social support networks further impairs access to healthcare, shelter, and basic care services. Moreover, the rising social unrest and instability following disasters hinder the active participation of older individuals in social life, rendering them increasingly invisible and vulnerable. Therefore, it is crucial that disaster management and recovery processes adopt inclusive policies and practices that prioritize the unique needs of older adults and foster social cohesion and solidarity.

Urban infrastructure systems, which form the foundation of modern society, are not limited to engineering structures alone; they also encompass multidimensional and interdependent components such as energy, transportation, communication, and water. However, the increasing frequency of extreme events like floods, typhoons, and power outages threatens the integrity of these infrastructures and heightens the risk of cascading disasters (Yan et al., 2025). The collapse of these systems during a disaster may halt essential life functions, such as the interruption of telephone and internet services, disruption in transportation, and failures in energy supply (Pescaroli & Alexander, 2016). Among the groups most affected by these disruptions are older adults, who may be unprepared for disasters due to limited financial means, lower levels of education, and a lack of personal resources. In particular, the absence of transportation options or communication equipment necessitates that they be prioritized in disaster preparedness planning (Alrousan et al., 2014).

Decisions regarding whether to shelter in place or evacuate during a disaster present complex logistical challenges for older adults. Ensuring safe evacuation requires the provision of appropriate transportation, the planning of accessible resources along evacuation routes (such as food, shelter, and restrooms), and minimizing health risks during the process. During lengthy evacuations, older individuals may have increased needs for access to these resources, making this an area of disaster management that demands meticulous planning (Johnson, Ling & McBee, 2014). Furthermore, shelters must be adapted to meet the physical and functional needs of older adults, including features such as elevators, accessible bathrooms and toilets, climate control, and suitable sleeping arrangements (Langan & Palmer, 2012). Another critical aspect of disaster planning is ensuring that evacuation and shelter information is delivered in accessible formats, particularly for older adults with limited technological literacy.

3. Post-Disaster Outcomes in Older Adults:

Post-disaster outcomes for older adults entail multidimensional and long-term effects. One of the most significant of these is the increase in morbidity and mortality rates. Studies conducted following the Northridge earthquake reported that older individuals had higher rates of hospitalization and emergency department visits due to disaster-related injuries compared to younger populations (Peek-Asa et al., 1998; Seligson & Shoaf, 2003; Mahue-Giangreco et al., 2001). Similarly, in the Hanshin-Awaji earthquake in Japan, mortality rates among older adults were found to be higher, a phenomenon largely attributed to their residence on the ground floors of structurally vulnerable wooden homes with heavy roofs (Kunii, Akagi & Kita, 1995). These findings underscore the greater physical vulnerability and elevated health risks faced by older adults during disasters (Rodriguez et al., 2007).

In the aftermath of disasters, not only acute medical interventions but also long-term care and support services are of critical importance for older individuals. However, current disaster response systems are often focused on short-term relief and tend to fall short in addressing the ongoing healthcare and support needs of the older people (Kar, 2016). For those with chronic illnesses, advanced frailty, dementia, or requiring specialized services such as dialysis, housing and care arrangements must be carefully integrated with professional healthcare services (Açkın & Tokem, 2023; Adelman & Legg, 2009; Atalay & Çakır, 2021; Kopp et al., 2007). The inadequacy of appropriate shelter options significantly hinders older adults' access to safe and accessible care environments, thereby increasing the risk of health complications.

Post-disaster displacement and temporary sheltering processes present complex challenges for older adults that go beyond physical safety and encompass significant social and psychological dimensions. Evacuated or displaced older individuals are often relocated to unfamiliar communal living environments or nursing homes, which may weaken their sense of belonging and increase the risk of social isolation. For individuals with cognitive impairments such as dementia, the loss of familiar surroundings may lead to disorientation,

agitation, and behavioral problems. Claver and Dobalian (2013) emphasize that disasters disrupt social structures, causing older adults to lose their daily routines, social roles, and support networks—factors that intensify feelings of loneliness and isolation. These disruptions adversely affect both physical and psychological well-being and significantly delay recovery processes. Moreover, social exclusion following a disaster further limits older individuals' access to healthcare and essential services, compounding their pre-existing vulnerabilities.

Among older adults exposed to traumatic events such as earthquakes, psychological reactions including avoidance behavior, emotional numbing, and reduced cognitive engagement with the event are common (Ahmadi et al., 2018; Knight et al., 2000; Rutherford et al., 2021). Although such symptoms are widespread in advanced age, if left unaddressed, they may have lasting adverse effects on mental health (Durak, 2023). Furthermore, a meta-analysis by Thompson and Vasefi (2025) identified that large-scale natural disasters—including earthquakes—may significantly contribute to the onset of cognitive disorders such as Alzheimer's disease and dementia. These findings underscore the necessity of developing longitudinal monitoring and targeted mental health support programs for older adults in post-disaster contexts.

Taken together, these findings demonstrate that the impact of disasters on older adults extends far beyond the immediate response phase, resulting in long-term physical, social, and psychological consequences. Therefore, disaster management processes must be supported by holistic and sustained strategies that are responsive to the specific needs of older individuals.

