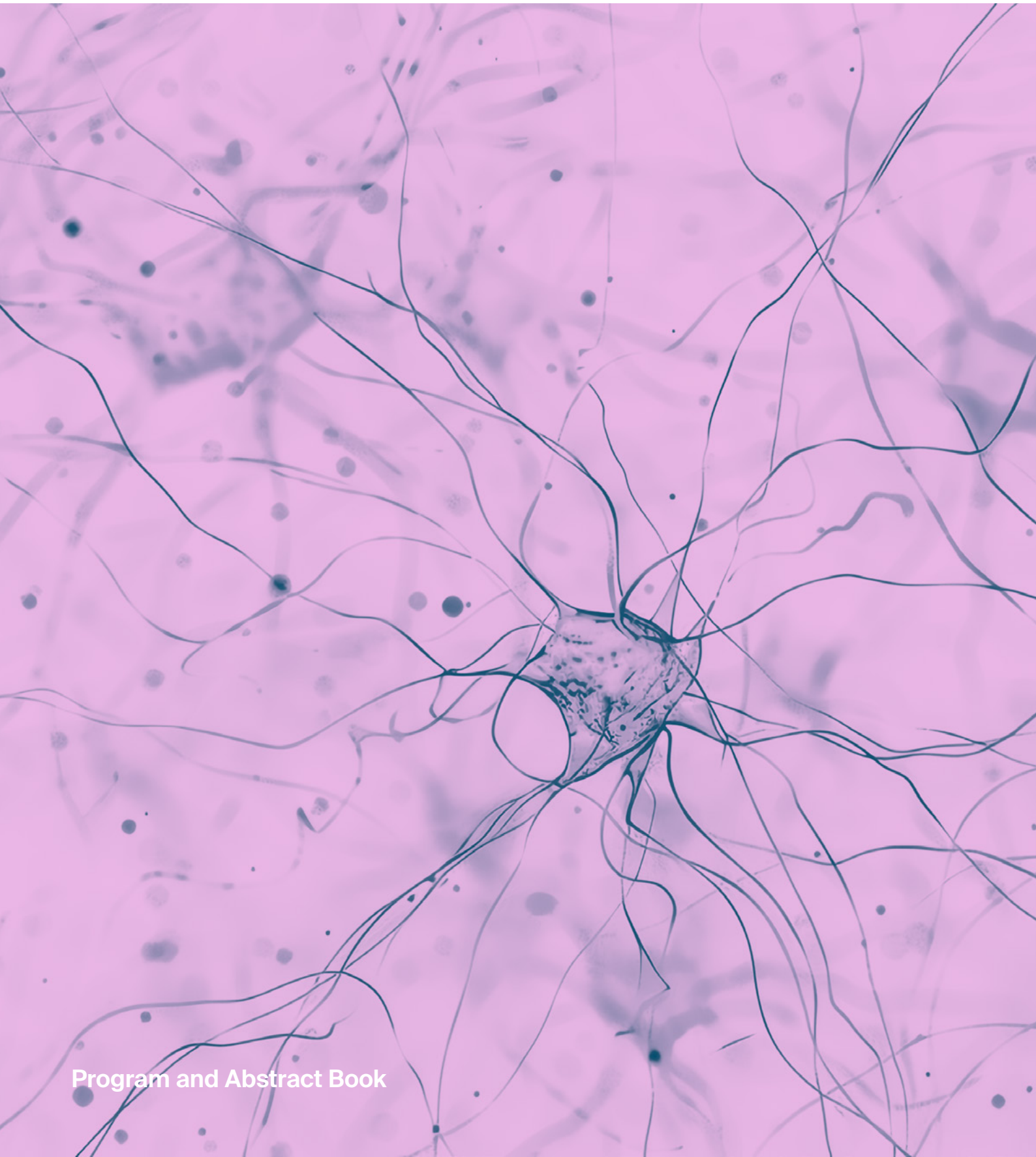
IOCBS 2026 Conference

The 1st International Online Conference on Behavioral Sciences

1–3 April 2026 | Online



Program and Abstract Book

Organizers

MDPI

behavioral sciences

Media Partners

brain sciences

education sciences

学术会议云 ALLCONFS.ORG

International Journal of Environmental Research and Public Health

sciforum.net/event/IOCBS2026
#IOCBS2026

The 1st International Online Conference on Behavioral Sciences

1–3 April 2026 | Online

MDPI

Organizing Committee

Conference Chair

Prof. Dr. Jerrell Cassady

Session Chairs

Dr. Andrew Soundy
Prof. Stacey Neuharth-Pritchett
Prof. Dr. Bin Hu
Prof. Dr. Johanna Nilsson
Prof. Dr. John Parkinson
Prof. Dr. Michele Roccella
Prof. Dr. Sukanlaya Sawang
Prof. Dr. Valentina Echeverria Moran
Prof. Dr. William Bart

Scientific Committee

Dr. Ana Šimunić
Dr. Daisuke Akiba
Dr. Haojie Li
Dr. Hyoung-Kil Kang
Dr. Jacopo Lamanna
Dr. Janet Koposko
Dr. Kristie-Lee Alfrey
Dr. Lee Kien Foo
Dr. Marco Bilucaglia
Dr. Mehmet Emin Arayici
Dr. Muhammad Rahimi
Dr. Ning Zhang
Dr. Panagiota D. Tryphonopoulos
Dr. Qaiser Mohi Ud Din
Dr. Qihai Cai
Dr. Seyma Yildirim-Erbasli
Dr. Shiwang Yu
Dr. Song Tong
Dr. Susan Xiqing Su
Dr. Sylvia Terbeck
Dr. Wonkyong Beth Lee
Dr. Xuechen Ding
Dr. Zhenhua Xu
Dr. Zheni Wang
Professor Hui Chen
Professor Laure Ibernon
Prof. Dr. Alain Morin
Prof. Dr. Alan Ewert
Prof. Dr. Alexandre Carvalho Barbosa
Prof. Dr. Andy Smith
Prof. Dr. Carlos Alberto Bezerra Tomaz
Prof. Dr. Casandra I. Montoro Aguilar
Prof. Dr. Cornelia Rada
Prof. Dr. Fotini Polychroni
Prof. Dr. Heidi Omdal
Prof. Dr. Ignasi Navarro-Soria
Prof. Dr. Jon Andoni Duñabeitia
Prof. Dr. Mark Reybrouck
Prof. Dr. Mehul Bhatt
Prof. Dr. Olga Maria Martins de Sousa Valentim
Prof. Dr. Oliver Ramos-Álvarez
Prof. Dr. Paul Rapp
Prof. Dr. Raquel Simões de Almeida
Prof. Dr. Sergey Lytaev
Prof. Dr. Vanja Kopilaš
Prof. Dr. Wei Wang
Mr. Ainzara Favini

Organised by

MDPI

Conference Secretariat

Email: iocbs2026@mdpi.com

Table of Contents

Welcome from the Chair

Dear colleagues,

Please join us at the 1st International Online Conference on Behavioral Sciences (IOCBS 2026), promoted by MDPI's open access journal *Behavioral Sciences* (ISSN 2076-328X; IF 2.5), which will be held online from 1 to 3 April 2026.

The field of behavioral sciences continues to advance at a rapid pace, encompassing key areas such as psychology, neuroscience, and behavioral genetics. As new challenges in mental health and behavior emerge, the need for interdisciplinary collaboration has never been more urgent. IOCBS 2026 provides a platform for researchers and professionals to come together, share insights, and explore innovative solutions.

Conference Themes and Sessions

IOCBS 2026 will cover nine core domains of behavioral sciences, providing a comprehensive look at the latest research and developments. Presentations will be organized into the following sessions:

S1. Psychiatric/Behavioral Disorders;
S2. Cognition;
S3. Developmental Psychology;
S4. Educational Psychology;
S5. Social Psychology;
S6. Health Psychology;
S7. Child/Adolescent Psychiatry;
S8. Organizational Behaviors;
S9. Experimental and Clinical Neurosciences.

This conference will enable you to share and discuss your most recent research findings with a community of scientists and professionals in the field from across the world. Your presentation will be accessible to hundreds of researchers worldwide and receive active engagement throughout the session.

Submission and Review Process

We invite you to submit your abstracts (in English only) by 2 December 2025. To maintain high academic standards, all submissions will undergo a peer-review process, conducted by the conference committee. The authors of accepted contributions will then have the opportunity to give an oral presentation or present a poster online. This process will ensure that submissions are topically relevant, of high quality, and present novel findings or discoveries.

- **Abstract Guidelines:** Abstracts should be concise (200–300 words) and clearly state the research question, methodology, and key findings.
- **Submission Expectations:** Both empirical research and review papers are welcome. Presenters should specify whether their work includes data-driven findings or is a theoretical/conceptual review.
- **Submission Criteria:** All abstracts must be submitted in clear, publication-ready English with accurate grammar and spelling. Submissions must be original and novel, without prior publication in any journal, or they may be rejected. Each abstract should include the following sections: Introduction, Materials and Methods, Results and Discussion, and References. The contents of the abstract must align with the selected session.
- **Prizes and awards:** Those with accepted contributions will be eligible to give oral presentations or present a poster online, with CHF 800 awarded for the best presentation and best poster.

Registration & Participation
Registration is free for all attendees, with a deadline of 27 March 2026. Following the conference, outstanding contributions will be invited for submission as full-length papers in a Special Issue of *Behavioral Sciences*, with a 20% discount on the article processing charge.

We believe IOCBS 2026 will be a landmark event, bringing together diverse perspectives to address critical issues in behavioral science. We look forward to your participation, whether you are presenting your latest research or contributing to meaningful discussions. Together, we will shape the future of behavioral sciences.

Prof. Dr. Jerrell Cassady
Conference Chair
Department of Educational Psychology, Ball State University, Muncie, IN 47306, USA

behavioral sciences
an Open Access Journal by MDPI

Behavioral Sciences (ISSN 2076-328X) is a peer-reviewed journal that rapidly disseminates original articles, critical and systematic reviews, as well as short communications in the areas of psychiatry, neuroscience, psychology, cognitive and behavioral sciences, and behavioral biology. Our aim is to encourage scientists to publish their experimental and theoretical results in a rigorous and detailed manner. There is no restriction on the maximum length of the papers. The full experimental details of each research paper must be provided in order to facilitate the reproducibility of the results. Electronic files or software regarding the full details of the calculation and experimental procedure, if unable to be published in a normal way, can be deposited as supplementary material.