3. Conclusion & Recommendation:

Natural disasters do not only result in physical destruction for older adults, but also generate multifaceted and long-term consequences across social, psychological, and economic dimensions. Factors such as chronic illnesses, cognitive impairments, physical limitations, and limited social support networks significantly increase older individuals' vulnerability to disasters. These vulnerabilities manifest in serious challenges related to evacuation, shelter, access to information, and the use of healthcare services. Furthermore, post-disaster issues such as displacement, social exclusion, and inadequate care services negatively impact both the physical and psychosocial well-being of older adults, thereby delaying their recovery processes.

In this context, it is essential that disaster management processes take into account the specific needs of older adults and structure service planning accordingly. During the preparedness phase, it is necessary to identify at-risk older individuals in advance, and systematically provide follow-up, health maintenance, care, and support services after the disaster. In this regard, the establishment of a "geriatric care team" consisting of trained volunteers is recommended to address the physical, psychological, and social needs of older adults in the aftermath of disasters. Such a team could serve as a fundamental support mechanism to help older individuals maintain their lives and reintegrate into society following a disaster.

By developing holistic, sustainable, and inclusive disaster policies, it is possible to enhance the resilience of older adults to disasters—thereby preserving individual quality of life while simultaneously promoting social justice and solidarity at the community level.

Biography:

Okan Demiryürek is currently working as a research assistant at the Department of Nursing, Faculty of Health Sciences, Kastamonu University. He completed his master's degree in Surgical Nursing at Hacettepe University and is currently pursuing a PhD in the same field. His academic research focuses on postoperative pain management and the use of virtual reality interventions.



Miss Safiatu Ibrahim

Our Lady Of Grace Hospital (OLGH), Breman Asikuma, Ghana

Positive Impact On Paulina Bottle for Fetal Movement Counts Among Pregnant Women

According to the World Bank Gender Data Report for 2021, Ghana has a stillbirth rate of 21.4 per 1000 live births, about twice the Sustainable Development Goal target of less than 12 per 1000 live births. This alarming stillbirth rate, which reflects the situation in the Southern Ghana, is as a result of inadequate monitoring of fetal movement by many pregnant women during the late second and third trimesters.

To mitigate these stillbirth rates, a kit called "Paulina Bottle" was invented at the Our Lady of Grace Hospital. This innovative bottle contains fifteen pebbles. Pregnant women (from 26 weeks gestation upwards) are taught to count each fetal movement daily using the bottle. The women are educated to be alert to any changes in the fetal kick counts and to communicate immediately with Midwives when these fetal kick counts become abnormal and report promptly to the hospital. Subsequently, Paulina Bottle has been implemented in various hospitals, clinics, and Community-Based-Planning and Services (CHPS) across Southern Ghana and evaluated as impactful. A workshop in Cape Coast in 2021 by the National Association of Registered Midwives-Ghana allowed inventors of the Paulina Bottle to share their findings assessing the impact of the bottle. Evidence showed that the Paulina Bottle increased compliance with fetal kick count monitoring among at least 80% of pregnant women. This appreciation in fetal kick count monitoring translated to a decrease in fresh stillbirth rates at (OLGH) from 3.03 per 1000 Live-Births to 2.7 per 1000 Live-Births between 2022 and 2023.

Biography:

Miss Safiatu Ibrahim is a Registered Midwife (BSc) from Valley View University and has completed Monitoring and Evaluation (diploma) in Global Health from the University of Washington, USA. She holds certificates in high-risk pregnancy and management and forensic nursing from the Medical Simulation Skills Institute, Accra, and the University of Ghana respectively, she runs educational channels on Social Media called "Time_with_Midwife_Safia" on Facebook and TikTok. Miss Ibrahim has won several awards, which include Best Health Promotor for the year 2023 and Best Health Education Program and Social Media Personality of the Year 2024 by the Ghana Medical and Health Awards.



Evgenii Shuranov

ITMO University, 49 Kronverksky prospect, Russian Federation,
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Analysis of the progress of AI models for EEG processing

Deep neural networks now dominate vision and language, yet electroencephalography (EEG) has lagged because of different montages, data collection methods, environments, individual differences between people, and, lack of consistency in labeling between experiments and datasets. Growing public datasets (such as the TUH EEG corpus) have begun to ease these constraints, enabling large-scale pre-training and transfer learning.

- We review recent efforts to build universal EEG embeddings (or Fundamental EEG models) with different deep learning architectures, showing why early deep models often trailed feature-based pipelines rooted in clinical heuristics.
- Our latest transformer model, fine-tuned for seizure detection, delivers state-of-the-art performance while reducing adaptation efforts.
- We show methods for evaluating the weaknesses of SOTA models and ways to improve them.

Biography:

PhD in sound processing, ITMO/HSE Associate professor, Expert in biosignals: EEG and multimodal signal processing for user state estimation.



Obydul Huq

Consultant Physiotherapist & Managing director Doctor's Physiotherapy center, Bangladesh

Advances and Challenges in Parkinson's Disease: Integrating Multidisciplinary Insights for Therapeutic Innovation

Parkinson's disease (PD), the second most prevalent neurodegenerative disorder, affects over 10 million globally, characterized by motor symptoms—tremors, rigidity, bradykinesia—and non-motor manifestations such as cognitive decline and autonomic dysfunction. Pathologically, PD involves the degeneration of dopaminergic neurons in the substantia nigra and the accumulation of α -synuclein aggregates within Lewy bodies, though emerging research implicates the gut-brain axis in disease propagation. Etiology is multifactorial, encompassing genetic mutations (e.g., LRRK2, SNCA), environmental exposures, and aging-related cellular dysfunction. Current therapies, primarily levodopa and deep brain stimulation, offer symptomatic relief but fail to halt progression. Recent advancements highlight promising disease-modifying strategies, including immunotherapies targeting α -synuclein, gene editing, and stem cell therapies. Innovations in neuroimaging and biomarker discovery enhance early diagnosis, while precision medicine approaches address clinical heterogeneity. Challenges persist in understanding pathogenic mechanisms, optimizing neuroprotection, and personalizing treatments.

Biography:

Dr. Obydul Huq has completed Bachelor of Physiotherapy from D Y Patil University, Pune, India. He also did PGT in Neuro Physiotherapy from Bangladesh. He is working 20 years in this field. Presently he is Managing director of Doctor's Physiotherapy Centre in Dhaka, Bangladesh.



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DAY 2



Joyce Simard

Adjunct Associate Professor School of Nursing and Midwifery, College of Health and Sciences Western Sydney, Australia.

University of Minnesota, Ithaca College Founder Namaste Care International, USA

Namaste Care: Helps people with advanced dementia live not just exist

Namaste Care is a small group program for residents in a nursing home or assisted living who can no longer participate in traditional activities. Often residents were kept clean, fed, changed and placed in front of a television. Residents were existing not living. The Namaste Care program provides quality of life for residents especially those with advanced dementia.

Namaste care can be offered as a small group program or can be brought to wherever the person is living. Two principles of The room or space where Namaste Care is offered as a small group is as free from distractions as possible. Residents are taken there after breakfast for the morning session. They are greeted individually and assessed for pain. A soft blanket is tucked around them and they are offered a beverage. Morning activities include gentle washing of the face and moisturizing of the face, hands, arms and legs. Their hair may be combed or scalps massaged. All of these activities are offered with a slow loving touch approach with the carer softly talking to them. They leave the room for lunch and return for the afternoon activities that may include bringing seasonal items to them, feet soaking, nail care and fun activities such as blowing bubbles. Beverages are offered on a continuous basis for both the morning and afternoon sessions. Namaste Care can be brought to the persons bedside and offered by trained staff or volunteers. Supplies are not expensive and no additional staff has to be hired.

Biography:

Joyce Simard MSW is an Adjunct Associate Professor School of Nursing, University of Western Sydney Australia. She is a private geriatric consultant residing in Florida (USA). She has been involved in long-term care for over 40 years.

Professor Simard has written numerous articles and chapters in healthcare books "The Magic Tape Recorder", and "The End-of-Life Namaste Care Program for People with Dementia" now in its third edition. She has been involved with grants studying the outcomes of Namaste Care internationally. with the School of Nursing, University of Western Sydney, Australia, St. Christopher's hospice (UK), the University of Worcester (UK) and Lancaster University (UK). Ms. Simard is a popular speaker for organizations all over the world.



Kerryyn Burgoyne

CEO/Founder of 6 self-help life courses at KTalk, Australia

Autism & Mental Health – how different individuals are impacted (my story)

Statement of the Problem: Women who suffer mental health issues, because of Autism Spectrum Disorder has a significant impact on their lives, especially if they've suffered trauma because of the bullying/discrimination/cruel remarks & actions from other people.

Autism can impact one's mental health in many ways (childlike behavior), social anxieties or overload. The impact of mental health can also be experienced when the person does not have a good quality of life for themselves (eg employment, independent living skills), or have support from family/friends/society).

I will be discussing how my mental health was impacted, by not being able to gain successful employment for myself but also when I was previously employed in an organisation, I'll also be discussing some trauma experiences that I've had in my life, which has caused me significant pain & suffering but has shaped me the way I am now today! But also some strategies that I've developed for myself to assist the recovery and positivity to my overall mental health itself!

Biography:

My name is Kerryyn Burgoyne & I was diagnosed with Asperger's Syndrome at the age of 30. Prior to that, there was very little known about what is known today as autism spectrum disorder.

Life was extremely difficult for me, as when I tried to gain successful employment for myself, it was difficult to do so especially when you were judged as an "outsider looking in" at others. In 2007, I started up my own business KTalk after writing my very first self-help life course book "The Goal".

I'm also an international/renowned/keynote autism speaker at major conferences globally as well as being the author of 6 self help life course materials as products of my business which I'm proud of.