Journal Webpage: https://www.mdpi.com/journal/behavsci

Session Chairs

Prof. Dr. John Parkinson
Wales Centre for Behaviour Change, Department of Psychology, Bangor University, Bangor, UK

Dr. Andrew Soundy
School of Sport, Exercise and Rehabilitation Sciences, University of Birmingham, Edgbaston, UK

Prof. Dr. Michele Roccella
Department of Psychology, Educational Science and Human Movement, University of Palermo, Palermo, Italy

Prof. Dr. Bin Hu
Department of Clinical Neurosciences, Hotchkiss Brain Institute, University of Calgary, Calgary, AB, Canada

Prof. Dr. Valentina Echeverria Moran
Laboratorio de Neurobiología, Facultad de Ciencias de la Salud, Universidad San Sebastián, Santiago , Chile

Prof. Dr. Johanna Nilsson
University of Missouri-Kansas City, Kansas City, MO, USA

Prof. Dr. Sukanlaya Sawang
Faculty of Business and Law, Coventry University, Coventry, UK

Prof. Dr. William Bart
Department of Educational Psychology, University of Minnesota, Minneapolis, MN, USA

Prof. Stacey Neuharth-Pritchett
Department of Educational Psychology, Mary Frances Early College of Education, University of Georgia, Athens, GA, USA

Keynote Speaker

Prof. Dr. Bin Hu

Department of Clinical Neurosciences, Hotchkiss Brain Institute, University of Calgary, Calgary, AB, Canada

Invited Speakers

Dr. Robbin Gibb

Canadian Centre for Behavioural Neuroscience, University of Lethbridge, Lethbridge, AB, Canada

Prof. Dr. Jasper Van Assche

Center for Social & Cultural Psychology (CESCUP), Université Libre de Bruxelles, Brussels, Belgium, Optentia Research Unit, North-West University, Vanderbijlpark, South Africa

Dr. Claudia Gonzalez

Department of Kinesiology and Physical Education, University of Lethbridge, Lethbridge, 4401 University Dr. W, Lethbridge, AB T1K 3M4, Canada

Dr. Cindy Harmon-Jones

School of Psychology, Western Sydney University, Sydney, NSW 2751, Australia

Dr. Ji Su Han

Graduate School of Education, Kyung Hee University, Yongin, South Korea

Prof. Dr. Ming Cui

Department of Human Development and Family Science, Florida State University, Tallahassee, FL, USA

Prof. Dr. George Georgiou

Faculty of Education, University of Alberta, Edmonton, AB, Canada

Ms. Pamela Guilbault

Catholic Independent Schools of Nelson Diocese, Kelowna, BC, Canada

Dr. Ubydul Haque

Rutgers Global Health Institute, Rutgers University, New Brunswick, NJ, USA

Dr. Brad Hokanson

Department of Design, Housing and Apparel, College of Design, University of Minnesota, Minneapolis, MN, USA

Program Overview

	1 April	2 April	3 April
Morning	Session 7: Child and Adolescent Psychiatry Session 8: Organizational Behaviors	Session 6: Health Psychology	
Afternoon	Session 2: Cognition Session 5: Social Psychology	Session 3: Develpomental Psychology Session 9: Experimental and Clinical Neurosciences	Session 1: Psychiatric, Emotional, and Behavioral Disorders Session 4: Educational Psychology

IOCBS 2026 Program

1 April 2026 (Wednesday)

S7. Child and Adolescent Psychology
S8. Organizational Behaviors

Time: 9:00 (CEST, Basel) | 03:00 (EST, New York) | 15:00 (CST Asia, Beijing)

Time in CET	Speaker	Title
Session 7. Child and Adolscent Psychology		
09:00–09:10	*Welcome from the conference chair* ***Prof. Dr. Jerrell Cassady*** *Event Chair*	
09:10–09:20	*Welcome from the Session Chair* *Session Chair*	
09:20–09:40	**Beatriz De Faria Sousa** Oral Speaker	Indirect Digital Exposure to War and Armed Conflict and Mental Health Outcomes in Children and Adolescents: A Systematic Review
09:40–10:00	**Dr. Kalliopi Megari** Oral Speaker	Identifying the Relationship Between Neurocognitive Functions and Quality of Life in Early Childhood Neurodevelopmental Disorders
Session 8. Organizational Behaviors		
10:00–10:10	*Welcome from the session chair* ***Prof. Dr. Sukanlaya Sawang*** *Session Chair*	
10:10–10:30	**Yuan Wang** Oral Speaker	The Anxiety Paradox of AI Training in High-Stakes Operations and Supply Chain Management: An Integrated Perspective from Control-Value Theory and Organizational Support Theory
10:30–10:50	**Hulumtaye Belayneh Dejene** Oral Speaker	Fostering e-Government Procurement Success: The Role of Servant Leadership and Organizational Change Readiness
10:50–14:00	**Break**	

S2. Cognition
S5. Social Psychology

Time: 14:00 (CEST, Basel) | 08:00 (EST, New York) | 20:00 (CST Asia, Beijing)

Time in CET	Speaker	Title
Session 2. Cognition		
14:00–14:10	*Welcome from the Session Chair* ***Prof. Dr. John Parkinson*** *Session Chair*	
14:10–14:40	**Dr. Claudia Gonzalez** Invited Speaker	Grounded in Action: The Sensorimotor Origins of Language and Spatial Ability
14:40–15:10	**Dr. Robbin Gibb** Invited Speaker	The influence of parental experience on offspring brain and behavior
15:10–15:30	**Ying Li** Oral Speaker	The Spatial Updating Mechanism of Different Field-Cognitive Styles in Various Perspective Orientations: Evidence from Behavior and fNIRS
15:30–15:50	**Irene Rodrigo** Oral Speaker	Age-related cognitive changes indexed by vocal biomarkers
Session 5. Social Psychology		
15:50–16:00	*Welcome from the session chair* ***Prof. Dr. Johanna Nilsson*** *Session Chair*	
16:00–16:30	**Prof. Dr. Jasper Van Assche** Invited Speaker	The Turtle Metaphor Reconsidered: Diversity and Social Polarization
16:30–17:00	**Dr. Cindy Harmon-Jones** Invited Speaker	Cognitive Dissonance: What's new with the classic theory?

17:00–17:20	**Song Tong** Oral Speaker	Cultural Experience and Cognitive Bias: Validating High-Order Aesthetic Judgment from Human to LLM
17:20–17:40	**Mengyang Liu** Oral Speaker	Testing a Dual-Pathway Model: How Event-Specific Attributions Shape Divergent Responses to Cyberbullying

2 April 2026 (Thursday)

S6. Health Psychology

Time: 9:00 (CEST, Basel) | 03:00 (EST, New York) | 15:00 (CST Asia, Beijing)

Time in CET	Speaker	Title
09:00–09:10	*Welcome from the session chair* ***Prof. Dr. Andrew Soundy*** *Session Chair*	
09:10–09:40	**Dr. Ubydul Haque** Invited Speaker	Coupled behavioral and structural dynamics in hub-and-spoke mobility networks shape disease transmission and vaccination outcomes
09:40–10:00	**Chloe Marie Maxwell-Smith** Oral Speaker	Beyond Belief: The Role of Health Anxiety and the Health Belief Model in UV Risk Exposure Among Australian Adults
10:00–10:20	**Alessio Matiz** Oral Speaker	Changes in mind-wandering frequency and phenomenology in cancer patients following an 8-week mindfulness intervention
10:20–10:40	**Lidia Amaro Diaz** Oral Speaker	Emotional Writing Therapy: Effects on Fibromyalgia Symptoms
10:40–11:00	**Verónica García-Tribaldos** Oral Speaker	Resilience as a Protective Factor Against Obstetric Violence and Adverse Childhood Experiences in the Perinatal Mental Health of Women
11:00–11:20	**Myrto Patagi Bakaraki** Oral Speaker	Enhancing Cognitive Function and Reducing Fatigue Through Occupational Therapy: Evidence from Postoperative Care in Older Adults
11:20–11:40	**Jhon Ostanin** Oral Speaker	Cognitive and Decisional Effects of Companion Presence During Medical Decision Making: A Systematic Review With Narrative Synthesis of Human Studies
12:10–14:00	**BREAK**	

S3. Developmental Psychology
S9. Experimental and Clinical Neurosciences

Time: 14:00 (CEST, Basel) | 08:00 (EST, New York) | 20:00 (CST Asia, Beijing)

Time in CET	Speaker	Title
	Session 3. Developmental Psychology	
14:00–14:10	*Welcome from the Session Chair* ***Prof. Stacey Neuharth-Pritchett*** *Session Chair*	
14:10–14:40	**Dr. Ji Su Han** Invited Speaker	Early Sleep and Developmental Trajectories: Longitudinal Pathways to School Adaptation and Achievement
14:40–15:00	**Ainzara Favini** Oral Speaker	On the Empirical Replicability of Temperamental Profiles in Italian Youths
15:00–15:20	**Mehmet Emin Arayici** Oral Speaker	Epidemiology and Developmental Psychopathology of Separation Anxiety Disorder: A Systematic Multidimensional Review
15:20–15:40	**Alexandra Sonfelianu** Oral Speaker	Fluid Intelligence and Working Memory in ASD and ADHD: A Comparative Study with Neurotypical Children
	Session 9. Experimental and Clincal Neurosciences	
15:40–15:50	*Welcome from the session chair* ***Prof. Dr. Bin Hu*** *Session Chair*	
15:50–16:20	**Prof. Dr. Bin Hu** Keynote Speaker	A Clinical Neuroscience Framework for AI Hallucinations: Measurement, Subtyping, and Intervention
16:20–16:40	**Sergey Lytaev** Oral Speaker	Reflection of phobic scenarios in virtual reality based on EEG data and intelligent video streaming
16:40–17:00	**Avneek Sandhu** Oral Speaker	Temporal Reliability of Sequential Perceptual Decisions in Humans and Artificial Agents

3 April 2026 (Friday)

S1. Psychiatric, Emotional, and Behavioral Disorders
S4. Educational Psychology

Time: 14:00 (CEST, Basel) | 08:00 (EST, New York) | 20:00 (CST Asia, Beijing)

Time in CET	Speaker	Title
Session 1. Psychiatric, Emotional, and Behavioral Disorders		
14:00–14:10	*Welcome from the Session Chair* ***Prof. Dr. Valentina Echeverria Moran*** *Session Chair*	
14:10–14:30	**Diego Díaz-Milanés** Oral Speaker	Revalidating Body Image Dynamics in the Body Investment Scale Using Network Analysis: A Clinical and Behavioural Perspective
14:30–14:50	**Jhon Ostanin** Oral Speaker	Post-Anesthesia Awareness and PTSD Risk: Exploring the Psychological Aftermath of Intraoperative Awareness
Session 4. Educational Psychology		
14:50–15:00	*Welcome from the Session Chair* ***Prof. Dr. William Bart*** *Session Chair*	
15:00–15:30	**Prof. Dr. Ming Cui** Invited Speaker	Navigating college and beyond: Promoting success among college students
15:30–16:00	**Prof. Dr. George Georgiou & Pamela Guilbault** Invited Speakers	Teacher's knowledge and how that relates to students' reading performance
16:00–16:30	Invited Speaker	
16:30–16:50	**Valeria Cavioni** Oral Speaker	Communication at school and teachers' wellbeing: An Italian qualitative study
16:50–17:10	**Simona Alexandra Pascal** Oral Speaker	Student Engagement, Autonomy and Teacher Support in Romanian High Schools: Evidence from a National Study