Wilfred Angie Abia
University of Yaounde, Cameroon, Central Africa

Dietary Exposure to Neurotoxic Mycotoxins in Cameroon: Implications for Brain Development and Neurodevelopmental Disorders in Children

Emerging evidence suggests that dietary exposure to neurotoxic mycotoxins may pose a significant and an underrecognized threat to pediatric brain health. In Cameroon, many children suffer from brain development-related disorders, which may be impacted, due to environmental risks. The study investigates how dietary mycotoxin exposure affects brain development in young Cameroonian children, highlighting risks for disorders like learning disabilities, attention-deficit/hyperactivity disorder, autism and cognitive impairments, especially from early-life exposure. Firstly, the study synthesized current evidence demonstrating neurotoxicity of some mycotoxins. It was observed that mycotoxins such as aflatoxins, ochratoxin A, and fumonisin B1 can cross the blood-brain barrier and disrupt key neurodevelopmental processes, and exert neurotoxic effects include oxidative stress, neuroinflammation and mitochondrial dysfunction. Secondly, agricultural commodities such as maize, groundnuts, and their processed food-products, frequently tainted with mycotoxins, and commonly used to process complementary foods for children, shall be screened for neurotoxic mycotoxins. Our previous studies show high contamination ($\geq 90\%$) of adult foods with aflatoxins and fumonisins at levels occasionally higher than their respective maximum limits, with $\geq 65\%$ co-occurrences. There's growing concern that processed children's foods, combining plant and animal products, may also carry dangerous mycotoxin levels due to feed contamination. Thirdly, existing animal studies have linked low-dose mycotoxin exposure to cognitive and behavioral issues, but human data and developmental risk assessments are lacking. This is a key area of this study, aiming to improve dietary mycotoxin monitoring and guide child health policies in Cameroon.

Keywords: Dietary exposure, Children's health, Mycotoxins, Neurodevelopment, Neurobehavioral disorders

Biography:

Dr. Wilfred Angie Abia holds a Ph.D. in Biochemistry (Food Safety/Mycotoxigenology) from the University of Yaoundé 1, with training under the MycoRed Project at IFA-BOKU, Austria. He also holds M.Sc. and B.Sc. degrees in Biochemistry from the University of Buea, Cameroon. His postdoctoral experience includes work at the University of Johannesburg, IFA-BOKU (MycoMarker Project), and Queen's University Belfast (EIT FoodFortress & EU FoodSafeR Projects). He has 64 publications, has supervised 21 M.Sc. theses, and serves as Secretary General of the African Society of Mycotoxicology, CEO of AFS1HA (Agri-Food Safety and One Health Agency), and Senior Lecturer at the University of Yaoundé 1.



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Bilal Amin

University of Cambridge, United Kingdom

Mitochondrial DNA in Glioblastoma: A Systematic Review

Glioblastoma Multiforme (GBM) is the most aggressive primary central nervous system cancer in adults, with limited treatment efficacy and poor prognosis. Mitochondrial genomics is a rapidly expanding field and variations in mitochondrial DNA (mtDNA) have been implicated in GBM metabolism, progression, and treatment response. Understanding these mtDNA abnormalities may provide insight into GBM pathogenesis and the development of novel biomarkers and therapies. Therefore, the objective of this systematic review is to provide a synthesis of the current data of mtDNA biology in the context of GBM.

This systematic review searched MEDLINE, Embase, Scopus, and Web of Science from inception to October 2023 for primary research studies in English. Two independent reviewers screened for eligibility in Rayyan using a defined criteria. Data extraction was completed in duplicate in Excel. Risk-of-bias was assessed using the Joanna Briggs Institute tools. Results were synthesised as a narrative. Meta-analysis was not performed due to significant heterogeneity.

This study identified 9881 records, 35 of which were included. Studies were thematically classified into gene expression (23%, 8/35), copy number (51%, 18/35), epigenetic changes (11%, 4/35), and mutations (43%, 15/35). Some studies addressed multiple themes. While some studies reported low mutational burden in mtDNA, others identified pathogenic variants, particularly in the D-loop and mitochondrial respiratory chain genes. mtDNA copy number was reported between x25 higher and x10 lower in GBM compared to controls. mtDNA copy number and mutations demonstrated potential as biomarkers. Alterations to mtDNA modulated GBM responses to radiation therapy and various chemotherapy drugs, including temozolomide and cisplatin.

Multiple mtDNA alterations are seen in GBM and these are linked to clinicopathological characteristics, such as survival time and therapeutic response. These findings highlight mtDNA's potential as a biomarker and therapeutic target. Further research is warranted to clarify its clinical utility and to develop mitochondria-targeted strategies in GBM treatment.

Biography:

Dr Amin obtained his medical degree (MBBChir) from the University of Cambridge, United Kingdom in 2024. He has since been working as a resident doctor and is currently pursuing a career in surgery. While at medical school, he embarked on research with the respiratory and neurosurgical departments. He has previously lead workshops on his research at the Annual Cambridge-UCLA Symposium on CPET and presented at other conferences.



Gihane Endrawes
Western Sydney University, Australia

Mental Health Issues affecting Immigrant women

Women's mental health is identified as one of the top five research priorities worldwide. There is an increasing concern about stresses faced by women and how these may adversely affect their health. International studies confirm gender difference and gender inequalities. For example, 70% of people living in poverty are women, 2/3 of adult illiterate people who are over 15 years of age are women. Marriage for men is a protective factor but is associated with more mental health problems for women. The risk of women developing depression and other mood disorders was found to be as twice that of men. This risk is even higher among immigrant women due to cultural factors and issues related to immigration. Migration can be a risk factor for suicide. The suicide rates for immigrants are higher when compared to those of the population in their countries of origin, particularly among immigrant women. The paper aims to explore a range of mental health issues experienced by women with specific attention to the role of culture. Women are a diverse group with specific mental health needs across the lifespan. Therefore, this paper will address mental health issues of adult, adolescent and elderly women. The following recommendations will be explored in more details: the need for more specialised services that target specific age groups, focusing on health promotion, health education, early detection, and early intervention for those women who are at risk of mental health problems. More efforts towards the empowerment of women are also needed which includes building their self-confidence, informing and educating them of their legal rights, increasing domestic violence refuges, how to access information and support services when needed, addressing the injustice and inequalities they are currently facing and, increasing the number of bi-lingual staff and culturally sensitive services.

Keywords: Immigrant women, Mental health, culture, Early intervention

Biography:

Gihane has more than 20 years experience in mental health nursing and education. She worked as a Transcultural Mental Health Clinical Nurse Consultant, she coordinated a number of projects addressing consumers' care and satisfaction. She won 2 nursing achievement awards due to her contribution to mental health nursing. Her PhD was on the 'lived experience of caring for a relative with mental illness'. At her current role as lecturer at Western Sydney University, Australia she coordinated a number of under-graduate and post-graduate units and is involved in the development and review of curriculum. Her role also includes supervision of higher degree research students and her research interests are in the area of mental health, transcultural nursing, evidence-based practice and nursing education which are reflected in her publications



Pankhuri Sharma

Manav Rachna International Institute of Research and Studies, India

Eyeballing the Brain with Neuroinformatics

The human brain, as marvellous as it is, creates temporally and spatially complex signals and patterns to regulate proper functioning of the body. Therefore, neuroscience data is massive, multidimensional and noisy. Analysis of data of this volume has been a complicated task with existing analytical methods. Neuroinformatics, a discipline conceived to overcome this issue, is a culmination of neuroscience and computer science. Neuroinformatics thrives on enormous, dense and multifaceted data to isolate significant information. Neuroimaging using neuroinformatics is a powerful tool for understanding brain function and diagnostics. This study focusses on presenting the advantages and drawbacks of current advances in neuroinformatics-based neuroimaging tools.

The neuroinformatic tool, Global Tree Reconstruction System (GTree) is an open-source software created specifically to digitally reconstruct neurons from a large dataset. The highly automated algorithm is designed to reduce manual interference, screen errors and reconstruct neurons as close to reality. Another tool, Neuprint, allows reconstruction of connectomes, which are a depiction of neurons and chemical synapses from large volume of neural tissues. It contains a web interface and a programmers API. It is designed to enable scientists globally get answers to their complex connectome related queries using a browser. It is integrated with connectomics database, neo4j, and Cypher, a query language, and is open to further integrations as well. Neurodesk is a platform that contains suites of numerous neuroimaging software. The interface has a virtual desktop, command line and is compatible with computational notebook. This not only allows portability and flexibility but also accessibility to accurate neuroimaging analysis.

Advanced machine learning, artificial intelligence and data analytics have allowed researchers to study the intricacies of neural networks, and convert scientific findings into real-life applications. This study attempts to exhibit, while assessing, these advances, their utilisation for neuroimaging along with their drawbacks.

Key words: Neuroinformatics, Neuroimaging, reconstruction, Brain, Neurodesk

Biography:

Pankhuri Sharma is currently pursuing a Ph.D. in Neuroinformatics at Manav Rachna International Institute of Research and Studies, Faridabad, Haryana, India. Her research focuses on the molecular mechanisms of Huntington's Disease, with an emphasis on peptide design, protein-peptide interactions, molecular docking, and molecular dynamics simulations. She has previously gained research experience at the Division of Microbiology, Indian Agricultural Research Institute (IARI), New Delhi, and the Department of Plant Molecular Biology, University of Delhi, South Campus. Her broader interests lie in integrating computational tools with neuroscience to investigate novel therapeutic strategies.