Session 1. Psychiatric, Emotional, and Behavioral Disorders

sciforum-161641: Gender Bias in ADHD Diagnosis and Exploring Predictors for Accurate Diagnosis

Betsy Wriston *, Kristi Barnes and Alicia Doerflinger

Psychology Department, Marietta College

Until recently, ADHD has been viewed as a developmental disorder largely affecting young boys. Today, many consider the disorder to be overdiagnosed among boys and men and underdiagnosed among girls and women. The primary focus of the current study was to examine clinician gender bias as it relates to the underdiagnosis of the disorder among girls and women. The role of clinician gender, gender competency, and practitioner type on diagnosis was also explored. A within-subjects vignette design was used in which clinicians evaluated boys and girls presenting with inattentive, hyperactive or impulsive, combination, or non-ADHD behaviors. Across the ADHD vignettes, chi-square analyses indicated significantly higher misdiagnosis rates than expected, showing that diagnostic inaccuracy was common across all presentation types. Clinicians were least accurate in diagnosing the inattentive presentation vignette, for both boys and girls, which suggested that difficulty recognizing this subtype, rather than clinician gender bias, played the largest role in diagnostic errors. Girls were underdiagnosed in the inattentive and hyperactive or impulsive conditions, although boys were also underdiagnosed at similar rates. The data did not support the idea that boys were systematically overdiagnosed. Regression analyses showed that clinician gender and self-reported gender competency did not predict diagnostic accuracy, and psychologists and pediatricians performed at similar levels. Overall, the findings suggested that challenges in identifying the inattentive subtype of ADHD had a stronger influence on diagnostic outcomes than clinician gender bias. These results highlight the need for greater attention to inattentive ADHD and raise broader concerns about high rates of misdiagnosis across clinicians.

sciforum-161802: Shielding Neurodivergent and Trauma-Sensitive Users: A Multilingual, Real-Time, Self-Learning Web Content Filtering System

Sinan Atıcı [1] and Ayse Tuna [2,*]

[1] SecHard Information Technologies
[2] Trakya University

Neurodivergent and trauma-sensitive individuals, such as those with autism spectrum disorder, are highly vulnerable to sensory and emotional distress caused by exposure to toxic online content, including hate speech, profanities, and their obfuscated variants. Conventional content filters lack robust multilingual support, fail to adapt to novel zero-day patterns, and provide no guarantees of reliable long-term performance. Neurocognitive predictability is rarely taken into account by such filters. Anxiety may be lessened, and sustained engagement may be supported by filtering systems that anticipate potential emotional triggers, such as toxic content.

In this study, we propose a fully autonomous, real-time web content filtering system designed to protect neurodivergent and trauma-sensitive users. Operating as a zero-configuration transparent proxy, the proposed system performs continuous multilingual analysis using a self-evolving knowledge graph that adaptively identifies both explicit and emerging toxic expressions. The system's core adaptive learning algorithm is designed to ensure stable and reliable operation over time. In the proposed system, a personalized *Safe-Point* toxicity threshold is maintained for each user. When the threshold is exceeded, harmful content is instantly masked while preserving readability. The primary contribution of this study is a practical, self-learning filtering system that offers vulnerable users a robust, adaptive, and privacy-conscious defense against online verbal aggression.

sciforum-172747: Therapeutic Alliance and Post-Intervention Outcomes in a Sample of South Asian Canadians Receiving Culturally-Adapted CBT: Considering Client and Therapist Perceptions

Zahra Wakif [1,*], Nivashi Arulventh [2], Nuzhat Azim [3,4], Mahwish Ali Khan [5], Fatima Nadeem [6,7] and Farooq Naeem [4]

1 York University
2 Toronto Metropolitan University, Toronto, Canada
3 University of Toronto, Toronto, Canada
4 Centre for Addiction and Mental Health, Toronto, Canada
5 University of Nottingham, Semenyih, Malaysia
6 Global University Systems Canada, Toronto, Canada
7 Pharma-Medical Science College of Canada, Toronto, Canada

Introduction

Culturally-adapted cognitive behavioural therapy (CaCBT) aims to incorporate cultural considerations into the CBT model, particularly for ethnic minorities. The current state of literature somewhat supports that client perception of therapeutic alliance may be more important in predicting greater improvement post-intervention, however some work may suggest therapist perception is also important. Authors conducted a sub-analysis of a CaCBT RCT for South Asians to explore the influence of therapeutic alliance.

Methods

Bivariate correlational analyses and ANCOVAs are underway, using data from 146 South Asian Canadians enrolled in the original RCT. Variables of interest include depression, anxiety, disability, and somatic symptoms, with timepoints of interest being baseline, 12-weeks (post-intervention), and a 36-week follow-up.

Results

Preliminary results suggest that therapist perception of therapist-client alliance or relationship is not significant in predicting improved client outcomes. However, preliminary results highlight that client perception of therapeutic alliance is statistically significant for depression and anxiety, but not for disability and somatic symptoms.

Conclusions

Preliminary findings suggest that client perception of therapeutic alliance holds more importance in client therapeutic outcome improvement than therapist perception does. Future research should consider whether this is the case for other therapy modalities and ethnicities and aim to integrate qualitative work for client feedback and satisfaction, while this work helps build a foundation for considering how important client perception of therapist-client relationship is for their therapeutic improvement.

sciforum-165345: Association between work schedule type, mental health and quality of life in Greek firefighters. (Protocol number accepted by ethical comitee: 223/ 27-05-2020)

Ioannis Androutsakos [1,2,*], Dimitris Dikeos [1], Thomas Paparrigopoulos [1] and Pentagiotissa Stefanatou [3]

[1] 1st Department of Psychiatry, Medical School, National and Kapodistrian University of Athens, Athens, Greece
[2] Department of Psychosocial Care, Headquarters, Hellenic Fire service, Athens, Greece
[3] Department of Speech and Language Therapy, University of Peloponnese, Kalamata, Greece

Background

Firefighters are exposed to chronic occupational stress, circadian disruption, and traumatic events, placing them at increased risk for sleep disturbances and mental health impairment. Within resilience frameworks, occupational outcomes are conceptualized as the result of the interaction between risk factors and protective factors. However, the role of work schedule-related protective mechanisms remains insufficiently explored.

Aim

This study examined the association between work schedule type, mental health, and quality of life among Greek firefighters, while situating the findings within a resilience-based conceptual framework.

Methods

A cross-sectional quantitative study was conducted among 191 permanent firefighters working 24-hour shifts, rotating 8-hour shifts, or working fixed morning 8-hour schedules. Participants completed validated self-report measures assessing health-related and overall quality of life and mental health.

Results

Work schedule type was significantly associated with psychological outcomes. Firefighters working fixed morning 8-hour schedules exhibited significantly lower general and psychological health, social functioning, environmental quality of life, and resilience compared with those working rotating 8-hour or 24-hour shifts. Across all schedules, sleep disturbances were strongly associated with poorer mental health and reduced quality of life.

Limitations of the study

The cross-sectional design precludes causal inferences regarding the relationship between work schedule type, sleep disturbances, and mental health outcomes. In addition, data were collected exclusively through self-report questionnaires. Finally, no objective sleep assessments or biological markers of stress and circadian disruption were included.

Conclusions

Fixed morning schedules did not appear to confer protection against mental health impairment. Within a resilience framework, it is plausible that the close interpersonal bonds formed among firefighters working shared shifts, combined with collective exposure to traumatic events and a strong shift-based occupational culture, may act as psychosocial buffering mechanisms that mitigate mental health risk. These findings highlight the importance of addressing both risk and protective factors when designing resilience-enhancing interventions for firefighters.

sciforum-165511: Bipolar Disorder and Neurodegeneration: Implications for Cognitive Decline and Dementia Risk

António Margarido *, Sofia Abreu and Iolanda Marques

Unidade Local de Saúde de Coimbra

Introduction

Bipolar disorder (BD) is a chronic psychiatric condition characterized by recurrent episodes of mania, hypomania, and depression. Beyond episodic mood disturbances, increasing evidence suggests that BD may be associated with progressive changes in cognitive functioning and behavior across the lifespan. This poster addresses the following research question: How does bipolar disorder affect long-term cognitive functioning, and what evidence links BD to an increased risk of cognitive decline and dementia, particularly frontotemporal dementia (FTD) or related syndromes?

Methods

A narrative review of the scientific literature was conducted using PubMed, MEDLINE, Google Scholar, and related databases. The review synthesized findings from longitudinal clinical studies, neuropsychological research, and neuroimaging investigations. Particular emphasis was placed on persistent cognitive deficits in executive function, attention, memory, and social cognition, as well as epidemiological studies examining dementia risk in individuals with a history of BD.

Results

The literature indicates that individuals with BD frequently exhibit enduring cognitive impairments that persist beyond acute mood episodes, most notably in executive functioning and attention. Recurrent mood episodes appear to contribute to cumulative neurocognitive burden, with neuroimaging studies demonstrating cortical thinning and altered functional connectivity within frontotemporal networks. Epidemiological evidence suggests an elevated risk of later-life cognitive decline and dementia among individuals with BD, with notable phenotypic overlap between BD-related cognitive changes and early features of frontotemporal dementia. Proposed mechanisms include chronic neuroinflammation, oxidative stress, mitochondrial dysfunction, and impaired synaptic plasticity. Increased vulnerability has been reported among individuals with late-onset BD or a high number of mood episodes.

Conclusions

These findings suggest that bipolar disorder may involve progressive cognitive trajectories in a subset of individuals, with partial overlap with neurodegenerative processes. Early intervention, sustained mood stabilization, and longitudinal cognitive monitoring may be critical for mitigating long-term cognitive decline and informing dementia prevention strategies in bipolar disorder.

sciforum-161630: Burnout and Psychological Well-Being among Mental Healthcare Professionals in Portugal: A Cross-Sectional Study.

Pedro Henriques [1,2,*], Ricardo Picoito [3,4,5] and Olga Valentim [1,6,7]

[1] Escola Superior de Enfermagem da Universidade de Lisboa, Lisboa, Portugal.
[2] Unidade de Cuidados Intensivos 4, Serviço de Medicina Intensiva. Hospital São Francisco Xavier, Unidade Local de Saúde Lisboa Ocidental, Lisboa, Portugal.
[3] Centro de Inovação e Investigação Clínica | Núcleo de Investigação e Formação em Enfermagem, Unidade Local de Saúde Lisboa Ocidental, Lisboa, Portugal.
[4] Universidade Católica Portuguesa – Faculdade de Ciências da Saúde e Enfermage, Lisboa, Portugal
[5] Centro de Investigação Interdisciplinar em Saúde (CIIS) – Wounds Research Lab, Porto, Portugal.
[6] Centro de Investigação, Inovação e Desenvolvimento em Enfermagem de Lisboa (CIDNUR), Lisboa, Portugal.
[7] RISE-Health, Nursing School of Porto, Porto, Portugal.

Introduction

Burnout from chronic occupational stress poses a psychosocial risk among mental healthcare professionals exposed to emotional demands (World Health Organization, 2019; Nagle et al., 2024), compromising well-being, care quality and organisational functioning (O'Connor et al., 2018; Bykov et al., 2022). This study assessed knowledge, burnout and psychological well-being among mental healthcare professionals in Portugal and analysed associations and group differences.