Gihane Endrawes
Western Sydney University, Australia

Using cultural simulation in nursing education to promote empathy

Background: Increasing cultural diversity challenges nurses and patients in providing and receiving culturally competent (CC) health care. It is important to develop a curriculum that diversifies education, to ensure graduate students can deal with diversity in a respectful, non-judgmental, empathetic, and compassionate way to people from diverse cultural and linguistic backgrounds (CALD). Of equal importance are educators' own cultural awareness and competence skills, and they have a significant role in developing students' knowledge, skills, and attitudes and adequately preparing them to meet workplace requirements related to cultural awareness and competency. Simulation in the form of scenarios, case studies, games, and role play are found to be an effective educational tool to master the principles of cultural competency, and cultural education improves students' cultural intelligence (CQ). Simulation is becoming a recognized teaching method in education that can facilitate the application and integration of knowledge in a controlled environment. Using simulations to include cultural variables, students can explore cultural diversity, gain experiential learning, work collaboratively with other students who may not share the same cultural backgrounds, and practice in a safe, non-threatening environment. It also encourages students' critical thinking, reflection, decision-making, problem-solving, interpersonal, and communication skills and empathy. This presentation aims to present a research project plan to:

1. Explore students and academic staff cross-cultural awareness, skills, and attitudes and the use of simulation in education.
2. Schools and students co-design and develop cultural simulation scenarios.
3. Identify the association between students' demographic data and (CQ), Emotional Intelligence (EI), and empathy/compassion.
4. Assess/evaluate the effectiveness of cultural simulation education in increasing students' cultural awareness and empathy when caring and/or providing services to clients from CALD backgrounds.

Method: The study uses a quantitative method, using descriptive surveys looking at CQ, EI, empathy, a demographic survey, and an audit screening/mapping subjects' outlines to identify if cultural diversity topics and cultural simulations are included in the subjects taught. Students' representatives are invited to the co-design of these cultural simulation scenarios. A pre- and post-intervention/education survey will be completed by students using the Cultural Intelligence Scale to measure the effectiveness of education in increasing their cultural awareness and sensitivity. Students are asked at the end of the session to complete the Satisfaction with Cultural Simulation Scale to assess the effectiveness of cultural simulation scenarios as a teaching and learning tool. Findings: preliminary findings and recommendations for nursing education will be presented.

Keywords: Cultural competency, Simulation, empathy, Nursing education

Biography:

Gihane has more than 20 years experience in mental health nursing and education. She worked as a Transcultural Mental Health Clinical Nurse Consultant, she coordinated a number of projects addressing consumers' care and satisfaction. She won 2 nursing achievement awards due to her contribution to mental health nursing. Her PhD was on the 'lived experience of caring for a relative with mental illness'. At her current role as lecturer at Western Sydney University, Australia she coordinated a number of under-graduate and post-graduate units and is involved in the development and review of curriculum. Her role also includes supervision of higher degree research students and her research interests are in the area of mental health, transcultural nursing, evidence-based practice and nursing education which are reflected in her publications



Gabriel Vacariu
Bucharest University, Romania

Is Cognitive Neuroscience a pseudo-science?

Cognitive Neuroscience (CNS) is a field constructed under the mind-brain problem. The main approach to this problem has been the identity theory (Place, Smith, middle of 20th century). Nevertheless, in this science, the main notion has been, especially in the last 20 years, "correlations" between neuronal and mental states. But what exactly does "correlations" mean? "Can we build a science on such correlations?" In other words, "Is CNS a real science?" From a classical viewpoint (which we use to define all other sciences), by simply using "correlations" as a main notion, it is impossible to claim that CNS is a real science. Obviously, correlations do not imply laws, but maybe we can extend the definition of "science" precisely to identify CNS as being one. With such an extension, would CNS be a genuine scientific field? A new approach, the EDWs perspective and its application to the main notions of CNS (localization, binding problem, perception, multisensory integration). From the perspective of the epistemologically different worlds, the majority of problems from cognitive neuroscience are in fact pseudo-problems created by scientists who have worked within the wrong framework, the unicorn world (the world, the universe) for half a century. CNS has no "ontology landscape" (the main topic of research, "correlation", has no ontology background) and therefore this "science" may be considered a pseudoscience. I discuss a particular case of brain damage under the EDWs perspective.

Biography:

Gabriel Vacariu is a Romanian philosopher and professor at the University of Bucharest, specializing in philosophy of mind, cognitive science, and philosophy of physics. He holds two Ph.D. degrees—one from the University of Bucharest and another from the University of New South Wales, Australia. He is known for developing the Epistemologically Different Worlds (EDWs) theory, which addresses key issues in mind-body philosophy and quantum mechanics. Vacariu has authored several books and co-founded the Centre for Cognitive Science at his university. Besides his academic work, he has also co-written a novel exploring themes of identity and existence.



Omar Ghaboura
University of Warwick, United Kingdom

The correlation between speech therapy and neuroscience from the perspective of a speech therapist

This study delves into the interplay between speech therapy and neuroscience, focusing on how advancements in neural science inform therapeutic approaches for speech and language disorders. Neuroplasticity, the brain's ability to reorganize and adapt, plays a central role in language acquisition and speech regulation. Through the integration of neuroimaging and electrophysiological techniques, clinicians and researchers can now better understand brain mechanisms underpinning these processes. The abstract highlights evidence from case studies and meta-analyses demonstrating the efficacy of targeted speech interventions in modifying neuroplasticity and restoring language functions. Additionally, it explores how speech therapy aids in neural reorganization post-injury, contributing to advancements in treating conditions such as aphasia and developmental speech delays. The correlation between therapeutic outcomes and neural adaptations underscores the potential for personalized therapy driven by neurological insights, paving the way for innovations in the field.

Biography:

Omar Ghaboura has completed his Bachelor's Degree Phoenicia University in Speech Therapy from Lebanon. He is a master's student at the University of Warwick majoring in Neuroscience and Psychology of Mental Health. He is currently working in Kuwait as a speech and language pathologist assessing and treating individuals with speech, language and communication disorders. Omar is interested in the Research Field and is currently working on publishing articles related to AAC and language acquisition in the Arab World.



Gihane Endrawes
Western Sydney University, Australia

Cultural perspectives on mental health: A study design

Mental illness is on the rise worldwide. It is estimated by the World Health Organisation (WHO) that 1 in 4 people has or will have a mental illness sometime throughout their lives. However, there is evidence suggesting that due to the stigma and negative societal attitudes towards mental illness and people with mental illness, it prevents many people from seeking professional mental health help. This paper addresses societal attitudes towards mental illness cross-culturally, such as the belief in evil eye, spirit possession, magic and misperceptions related to mental illness. Societal attitudes towards people with mental illness can be harmful, stigmatising, rejecting, creating prejudice, discrimination and intolerance for individuals. The paper will discuss strategies such as working with NGOs and various community and religious leaders in a shared care approach to change societal attitudes towards people with mental illness and reduce stigma. This has the potential to encourage people to seek help at an early stage, thus reducing the burden of disease on the person, families and society as a whole. The paper will also address a current project plan related to communities' attitudes. The proposed study will evaluate the cultural adaptation of the CAMI - CALD scale within the Australian context, including African, Indian, Arabic and Chinese groups to further establish the scale's reliability and validity. Results of this study may inform policy makers and allocation of resources directed towards development of culturally sensitive mental health awareness campaign/ resources aiming raising awareness and reducing stigma.

Biography:

Gihane has more than 20 years of experience in mental health nursing practice and education. She worked as a Transcultural Mental Health Clinical Nurse Consultant, during which, she coordinated a number of projects addressing consumers' care and satisfaction. She won 2 nursing achievement awards due to her contribution to mental health nursing. At her current role as lecturer at Western Sydney University, Australia she coordinated a number of undergraduate and post-graduate units and is involved in the development and review of curriculum. Her role also includes supervision of higher degree research students and her research interests are in the area of mental health, transcultural nursing, evidence-based practice and nursing education which are reflected in her publications



Shivi Kumar

Mind Matters Foundation, Marcus High School, Texas , United States

Metabolic Pathway Alterations in Glioblastoma Stem Cells Under Hypoxia: Computational Analysis of Hypoxia-Activated Pathways

This study investigates how glioblastoma stem cells (GSCs) adapt their metabolism under hypoxic stress, a condition common within tumors that impacts cellular survival pathways. Focusing on three key metabolic pathways—glycolysis, lipid metabolism, and glutaminolysis—we utilized transcriptomic data from the Gene Expression Omnibus (GEO) to analyze metabolic shifts in U87-MG glioblastoma cells. Differential gene expression analysis revealed significant upregulation of glycolytic enzymes such as LDHA and GLUT1, along with changes in lipid biosynthesis mediated by fatty acid synthase (FASN), highlighting GSCs' metabolic flexibility. These adaptations enable GSCs to sustain energy production and structural support despite oxygen limitations, suggesting that their survival depends on the strategic modulation of these pathways. By identifying these critical metabolic shifts, this study aims to uncover potential therapeutic targets within GSCs' unique metabolic network. Targeting glycolysis and lipid metabolism, specifically enzymes like LDHA and FASN, could disrupt the energy production and structural maintenance of GSCs, making them more susceptible to treatment. The findings provide new insight into how hypoxic environments drive GSC survival, emphasizing metabolic reprogramming as a promising target for developing therapies to enhance treatment efficacy in glioblastoma.

Keywords: Brain Tumors, Cancer Metabolism, Hypoxic Signaling Pathways, Metabolic Hypoxia, Tumor Microenvironment

Biography:

Shivi Kumar is a passionate high school researcher and aspiring neurosurgeon with a deep commitment to advancing scientific knowledge in the fields of neuroscience and genomics. As an emerging researcher, Shivi has made significant contributions to understanding complex medical topics, including metabolic hypoxia and brain tumors. Her work in these areas has earned her recognition as a semifinalist for the AAN (American Academy of Neurology) Research Neuroscience Award and a participant in the prestigious Regeneron Science Talent Search.

Shivi's academic journey is marked by her extensive involvement in various research projects, most notably her current focus on AI-powered precision medicine for neurofibromatosis, where she combines machine learning and genomic data to create innovative therapeutic solutions. With a strong interest in neurodegenerative diseases and brain cancer, Shivi is determined to make groundbreaking contributions in the medical field, aspiring to one day win a Nobel Prize for her research.