Methods

A descriptive–correlational cross-sectional study was conducted with 199 professionals using an anonymous online survey in October 2025. The instrument included sociodemographic variables, burnout-related knowledge, the Copenhagen Burnout Inventory and the reduced General Psychological Well-Being Questionnaire (both validated for Portugal). Analyses comprised descriptive measures, normality assessment, parametric/non-parametric tests and internal reliability ($\alpha \geq 0.86$). This study was approved by the Ethics Committee (ref. no. 2025-109).

Results

Of the 199 participants, 75.4% were female and 50.8% held a bachelor's or master's degree (38.2%), with nurses predominating (78.9%). Most worked rotating shifts (60.8%), and 45.7% had been advised to seek psychological support. Participants demonstrated strong burnout knowledge, with only 9% believing that work–life boundaries are irrelevant. Burnout was moderate ($M \approx 46/100$) and well-being likewise ($M \approx 3.1/5$), with a strong negative correlation ($r = -0.80$). Older and more experienced professionals showed lower burnout. Burnout was higher in rotating-shift workers ($p = 0.048$) and those advised to seek support ($M = 49.3$ vs 43.1; $p = 0.003$), who also showed lower well-being (p0.001).

Conclusions

Findings indicate a psychological burden among mental health professionals, especially those in rotating shifts and reporting support needs. The inverse burnout–well-being association reinforces the need for organisational strategies that foster healthier work conditions. Limitations include the cross-sectional, self-report design. Future studies should adopt longitudinal approaches and evaluate targeted interventions to mitigate burnout.

sciforum-155550: Creating parent capacity in cases of selective mutism

Heidi Omdal

Department of Education, University of Agder, Kristiansand 4604, Norway

Background

This paper draws on a capacity-building initiative by the researcher, preparing the parents of nine selectively mute (SM) children to take the lead in their child's process of change, starting gradually and in small steps, to speak in more situations and to more people, especially in school.

Aim and conceptual framework

This study investigates the possibilities and challenges parents face in implementing an authoritative parenting style (Baumrind, 1991; Snyder et al., 2013; Wentzel, 2002) in their interactions with an SM child. This innovation aims to strengthen parents' capacity to promote social and emotional development in their child through the support of other parents in a parent guidance group, and from the researcher's guidance.

Methods

Egan's problem-solving model (Egan, 2014) is used as a framework in the parent guidance group. Focus-group interviews in the parent group, and the parents' written answers to questions arising from Egan's (2014) skilled-helper model, in between the meetings with parents, form the database of the project. Content analysis (Patton, 2002) is used to analyze the data. Common themes across families taking part are analyzed in NVivo (Richards, 2002).

Results

A common theme among the families is how to find the right balance between supporting and challenging the SM child in communication with others.

Discussion

How to promote greater independence in the parent–child relationship is the main question from the project. Close monitoring over time is needed to help parents become authoritative adults towards their child.

Conclusions

A close home–school cooperation and a common understanding of the child's needs are urgent in SM cases. The longer the condition has lasted, the more complex the picture seems to be. More supervision after the end of the project year was needed both by parents and professionals in each case to help the children recover from SM.

sciforum-150323: Emotional Mechanisms of Oppositional Defiant Disorder (ODD) in Adults: Links to Functional Impairment

Jessica Rhodes

Department of Psychology and Neuroscience, Westminster College, New Wilmington, PA 16172, United States

Introduction

Oppositional Defiant Disorder (ODD) is defined in the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-5-TR; American Psychiatric Association, 2022) as a childhood disorder characterized by angry/irritable mood, argumentative/defiant behavior, and vindictiveness. Although evidence suggests that ODD symptoms often persist into adulthood, research on adult ODD remains limited. This gap is partly attributable to diagnostic guidelines that do not characterize ODD beyond age 18 and instead imply diagnostic supersession by Antisocial Personality Disorder. This omission is consequential, as adults with ODD histories show elevated psychiatric comorbidity, interpersonal conflict, and occupational and educational impairment. Emerging literature conceptualizes ODD as comprising two dimensions: antagonistic/defiant behavior and negatively oriented affect, particularly irritability. Irritability has been linked to depression, anxiety, and functional impairment and may represent a central mechanism driving adverse outcomes. Emotion dysregulation and emotional impulsivity—characterized by heightened emotional reactivity and poor regulatory control—have also been implicated in ODD and related psychopathology. The present study aims to clarify emotional mechanisms contributing to functional impairment in adult ODD by examining associations between ODD symptoms, functional impairment (including relationship satisfaction and substance use), irritability, emotion dysregulation, and emotional impulsivity; testing irritability and emotional impulsivity as mediators; and evaluating the psychometric properties of a novel adult ODD measure.

Methods

Participants were 168 adults (49% female; mean age = 42.84, SD = 13.01) recruited via Prolific. No additional inclusion/exclusion criteria were implemented. Participants completed self-report measures of ODD symptoms, functional impairment, emotional impulsivity, emotion dysregulation, and irritability. All procedures were approved by the institutional review board.

Results

Regression-based mediation models will be used to test study hypotheses.

Conclusions

Findings are expected to support a neurodevelopmental model of adult ODD, highlighting emotional impulsivity and irritability as key mechanisms linking ODD symptoms to functional impairment and identifying potential targets for assessment and intervention.

sciforum-165165: Graphic Media Exposure During War and Posttraumatic Stress Symptoms: The Mediating Role of Emotion Regulation

Orit Taubman-Ben-Ari [1], Matan Popko [1], Amit Raizman [1], Oded Basok [1] and Meital Navon-Eyal [2,*]

[1] School of social work, Bar Ilan University, Israel
[2] Department of psychology, Hebrew University, Israel

Introduction

Exposure to dreadful graphic media images is consistently found to negatively impact civilians' psychological mental health. This empirical study investigated the direct and indirect links between two types of media exposure (human suffering and death; violent events and attacks) during and following the October 7 attacks on Israel, on the one hand, and posttraumatic symptoms (PTSS), on the other, specifically examining the mediating role of emotion regulation (suppression and reappraisal).

Materials and Methods

A total of 455 individuals ranging in age between 18 and 83 completed measures of graphic exposure, emotion regulation, and PTSS, around one and a half years into the war.

Results

Exposure to either human suffering or violent attacks was significantly associated with higher PTSS, mediated by greater emotion suppression. The emotion regulation strategy of reappraisal did not play such a role.

Discussion

These findings point to the role of emotional suppression in contributing to PTSS following graphic exposure to highly distressing content. Working to reduce the use of suppression and encourage adaptive emotion regulation could play a key role in reducing the lasting impact of graphic exposure on PTSS in similarly distressing contexts.

References

1. Gross, J. J. (1998). The emerging field of emotion regulation: An integrative review. *Review of General Psychology, 2*(3), 271–299. https://doi.org/10.1037/1089-2680.2.3.271
2. Holman, E. A., Garfin, D. R., & Silver, R. C. (2014). Media's role in broadcasting acute stress following the Boston Marathon bombings. *Proceedings of the National Academy of Sciences of the United States of America, 111*(1), 93–98. https://doi.org/10.1073/pnas.1316265110
3. Shoval-Zuckerman, Y., & Horesh, D. (2025). The DSM-5 exclusion of media exposure to traumatic events: A critical reexamination in light of the October 7, 2023, attacks. *Psychological Trauma: Theory, Research, Practice and Policy*, *17*(7), 1548–1550. https://doi.org/10.1037/tra0002013

sciforum-165542: Post-Anesthesia Awareness and PTSD Risk: Exploring the Psychological Aftermath of Intraoperative Awareness

Jhon Ostanin [1,*], Helena De Azeredo Miranda [2] and Beatriz De Faria Sousa [1]

[1] FIU Herbert Wertheim College of Medicine
[2] Charles E. Schmidt College of Medicine at FAU

Introduction

Accidental awareness during general anesthesia (AAGA) is an uncommon but recognized adverse event that may involve explicit recall of intraoperative events, sensory perception, pain, or paralysis. AAGA can be profoundly distressing and has been associated with acute and long-term psychological reactions, including post-traumatic stress disorder (PTSD). This systematic review synthesizes available evidence on psychological outcomes following AAGA.

Methods

We searched Cochrane, PubMed, and Embase (2000–2025), identifying 88 records. After removal of 3 duplicates, 85 studies underwent title and abstract screening; 14 full texts were reviewed, and 8 studies met inclusion criteria. Eligible studies included patients of any age with confirmed AAGA and reported at least one psychological outcome. Data were synthesized qualitatively using narrative methods.

Results

The eight included studies consistently identified acute panic or psychological distress as a common response to AAGA, though prevalence varied. Reported PTSD rates among patients ranged from 0% to 56% across studies, with considerable variability related to differences in study design, patient populations, and timing of outcome assessment. In a retrospective case–control study, 56% of patients met PTSD criteria a mean of 17.9 years after awareness, compared with none of the non-aware controls (p0.01). In a prospective obstetric cohort, 33% of awareness patients received a provisional PTSD diagnosis at 30 days of follow-up. Secondary analysis of a randomized trial demonstrated persistent PTSD symptomatology in 43% of awareness patients versus 16% of non-aware patients, with 14.3% meeting PTSD diagnostic criteria versus 7.6% at 2 years of follow-up. Awareness involving pain or paralysis was associated with greater prevalence of psychological harm, while early postoperative support appeared protective.

Conclusions

While many patients experiencing AAGA recover without lasting psychological sequelae, a clinically significant subset develop persistent trauma-related symptoms. Early identification, structured debriefing, and standardized follow-up may mitigate long-term psychological harm and should be integrated into perioperative care pathways.

sciforum-165034: Revalidating Body Image Dynamics in the Body Investment Scale Using Network Analysis: A Clinical and Behavioural Perspective

Diego Díaz-Milanés [1,2,*], Ana Garcia-Megias [1], Ana Clouté-Fernández [1] and Sergio Navas-León [3]

[1] Department of Quantitative Methods, Universidad Loyola Andalucía, 41704 Sevilla, Spain
[2] Health Research Institute, University of Canberra, Canberra 2617, Australia
[3] Centro de Investigación Nebrija en Cognición (CINC), Facultad de Lenguas y Educación, Universidad Nebrija, 28043 Madrid, Spain

Introduction

Body image is a core psychological construct with major implications for mental health, self-regulation, and health-related behaviours. Negative body investment is associated with eating disorders, depression, psychological distress, non-suicidal self-injury, and suicide risk, underscoring the need for clinically informative assessment. Although the Body Investment Scale (BIS) is widely used, further work on item-level dynamics and gender-related patterns may benefit from alternative analytic approaches.

Materials and Methods

This cross-sectional study included 872 university students (73.7% female; mean age = 20.62 years, SD = 2.15). Item-level gender differences were examined using descriptive statistics and independent-sample t-tests. Gaussian Graphical Models (GGMs) with LASSO regularisation were estimated for the full sample and separately by gender. Network density, edge weights, centrality indices, and node predictability were evaluated; network invariance and global strength were tested. A Bayesian Network (BN) was also estimated to explore potential directional dependencies among items.

Results

BIS items showed acceptable distributional properties. Several items differed significantly by gender, with small-to-moderate effects. The network was dense (86.7% of possible edges), indicating strong inter-item connectivity. Network structure was invariant across genders ($p = 0.573$), but global strength was higher in females ($S = 2.732$) than in males ($S = 2.629$; $p = 0.043$), suggesting greater overall interconnectedness of body image attitudes among women. Across models, Item 3 ("I hate my body") showed the highest predictability (GGM R^2 up to 0.742; BN $R^2 = 0.727$), whereas Item 6 ("I like my appearance in spite of its imperfections") showed the lowest predictability.

Discussion

These findings support a network conceptualisation of body investment in which certain BIS items appear particularly influential. Clinically, highly predictable and strongly connected items may be useful targets for assessment, monitoring, and intervention planning, while gender differences in overall connectivity may inform tailoring of prevention and psychoeducation.

Session 2. Cognition

sciforum-165441: Age-related cognitive changes indexed by vocal biomarkers

Irene Rodrigo *, Sergio Navas-León and Jon Andoni Duñabeitia

Universidad Nebrija

Early detection of neurocognitive and mental health alterations remains limited by the high costs and invasive nature of many traditional clinical protocols. In this context, vocal biomarkers have emerged as a non-invasive, low-cost, and accessible alternative capable of reflecting underlying cognitive and emotional states. Humming, as a source of vocal biomarkers, offers advantages over speech-based methods, including language independence, scalability, and privacy preservation. With the objective of evaluating whether vocal biomarkers extracted from humming are sensitive to aging-related cognitive changes, participants aged between 18 and 80 years completed a humming task under different levels of cognitive load (immediate humming vs. delayed reproduction). Participants repeated two different melodies; for each melody, participants performed six trials, three sung immediately and three sung after playback, resulting in twelve trials per participant. A range of prosodic and spectral voice features, commonly used in speech-based biomarker research, were extracted and analyzed, including measures related to pitch variability, temporal stability, and spectral energy distribution. Results revealed systematic variations in these spectral and prosodic features associated with age and cognitive performance, suggesting that humming captures meaningful information related to cognitive functioning across the lifespan. This highlights the potential of humming-based vocal biomarkers as a promising tool for monitoring age-related cognitive changes and for the early detection of neurocognitive alterations in both research and clinical settings.

sciforum-160921: Associative Cognitive Networks: A Meta-Analysis of Their Impact on Science and Mathematics Education

Elena González Cortés *, Lina Viviana Melo Niño, Alejandro de la Hoz, Miguel Ángel González Maestre and Javier Cubero Juánez

Department of Didactics of Experimental Sciences and Mathematics, Faculty of Education and Psychology, University of Extremadura (UEX), Badajoz 06006, Spain

Within this context, Network Analysis (NA) has emerged as a powerful methodological paradigm, enabling the visualization and quantification of the cognitive structures underlying learning, known as Associative Cognitive Networks (ACNs). This study investigates the impact and application domains of this methodology within science and mathematics education through a mixed-methods systematic review. A systematic synthesis was conducted on 30 studies published between 2014 and 2024, selected in accordance with the PRISMA protocol. The qualitative phase employed thematic coding to identify key application areas, revealing three primary domains: (1) modeling knowledge structures; (2) analyzing dynamic learning processes, with a particular emphasis on Epistemic Network Analysis (ENA); and (3) evaluating educational systems and resources, such as textbooks and curricular designs. The quantitative phase consisted of a random-effects meta-analysis of five quasi-experimental studies, calculating the impact on learning outcomes using Hedges' g. Results yielded a moderate, statistically significant positive effect (g = 0.46, p .001), indicating that the use of ACN approaches significantly enhances learning outcomes. This study reaffirms the potential of Network Analysis as a transformative tool. By providing a solid empirical basis for understanding learning as the dynamic organization of a cognitive network—rather than a mere accumulation of isolated facts—it renders mental structures visible. In practice, this facilitates conceptual understanding and fosters the development of complex skills such as metacognition and argumentation, aligning pedagogical practices with neurocognitive processes.

sciforum-165411: Baseline Vitamin B12 as a Prognostic Marker of Cognitive Progression in Mild Cognitive Impairment: A Systematic Review

Beatriz De Faria Sousa [1,*], Jhon Ostanin [1] and Helena Miranda [2]

[1] Florida International University
[2] Florida Atlantic University

Introduction

Vitamin B12 deficiency is frequently evaluated in patients with cognitive impairment, yet its prognostic value for disease progression among individuals with mild cognitive impairment (MCI) remains uncertain. While vitamin B12 is routinely measured in memory clinics, it is unclear whether baseline levels meaningfully predict longitudinal cognitive decline or conversion to dementia within the Alzheimer's disease spectrum.

Methods

This systematic review was conducted in accordance with PRISMA 2020 guidelines. PubMed, Embase, PsycINFO, and Scopus were searched for longitudinal human studies published between 2005 and 2025. Eligible studies enrolled adults with clinician-diagnosed MCI at baseline, measured baseline serum vitamin B12, and reported longitudinal outcomes, including cognitive decline on standardized neuropsychological tests or conversion from MCI to dementia. Screening and full-text eligibility assessment were performed using Covidence. Due to heterogeneity in study design, outcomes, and analytic methods, findings were synthesized narratively.

Results

Of 330 records identified, 24 full-text articles were assessed, and five longitudinal cohort studies met inclusion criteria. Sample sizes ranged from 49 to 422 participants, with follow-up durations between 24 months and 3.5 years. Findings were inconsistent. Two studies reported associations between lower baseline vitamin B12 levels and greater cognitive decline; however, these associations were attenuated after multivariable adjustment and derived from cohorts that included mixed MCI and early Alzheimer's disease populations. Three studies, including the largest and most methodologically robust cohort, found no significant association between baseline vitamin B12 levels and cognitive decline or conversion to dementia.

Conclusions

Current longitudinal evidence does not consistently support baseline vitamin B12 as an independent prognostic marker of cognitive progression in MCI. These findings suggest that routine measurement of serum vitamin B12 alone may have limited value for risk stratification, highlighting the need for future studies using functionally sensitive biomarkers of vitamin B12 status and standardized progression endpoints.

sciforum-162772: Comparing GPT and Human Affective Evaluations of Social Images

Jongwan Kim

Jeonbuk National University

Understanding how multimodal large language models interpret emotion is essential for evaluating their psychological plausibility. This study investigated how GPT encodes affect in complex social contexts by comparing its emotion ratings with human normative data. Using a database of 274 images depicting diverse interpersonal interactions, we examined model–human correspondence across both dimensional (valence, arousal) and categorical (angry, disgusted, fearful, happy, neutral, sad) measures. GPT-4o was instructed to generate continuous ratings on the same scales used in human assessments. At the dimensional level, GPT systematically assigned higher valence and arousal scores than humans, producing an affective landscape that appeared more positive and more activated overall. The model also exhibited greater variability within semantic categories, suggesting a looser or less constrained mapping of image features to affective dimensions. At the categorical level, confusion-matrix analyses revealed close alignment with human labels for highly prototypical expressions, particularly happiness, anger, and sadness. In contrast, the model frequently misclassified images associated with disgust, fear, and neutrality, indicating difficulty distinguishing among emotions that share overlapping contextual or semantic cues. Together, these findings suggest that GPT relies on a coarse, semantically organized evaluative axis when interpreting emotions in social scenes—an axis that only partially captures the structure of human affective representations.

sciforum-161432: Does an OPTIMIST (Optimizing Psychosis Transformations Interpersonally with Mood, Insight, and Self-stigma Tracking) Approach Improve Prediction of Social Function in Individuals on the Psychosis Spectrum?

Katherine Packard *, Madison A Smith and Veronica B Perez

California School for Professional Psychology - Alliant University

Psychosocial dysfunction in individuals across the psychosis spectrum is well-documented, with neurocognitive and social-cognitive deficits among the strongest predictors. However, mood, insight, and self-stigma may work in tandem with cognitive abilities to improve predictive models of social function. Interventions focused around cognitive remediation for real-world improvements have been inconsistent. Taking an OPTIMIST (*Optimizing Psychosis Transformations Interpersonally with Mood, Insight, and Self-stigma Tracking*) approach to target layered, compensatory treatments may yield more permanent social efficacy. We aim to clarify the relationship between cognitive processes with OPTIMIST factors to predict social function across the psychosis spectrum, hypothesizing that OPTIMIST factors will uniquely contribute to social functioning outcomes.

Psychosis-spectrum participants were assessed on neurocognitive (Trail Making Test - A & B; D-KEFS Color–Word Interference Test; Wisconsin Card Sort Test) and social cognitive performance (Ambiguous Intentions Hostility Questionnaire; Penn Emotion Recognition Task). OPTIMIST factors were assessed with the Depression and Anxiety Stress Scale and UCLA Loneliness Scale; Birchwood Insight Scale and Beck Cognitive Insight Scale; and the Internalized Stigma of Mental Illness Scale. Social and role functioning were assessed using the Social Integration Survey and Social Adjustment Scale.

Hierarchical regression assessed (Step 1) cognitive processes and (Step 2) OPTIMIST factors (mood, insight, self-stigma) on social functioning. Preliminary findings on a small initial sample (n=8) are promising, and suggest OPTIMIST factors substantially increase explained variance, though data collection is ongoing. Our data support a stronger-fitting predictive model of social disability and highlight alternative targets that may be responsive to therapeutic interventions, with the ultimate aim of enhancing social function across the psychosis spectrum.

sciforum-161409: Parasympathetic cardiovascular regulation during a worry-related attentional task in individuals with fibromyalgia

Pilar Ruiz-Medina [1,*], Stefan Duschek [2], Gustavo A. Reyes del Paso [1] and Casandra I. Montoro Aguilar [1]

[1] University of Jaén
[2] UMIT - University for Health Sciences Medical Informatics and Technology

Worry, the presence of intrusive and uncontrollable negative thoughts, is regulated by top-down control mechanisms. When these cognitive control mechanisms are ineffective, they lead to excessive worry, a core symptom in emotional disorders such as depression. Depressive symptoms are often comorbid in fibromyalgia syndrome (FMS). The present study explored the relationship between cognitive control, parasympathetic cardiovascular regulation, and worry in patients with FMS.

Forty-one patients with FMS and seventeen healthy controls completed the Breathing Focus Task (BFT), a task consisting of an induced-worry phase, presented between two phases assessing the ability to focus on breathing. Meanwhile, an electrocardiogram recording and continuous blood pressure measurements were performed. Heart rate variability and baroreflex sensitivity indexes were then computed.

Compared to controls, during the entire procedure, patients reported higher levels of worry and lower HRV, as well as reduced ability to concentrate on breathing, higher frequency of intrusive negative thoughts, and worse mood ratings. These difficulties were more marked after the induced-worry phase, increasing the deficit in attentional focus and the number of intrusive negative thoughts reported.