In addition to her academic pursuits, Shivi is an active member of her community. She is the founder of the Mind Matters Foundation, which aims to raise awareness and support research for marginalized pediatric populations diagnosed with neurodegenerative diseases. Through this foundation, she advocates for better healthcare resources

and more equitable access to medical care for underserved groups.

Shivi is also a dedicated leader, co-founding the nonprofit GEWL (Global Education Women Leaders), which focuses on empowering young girls through education, mentorship, and leadership opportunities. Outside of her research and philanthropic endeavors, Shivi enjoys mentoring others and fostering the next generation of women in STEM.

With her eye on the future, Shivi is focused on expanding her knowledge and skills, constantly seeking opportunities to enhance her understanding of neuroscience, genomics, and AI to push the boundaries of what is possible in the field of medicine.



Paula Abola

Department of Clinical Research, University of Jamestown, United States of America

Technological Advancements in the Detection and Quantification of Parkinsonian Tremor: A Scoping Review

Introduction: Tremor is a cardinal motor symptom in Parkinson's Disease (PD). Technologies that detect and/or quantify tremors and promote rehabilitation have been developed.

Methods: Following a systematic literature search in PubMed, Cochrane, and EBSCO databases to identify studies on individuals with PD who presented with Parkinsonian tremors and who used technology to detect and/or quantify their Parkinsonian tremors, a scoping review was performed.

Results: Accelerometers and sensor-based devices have emerged to detect and/or quantify Parkinsonian tremors.

Conclusion: Available technologies can aid in individual rehabilitation treatments to improve the quality of life in individuals with PD.

Biography:

Paula Abola is a PhD in Clinical Research student at the University of Jamestown. She received a Bachelor of Science in Medicinal Chemistry and Chemical Biology from Jacobs University Bremen and a Master of Science in Clinical Drug Development from Queen Mary University of London. Her research is focused on Parkinson's Disease, mainly on pharmacological management options.



Katelyn Lehman, Ph.D

The Chicago School of Professional Psychology, Los Angeles, CA 90017

Neurodynamics and Clinical Implications of Heart-Brain Coherence and Non-Sleep Deep REST

The purpose of this presentation is to describe and demonstrate the clinical benefits and neurodynamics of heart-brain coherence and non-sleep deep REST as a model of quaternary prevention. Heart-brain coherence is defined as the synchronized entrainment of respiration, heart rate variability, and blood pressure, which results in system-wide metabolic and neurophysiological regulation. Non-sleep deep REST (NSDR), which includes practices such as flotation therapy, yoga nidra, and guided breathwork, facilitates a parasympathetic-dominant state that mimics sleep-related neural repair while maintaining conscious awareness.

This presentation synthesizes current findings from neurocardiology, psychophysiology, and clinical neuroscience to outline how coherence states enhance autonomic balance, improve emotional regulation, and support long-term resilience. Case-based examples are provided to illustrate therapeutic applications in populations with stress-related disorders, anxiety, and sensory processing sensitivity. Assessment methods include biometric tracking (e.g., HRV monitoring), qualitative interviews, and psychometric evaluations measuring psychological well-being and somatic symptom relief.

Findings suggest that heart-brain coherence training and NSDR practices can serve as preventative strategies that reduce overmedicalization and foster self-regulation capacities. Conclusions highlight the importance of integrating coherence-based approaches into holistic care models, particularly as part of mental health and wellness programs that address root causes rather than symptoms. This approach aligns with emerging paradigms in precision medicine and systems-based care, promoting coherence not only within the individual but across clinical and ecological systems.

Biography:

Dr. Katelyn Lehman is reshaping the conversation around heart-brain coherence, revealing its transformative potential to spark change—from personal well-being to the evolution of global systems.

Blending cutting-edge science with holistic insight, her work has captured attention in Vogue, the LA Times, Goop, CNBC, and the California Business Journal. Driven by the belief that “harmony within creates harmony in the world,” Dr. Lehman has dedicated her career to uncovering how aligning the mind, heart, and body fosters resilience, innovation, and meaningful connection.

As the Founder of Quantum Clinic in Los Angeles, she has developed a unique framework to address chronic stress and inflammation—two of the most critical drivers of disease. Her approach integrates neuro-cardiac function, cognitive entrainment, and emotional regulation to help clients achieve deep, lasting wellness.

With a Ph.D. in Clinical and Multicultural Community Psychology, Dr. Lehman brings a unique lens to rethinking wellness systems, advocating for equity and accessibility in health care. Her insights have reached diverse audiences,

from the Los Angeles Police Department's Wellness Day to Coherence x Health at the Creative Technology Center, and the Los Angeles Psychedelic Association's AWAKENING 2024.

An engaging speaker and educator, Dr. Lehman also serves as adjunct faculty at The Chicago School, teaching Humanistic and Existential Interventions. Her passion for sharing knowledge shines through on every platform, whether at a health conference or in intimate workshops.

Through her groundbreaking work, Dr. Lehman continues to inspire a vision of thriving individuals and systems—grounded in coherence, compassion, and transformative innovation.

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