These results are an indication of decreased parasympathetic cardiovascular regulation in patients with FMS, evidenced by reduced HRV. Given the association between the prefrontal cortex and cardiovascular regulation, low HRV would indicate reduced functional capacity of the prefrontal cortex and impaired cognitive control. These findings suggest that this cognitive dysregulation may be exacerbating worry and contributing to the maintenance of negative emotional states in FMS.

sciforum-160840: Pedagogical Content Knowledge of Measurement through the Analysis of *Associative Cognitive Networks*

Elena González Cortés [1,*], Lina Viviana Melo Niño [1], Alejandro de la Hoz [1], Miguel Ángel Ángel González Maestre [1], Luis Luis Manuel Soto Ardila [1], Adrián Gordillo Merino [1], Raúl Martínez Bohórquez [1], Carlos José Prieto Vera [2], Susana Sánchez Herrera [3] and Javier Cubero Juánez [4]

[1] Department of Didactics of Experimental Sciences and Mathematics, Faculty of Education and Psychology, University of Extremadura (UEX), Badajoz 06006, Spain
[2] Department of Medical-Surgical Therapeutics, Faculty of Medicine and Health Sciences, University of Extremadura (UEX), Badajoz 06006, Spain
[3] Department of Psychology and Anthropology, Faculty of Education and Psychology, University of Extremadura (UEX), Badajoz 06006, Spain
[4] Department of Didactics of Experimental Sciences and Mathematics, Faculty of Education and Psychology, University of Extremadura (UEX), Badajoz 06006, Spain

Measurement estimation is a fundamental mathematical skill, yet teaching it presents significant challenges, largely due to weaknesses in teachers' Pedagogical Content Knowledge (PCK). This study proposes a structural approach to analyze the knowledge organization of 31 pre-service elementary school teachers regarding measurement estimation. Based on an open-ended questionnaire, a qualitative analysis was conducted, resulting in 68 subcategories, which were modeled as nodes in an *Associative Cognitive Network* (ACN). The co-occurrences between subcategories in the pre-service teachers' responses generated 1,959 weighted edges. Quantitative graph analysis reveals a highly dense and efficient network (density = 0.860; ASPL = 1.087), featuring a hyper-connected core of practical and procedural ideas. The conceptual hubs, identified by their high Weighted Degree, correspond mainly to instructional actions and basic measurement concepts—such as extensive quantities and quantitative magnitudes—as well as measurement as a comparison process and the use of physical objects (all with weighted degree values close to 1000). In contrast, key formal mathematical concepts, such as proportionality (Weighted Degree = 146) and transitivity (Weighted Degree = 84), occupy peripheral positions and rarely serve as bridges. Modularity analysis ($Q \approx 0.042$) identifies two large functional communities: a Didactic–Operational Core and a Peripheral Conceptual Belt, which are strongly interconnected. These results quantify the gap between concrete pedagogical knowledge and abstract mathematical foundations, underscoring the need for initial teacher education to focus not only on introducing new concepts but also on reinforcing the structural connections between practical knowledge and the formal mathematical principles that underpin it.

sciforum-165382: Reading with Noisy Orthographic Input: Easy-to-Read Formats and Visual Processing Across the Adult Lifespan

Sergio Navas-León * and Jon Andoni Duñabeitia

Centro de Investigación Nebrija en Cognición (CINC), Facultad de Lenguas y Educación, Universidad Nebrija, 28043, Madrid (Spain)

Introduction

Easy-to-Read (E2R) are intended to enhance digital accessibility by reducing cognitive load. However, evidence supporting their effectiveness, particularly in non-disabled adult populations, remains limited. To fill the gap, the present study examines whether E2R is associated with more efficient reading across adult lifespan.

Materials and Methods

A convenience sample of healthy Spanish adults (N = 49; *M* = 42.2, *SD* = 20.5), completed a within-subject reading task. Texts were presented in a Control (sans-serif font, justified alignment, standard spacing) and an E2R format (sans-serif font, left-aligned text, increased spacing, and pictograms). Eye movements were recorded at 500 Hz. Measures included fixation count, fixation duration, saccade amplitude, and reading time. After reading, participants completed a comprehension test. Linear mixed-effects models were fitted, with age entered as a continuous predictor.

Results

E2R condition resulted in shorter fixation durations and larger saccade amplitudes. Fixation count showed a non-significant trend. A significant main effect of age was observed on total reading time, with older participants exhibiting longer reading times. However, main effects of age and Condition × Age interactions were non-significant across other measures. Finally, non-significant differences in comprehension were found between conditions.

Discussion

These results show for the first time that E2R may not represent any benefit for native readers without any marked cognitive difficulty. This pattern highlights the need to revisit and empirically refine current E2R guidelines, particularly when applied beyond their original target populations.

References

1. Schmutz, S., Sonderegger, A., & Sauer, J. (2016). Implementing recommendations from web accessibility guidelines: Would they also provide benefits to nondisabled users? Human Factors, 58(4), 611–629. https://doi.org/10.1177/0018720816640962
2. Schmutz, S., Sonderegger, A., & Sauer, J. (2019). Easy-to-read language in disability-friendly websites: Effects on nondisabled users. Applied Ergonomics, 74, 97–106. https://doi.org/10.1016/j.apergo.2018.08.023
3. World Wide Web Consortium (W3C). (2022). W3C accessibility standards overview: Accessibility guidelines. https://www.w3.org/WAI/standards-guidelines/#guidelines

sciforum-158428: Real-Time Modulation of Cerebral Blood Flow by tDCS During a Cognitive Task

Casandra I. Montoro Aguilar [1,*], Pilar Ruiz-Medina [1], Stefan Duschek [2] and Gustavo Adolfo Reyes del Paso [1]

[1] Department of Psychology, Faculty of Humanities and Education Sciences, University of Jaén, Jaén, 23071, Spain
[2] Department of Psychology and Medical Sciences, UMIT – Private University for Health Sciences, Medical Informatics and Technology, Hall in Tirol, 6060, Austria

Transcranial direct current stimulation (tDCS) has shown promise for enhancing cognition, yet its underlying mechanisms remain poorly understood, limiting its clinical application. To gain deeper insight into these mechanisms, we conducted a study combining tDCS with continuous monitoring of cerebral blood flow (CBF) using Doppler ultrasonography during a cognitive task. Thirty-five right-handed participants were randomly assigned to receive 20 minutes of active or sham tDCS over the left inferior parietal cortex, followed by a mental arithmetic task. CBF in the middle cerebral arteries (MCA) was continuously recorded throughout the task. Velocity signals revealed three distinct phases: an early increase coinciding with stimulus presentation, a secondary peak approximately 5 seconds later, and a gradual decline below baseline. Peak amplitudes were analyzed within defined time windows (5–6 s, 14–18 s, 21–24 s). Preliminary results indicate that active tDCS enhanced the early CBF response bilaterally, while the late response in the right MCA was attenuated compared to sham. These findings suggest that tDCS may facilitate arithmetic performance by amplifying preparatory activation and suppressing irrelevant neural activity, thereby focusing resources on task-relevant regions supplied by the left MCA. Furthermore, this study demonstrates that Doppler ultrasonography provides a reliable, real-time measure of neurovascular changes induced by tDCS, offering a valuable window into its underlying mechanisms. Overall, these results support the notion that tDCS can modulate distributed brain networks to optimize cognitive function, highlighting its potential for targeted cognitive enhancement interventions.

sciforum-161663: The Effects of Two Reward Schedule on Cognitive Control in Individuals on the Psychosis Spectrum

Susan E Koh * and Veronica B Perez

Alliant University

Motivational deficits often have adverse effects on cognitive control tasks in individuals with schizophrenia (SZ) and contribute to artifacts of poor cognitive performance. Healthy populations have shown benefits from motivational tools, such as monetary reward, but these rewards were sporadically effective in SZ. Evidence suggests that the reward reinforcement schedule may largely determine efficacy for enhanced performance; chronic SZ improved performance in response to contingent rewards when presented with feedback immediately following correct trials, but not when informed of rewards at the beginning of the block. The current study aimed to expand the examination of the role of reward scheduling on cognitive control performance in individuals across the full psychosis spectrum (PS) relative to healthy controls (HC). Participants completed the Stop Signal Task (SST) at three time points: at baseline (without reward) and two monetary reward conditions: 10:1 Fixed Ratio Reinforcement Schedule (FR10) and Continuous Reinforcement Schedule (CRS); Intrinsic Motivation Inventory- Schizophrenia Research (IMI-SR); Prodromal Questionnaire-Brief (PQ-B); Depression Anxiety Stress Scale (DASS-21), and the Social Integrational Survey (SIS). Results revealed both groups benefitted from the FR10 schedule, while only PS showed improved SST performance with CRS relative to baseline. It was predicted that intrinsic motivation and clinical symptoms would impact task performance, and results showed perceived choice and overall intrinsic motivation as a predictor of performance enhancement with reward, even when accounting for age and race/ ethnicity. Neither other domains of intrinsic motivation (interest/enjoyment, effort/importance, pressure/tension, value/usefulness) nor symptom severity (negative symptomatology, depression, anxiety, stress) predicted reward-based performance enhancements. Finally, FR10- and CRS-mediated changes in SST accuracy and reaction time were associated with psychosocial function (SIS). Clarifying the mechanistic role of the scheduling of rewards for cognitive tasks for individuals on the psychosis spectrum may inform more effective interventions toward restored cognitive control and psychosocial functioning.

sciforum-161334: The role of rumination and executive function in autobiographical memory phenomenology in depression.

Beth Markham

School of Psychology and Social Work, University of Hull, UK

Depression is associated with biases in autobiographical memory (ABM), including difficulties retrieving specific episodic memories, known as overgeneral memory (OGM), and reduced phenomenological richness. Increased levels of rumination and deficits in executive function have been identified as factors underlying OGM, as both likely limit the cognitive resources available for the effortful search process required to retrieve specific memories. While their role in OGM is well-established, less is known about how rumination and executive function may relate to the phenomenological experience of ABMs. The present study investigated the role of depressive symptoms, rumination, and executive function in the phenomenology of ABMs. We hypothesized that higher levels of depressive symptoms would be associated with impoverished phenomenology, and that higher levels of rumination and reduced executive function would also show similar associations. Participants completed an ABM recall task in which they recalled three positive and three negative memories from the past year and rated each memory on several phenomenological characteristics (e.g., vividness and coherence). Depressive symptoms were measured using the Center for Epidemiological Studies Depression – Revised (CESD-R), rumination using the Ruminative Response Scale (RRS), and executive function using tasks measuring inhibition (Word-Face Stroop), working memory (Letter-Number Span), and cognitive flexibility (Trail Making Test). The findings support previous literature showing biases in phenomenological experience as a function of depressive symptoms. There were also some findings for biases in ABM as a function of rumination. These findings suggest both depressive symptoms and rumination may influence the phenomenological experience of ABMs and may also contribute to the maintenance of depression.

sciforum-165492: The Spatial Updating Mechanism of Different Field-Cognitive Styles in Various Perspective Orientations: Evidence from Behavior and fNIRS

Ying Li * and Xia Sun

Faculty of Psychology, Tianjin Normal University, Tianjin, 300387, China

Spatial updating is a key cognitive function in the navigation process, which directly affects an individual's path integration ability and navigation efficiency. Although existing studies have shown that field cognitive style and perspective orientation may influence spatial updating performance, the underlying cognitive and neural mechanisms have not yet been systematically investigated.

To explore this issue in depth, this study adopted a 2 (field-dependent/field-independent) * 2 (memory-consistent/sensorimotor-consistent) mixed experimental design, combining the relative direction judgment paradigm with functional near-infrared spectroscopy (fNIRS) brain imaging technology. Through a virtual navigation task and the judgment of relative direction (JRD) paradigm, the study simultaneously recorded participants' behavioral performance and brain activation patterns.

Results demonstrated that field-independent individuals exhibited superior behavioral performance and stronger activation in brain regions such as the precentral gyrus. Memory-aligned perspectives yielded better performance than sensorimotor-aligned perspectives. A significant interaction was observed between field-cognitive style and perspective orientation: under sensorimotor-aligned conditions, field-independent individuals demonstrated enhanced cognitive flexibility. This research reveals the synergistic influence of field-cognitive style and perspective orientation on spatial updating from a cognitive neuroscience perspective. These findings deepen the understanding of individual differences in spatial cognition and provide a key theoretical basis for optimizing spatial navigation-related cognitive training to enhance individual navigational abilities.

Session 3. Developmental Psychology

sciforum-161197: Epidemiology and Developmental Psychopathology of Separation Anxiety Disorder: A Systematic Multidimensional Review

Mehmet Emin Arayici [1,2] and Sema Gultekin Arayici [3,*]

[1] Department of Public Health, Faculty of Medicine, Dokuz Eylül University, İzmir, Türkiye
[2] Department of Biostatistics and Medical Informatics, Faculty of Medicine, Dokuz Eylül University, İzmir, Türkiye
[3] Department of Clinical Psychology, Faculty of Letters, Ege University, Izmir, Türkiye

Background

Separation anxiety disorder (SAD) is one of the most prevalent anxiety disorders in childhood and adolescence, typically emerging around the age of six and affecting approximately 4% of individuals across the lifespan. Global and national data indicate that SAD is highly common in preschool settings and pediatric clinical populations in Türkiye. Prior research suggests that its etiology is shaped by an interplay of genetic, environmental, psychological, and socioeconomic determinants, with girls showing higher prevalence rates than boys. However, a comprehensive developmental psychopathology perspective integrating these multidimensional factors remains limited.

Methods

A systematic literature search was undertaken in PubMed/MEDLINE, PsycINFO, Web of Science, and Scopus from inception until October 2025. This review synthesizes epidemiological findings and developmental psychopathology frameworks to examine the risk and protective factors associated with the onset and course of SAD. Evidence from genetic studies, environmental risk models, attachment theory, and socioeconomic determinants is integrated to provide a multidimensional understanding of SAD. Particular attention is given to parental behaviors, temperament traits, and contextual stressors that influence vulnerability to anxiety disorders.

Results

Findings indicate that genetic influences, especially among girls, play a significant role in the emergence of SAD. Environmental contributors—including overprotective or controlling parenting styles, insecure attachment patterns, and adverse socioeconomic conditions—further elevate risk. Children from lower socioeconomic backgrounds demonstrate higher rates of SAD, suggesting a strong contextual effect. Conversely, secure attachment with caregivers emerges as a key protective factor, reducing susceptibility to anxiety and supporting adaptive emotional development.

Conclusions

SAD arises from complex interactions between biological, psychological, and environmental processes, underscoring the multifactorial nature of anxiety disorders. Understanding these interactions is essential for informing evidence-based prevention and intervention strategies. This review highlights the psychosocial impact of SAD on child development and emphasizes the need for further longitudinal and interdisciplinary research. This work aims to contribute to the epidemiological and clinical understanding of SAD within both academic and applied contexts.

sciforum-137886: Fluid Intelligence and Working Memory in ASD and ADHD: A Comparative Study with Neurotypical Children

Alexandra Sonfelianu [1,*], Laura Lacomba-Trejo [2] and Francisco González-Sala [2]

[1] Faculty of Psychology and Speech Therapy, Universitat de València, Valencia 46010, Spain
[2] Department of Developmental and Educational Psychology, Faculty of Psychology and Speech Therapy, Universitat de València, Valencia 46010, Spain

Introduction

Fluid intelligence is defined as the ability to reason, solve problems and adapt, while working memory is a temporary system for holding and manipulating information for complex tasks. Both factors are part of executive functions and are closely linked because working memory is fundamental for the reasoning and flexibility of fluid intelligence. Therefore, the aim of this study is to determine the level of the impairment of these variables in children with ASD, ADHD, or without neurodevelopmental problems, and to compare the groups.

Material and Method

To conduct the study, two questionnaires were assessed: the Raven's Test and the WISC Arithmetic subtest. The sample consisted of 12 girls and 21 boys (M = 9.94; SD = 1.44) between 7 and 13 years old. Of these, 36.40% had no disorder, 36.40% had ADHD, and the remaining 27.30% had ASD. This was a quantitative study, and the data were analyzed using IBM SPSS statistical software.

Results

No statistically significant differences were found among the three groups on the Raven's Test. However, significant differences were observed in the WISC Arithmetic subtest, where children with ADHD (M = 17.50; SD = 3.71) scored lower than the group without disorders (M = 24.09; SD = 3.21) (F = 7.309, p = 0.003, η^2 = 0.335). Although no statistically significant differences were found in the Raven's test, we observed a large effect size (F = 1.861, p = 0.173, η^2 = 0.110), suggesting that significant differences might exist if we increased the sample size.

Conclusions

Despite the executive function impairments observed in individuals with neurodevelopmental disorders, significant differences were only found in the WISC Arithmetic subtest. This subtest evaluates quantitative reasoning ability and the mental manipulation of arithmetic problems, both of which involve working memory. A larger sample size is necessary to determine the differences between the distinct groups in the Raven's test.

sciforum-141865: Cognitive Correlates of Language Performance in Tunisian Dyslexic Pupils

Sleh Eddine Saadi

Mental Health Service, Mohamed Tahar Maamouri Hospital, Mrazka, 8000 Nabeul, Tunisia

Dyslexia is a specific learning disorder affecting written language, hindering reading and spelling acquisition despite preserved intelligence and adequate schooling. This study examines the cognitive profile of Tunisian children with dyslexia by exploring associations between executive functions, intelligence, and language achievement. The sample included 134 pupils aged 8–12 years who met eligibility criteria for dyslexia based on a prior clinical diagnosis established independently of the present study. Executive functions were assessed using the Hayling Junior Test (inhibition) and the Trail Making Test (cognitive flexibility). The WISC-V provided full-scale IQ. Working memory was indexed by the WISC-V Digit Span subtest (verbal working memory), while Block Design was analysed separately as an index of visuospatial reasoning. Academic achievement was approximated using the latest term language grade as an ecological outcome measure, not for diagnostic purposes. Pearson correlations examined relationships between cognitive variables and academic outcomes, and one-way ANOVAs tested age effects on cognitive performance. Language achievement correlated positively with inhibition and flexibility and showed a moderate association with verbal working memory. A weak but significant correlation emerged between full-scale IQ and language scores. No significant association was found with visuospatial reasoning. Age effects were significant for most executive measures except Digit Span. These findings highlight the central role of executive functions, particularly inhibition and flexibility, in language achievement among children with dyslexia, beyond global intellectual functioning.

sciforum-161664: Models of Attachment and Persistence Among First- and Second-Year College Students

Hope Adams [1], Kristi Anne Barnes [2,*], Lizzie Herrera [2] and Andy Liu [2]

[1] Marietta College
[2] Psychology Department, Marietta College

Research consistently indicates that early attachment to primary caregivers can have a lasting effect on development that persists into adulthood. While studies have established a positive relation between secure attachment and academic persistence (e.g., Sollenberger et al., 2007), there is a lack of systematic research examining how attachment interacts with other variables linked to persistence. The current study examines how attachment styles interact with other individual factors (gender, ego-resiliency, and trait anxiety) to influence persistence among first- and second-year college students.

A majority of the sample reported a secure attachment. As a result, all categories of insecure attachment were collapsed for the purposes of data analysis. Persistence was operationalized as time spent on an unsolvable puzzle task. To help create the expectation that all tasks were solvable, participants completed two solvable tasks first. Statistics indicate that there were no significant differences in persistence based on attachment. However, it is important to note that meaningful differences among categories of insecure attachment may have been masked by grouping them together. Further, the small sample of insecurely attached participants constrained power.

A similar pattern of findings emerged when comparing those with higher versus lower levels of ego-resiliency. Overall, the sample reported high levels of ego resiliency. Although significant group differences (i.e., higher vs. lower) failed to emerge, the findings were generally consistent with the expectation that higher ego-resiliency was related to more persistence. Linear regression analyses indicated that while the overall model (gender, ego-resiliency, trait anxiety, and attachment) was not significant in predicting persistence, gender did contribute unique variance. Further research more closely examining how specific categories of attachment differentially contribute to models of persistence should be pursued. More effective interventions targeting at risk students can be developed with a better understanding of how individual characteristics relate to persistence.

sciforum-159890: On the Empirical Replicability of Temperamental Profiles in Italian Youths

Ainzara Favini * and Carolina Lunetti

Department of Human Sciences, Guglielmo Marconi University, 00193 Rome, Italy

Research in individual differences focuses on identifying the core dimensions that distinguish people from one another, particularly psychological, emotional, and cognitive aspects of functioning. Temperament represents a fundamental facet of these differences: an early-emerging, biologically rooted set of affective, attentional, and regulatory tendencies that underlies later personality development. Because temperament is relatively stable and observable early in life, it offers a valuable framework for understanding the developmental pathways that may lead to either adjustment or maladjustment across childhood and adolescence.

A growing body of lifespan-oriented research shows that temperamental differences are linked to later emotional and behavioral problems. This has generated increasing interest in whether distinct temperament profiles can identify youths at risk for developmental difficulties. However, past empirical findings have been inconsistent—often focusing on younger children or on biologically oriented dimensions such as novelty seeking or harm avoidance—limiting the generalizability of existing models.

The presented work aims to address these gaps by identifying robust temperamental profiles in late childhood and adolescence, emphasizing two core domains: **effortful control (EC)**—a self-regulatory system including attentional, inhibitory, and activation control—and **negative emotionality (NE)**, particularly anger/frustration and sadness. Using self-reports from 339 Italian adolescents, the study attempts to replicate profiles previously observed in a cross-cultural dataset based on mother reports.

Latent profile analysis successfully replicated four distinct patterns:

Adjusted

– high EC, low NE

Average

– moderate EC and NE

Emotional

– average to high EC combined with high anger

Dysregulated

– low EC and high NE

These replicated profiles strengthen evidence for a coherent, developmentally meaningful structure of temperament in adolescence. The findings advance the field by clarifying how patterns of emotionality and self-regulation combine to shape adaptive versus maladaptive trajectories.

sciforum-165047: Psychometric Evaluation of a Spanish Telepressure Measure in Primary School Students

Jesús Martínez-Calvo [1,*], Diego Diaz-Milanes [1,2] and Jose Manuel Guerra [3]

[1] Department of Quantitative Methods, Universidad Loyola Andalucía, Seville, Spain
[2] Health Research Institute, University of Canberra, Canberra, Australia
[3] Department of Social Psychology, University of Seville, Seville, Spain

Introduction

Telepressure—the perceived urge to respond quickly to digital messages—may undermine students' attention and well-being, yet brief validated tools are limited in school settings. This empirical study evaluates the psychometric properties of a Spanish adaptation of the 6-item Workplace Telepressure Measure (WTM-6) for primary education.

Materials and Methods

Participants were 439 Spanish primary students (5th grade n=189; 6th grade n=250; 53.99% females) who completed the WTM-6 on a 1–5 Likert scale. Factorability was assessed using the Kaiser–Meyer–Olkin (KMO) index and Bartlett's test. Dimensionality was examined with multiple factor-retention procedures and then tested with a one-factor confirmatory factor analysis (CFA) using an ordinal estimator. Model fit was evaluated with χ^2, CFI, TLI, RMSEA (90% CI), and SRMR. Internal consistency was estimated with ordinal alpha, split-half reliability, and omega total. Group differences by gender and grade were examined using independent-sample t-tests with Cohen's d.

Results and Discussion

The data were suitable for factor analysis (KMO=0.800; Bartlett $\chi^2(15)=728.45$, p.001). Retention criteria converged on a single latent factor. The one-factor CFA showed good fit: $\chi^2(9)=25.48$, CFI=0.985, TLI=0.974, RMSEA=0.065 (90% CI [0.036, 0.095]), and SRMR=0.053. Reliability was satisfactory in the total sample (ordinal α =0.797; ω=0.854). Telepressure did not differ by gender (total score p=0.540), but 5th-grade students reported slightly higher telepressure than 6th-grade students (M=2.595 vs 2.377; p=0.006; d=0.264). These findings support the use of the adapted WTM-6 as a brief, reliable measure of telepressure in primary educational contexts.

sciforum-161542: When and How do Iconic Gestures Impact Early Word Learning?

Keryn Siddle [1,*], Dr Henning Holle [2] and Dr Emily Mather [2]

[1] University of Hull, PhD Candidate
[2] University of Hull

Across the second and third years of life, children increasingly rely on word-learning cues to identify referents, retain new mappings over time, and extend words beyond their initial context. Existing studies provide mixed evidence for the benefits of iconic gesture, with intervention research reporting inconsistent vocabulary outcomes and small-scale experimental studies producing conflicting results for two- and three-year-old children. By adopting a controlled experimental design conducted in familiar nursery and educational environments, this project will isolate the specific contribution of iconic gestures to early noun learning.

Three initial experiments will examine: (One & Two) whether iconic gestures support 17-42-month-old children's map novel labels to referents in a referent selection and referent retention study; and (Three) whether iconic gestures support two to three-year-olds' generalisation of newly learned novel object names. Experiment One examined whether iconic gestures may support young children's novel word learning and revealed a significant overall learning effect across the cohort. However, despite a robust main effect, there was no evidence of an age effect within the 2.5-3.5-year-old cohort. This suggests that this cohort is already proficient at integrating iconic gestures into the word-learning process, and that age-related variation within this cohort is minimal. Experiment Two demonstrated that children aged 18-27 months can successfully select referents in an iconic gesture-supported word-learning task. Still, they are not able to retain these mappings over time. These findings highlight a key developmental transition period in early word learning, during which children become more adept at establishing immediate associations but have not yet mastered the processes necessary for reliable retention. Experiment Three is yet to be completed at the time of this abstract submission. Together, these studies will generate comprehensive experimental evidence on the developmental timing and mechanisms through which iconic gestures support word learning.

Session 4. Educational Psychology

sciforum-160518: Mathematics anxiety related to geometry and geometric reasoning in primary education

María de los Remedios López García *, Ana Caballero Carrasco and Lina Viviana Melo Niño

Department of Didactics of Experimental Sciences and Mathematics, Faculty of Education, University of Extremadura, Badajoz 06071, Spain

This study examines the relationship between anxiety toward geometry and geometric reasoning in 4th and 6th grade Primary Education students, addressing the need for domain-specific analyses of mathematics anxiety. While mathematics anxiety has been widely studied as a factor that negatively affects learning and performance, anxiety toward geometry has received less attention, despite the specific cognitive demands of this domain, such as spatial visualization and reasoning about properties. Exploring this relationship in Primary Education is especially relevant, as this stage is critical for the development of geometric thinking.

This research uses a non-experimental quantitative design with a sample of 221 students (109 in 4th grade and 112 in 6th grade). Two instruments were administered: an adapted geometry anxiety scale with high internal consistency (α = .939) and a geometric reasoning test based on the first three levels of the Van Hiele model, focusing on tasks involving triangles and quadrilaterals. Data were analyzed using descriptive statistics and inferential tests.

The results showed that most students reported low or very low levels of geometry anxiety, with no statistically significant differences between grades. Likewise, no significant differences were found between 4th and 6th grade in geometric reasoning. Analysis based on Van Hiele levels revealed that a large proportion of students in both grades remained at the initial visualization level, particularly in tasks involving quadrilaterals, while only a small percentage reached higher levels of analysis or informal deduction.

Finally, a significant negative correlation was found between geometry anxiety and geometric reasoning, indicating that higher reasoning levels are associated with lower anxiety. These findings highlight the close interaction between affective and cognitive factors in geometry learning and emphasize the importance of teaching approaches that address both emotional and cognitive aspects, fostering supportive environments where students can develop geometric reasoning without fear or tension.

sciforum-157245: Navigating the Journey to Independence: Challenges and Strategies for Individuals with Severe to Profound Disabilities

Yi-Fan Li

Department of Interdisciplinary Learning and Teaching, The University of Texas at San Antonio, 1 UTSA Circle, San Antonio, TX 78249, United States

The completion of high school is often seen as an exciting time for young adults. For students with disabilities, however, this can be a difficult time filled with uncertainty if they have not had sufficient planning and preparation for adult life. Transition refers to the process of preparing individuals for changes as they move from one stage of life to another, such as the shift from school to adulthood. However, this process often presents new challenges and responsibilities for youth and young adults with disabilities and their families. This study employed a qualitative approach using semi-structured interviews to gain insights from adults with severe disabilities regarding their experiences in pursuing independence, including the challenges they encountered and the strategies they used to navigate life after leaving school. Ten participants from Taiwan, all with severe to profound disabilities, were interviewed. The findings revealed various strategies that supported their pursuit of independence, such as family support, self-advocacy, and the use of societal or public long-term care services. Participants also identified barriers and challenges, including a shortage of caregivers and limited access to services. Furthermore, the findings highlighted how policies, societal values, and attitudes in Taiwan influence their journey toward independence. By exploring the experiences of older individuals with severe disabilities, this study underscores equity issues and individual-centered perspectives, offering implications for youth and young adults with disabilities and their families as they navigate the transition to adulthood.

sciforum-161353: Communication at school and teachers' wellbeing: An Italian qualitative study

Valeria Cavioni [1,*], Elisabetta Conte [2] and Veronica Ornaghi [3]

[1] Department of Humanities and Social Sciences, Faculty of Society and Communication Sciences, Universitas Mercatorum (Rome, Italy)
[2] Department of Human and Social Sciences, University of Bergamo (Bergamo, Italy)
[3] Department of Human Sciences for Education "Riccardo Massa", University of Milano-Bicocca (Milan, Italy)

Introduction

Teachers' wellbeing is closely linked to the quality of communication within the school environment, as it influences daily relationships and practices (Addimando, 2019; Kuusimäki et al., 2017; Tsuyuguchi, 2025). This qualitative study explored how Italian teachers experience communication with colleagues and head teachers, and thus respectively in horizontal and vertical relationships at school.

Methods

Seventy-six teachers (67 females; M age=46.6 years, SD=11.2) working in three school institutes (M years of job experience in those schools=9.3 years, SD=8.4) participated in three semi-structured focus groups exploring their perceptions of wellbeing at school. Three guiding questions focused specifically on experiences with colleagues and school leaders. All discussions were audio recorded, transcribed verbatim, and analyzed using thematic analysis (Braun & Clarke, 2006) to identify recurrent communicative patterns in horizontal and vertical interactions.

Results

Four themes emerged concerning communication with colleagues: informal exchanges, professional collaboration and reciprocal support, conflictual communication, and limited communication. Regarding communication with head teachers, four themes were identified: approachability and availability, organizational communication, professional support, trust and respect. Positive communication was associated with pleasant emotions (e.g., joy, satisfaction), whereas negative communication was more frequently linked to unpleasant emotions (e.g., frustration, demotivation, feeling of isolation). Negative communication patterns and associated negative emotions were reported more often in interactions with school leaders.

Conclusions

The findings highlighted an asymmetry in horizontal (i.e., with colleagues) and vertical (i.e., with head teachers) communication. As positive communication is related to experiences of positive emotion, this study highlights the importance of creating structured opportunities for collegial dialogue and strengthening leadership communication to support teachers' psychological wellbeing.

sciforum-160914: Effects of academic self-efficacy and future orientation on procrastinating behavior in Italian university students

Elisabetta Sagone * and Maria Luisa Indiana

Department of Educational Sciences, University of Catania, Via Casa Nutrizione, 95100 Catania, Italy

Promoting academic self-efficacy is crucial for improving resilience and future orientation (Cassidy, 2015; Bozzato, 2024), as well as for reducing procrastinating behavior (Liu et alii, 2020), even if the relationship between these three phenomena has not yet been investigated in a university context. This study explored the effects of academic self-efficacy and future orientation on procrastination in 230 Italian university students randomly recruited at the Department of Educational Sciences, University of Catania, Sicily. We used three measures: Design my Future (Santilli et alii, 2015), Academic Self-Efficacy Scale (Sagone & De Caroli, 2014), and General Procrastination Scale (Mariani, 2009). Results showed that all dimensions of academic self-efficacy were positively correlated (all for p.001) with future orientation (self-engagement: r=.56; self-oriented decision making: r=.58; others-oriented problem: r=.46; interpersonal climate: r=.45) and resilience (self-engagement: r=.61; self-oriented decision making: r=.67; others-oriented problem: r=.56; interpersonal climate: r=.38); conversely, procrastinating behaviors were negatively correlated (all for p.001) with future orientation (r=-.39), resilience (r=-.46), and all dimensions of academic self-efficacy (self-engagement: r=-.49; self-oriented decision making: r=-.47; other-oriented problem: r=-.35; interpersonal climate: r=-.26). Additionally, linear regression analyses indicated that higher academic self-efficacy (self-engagement: β=-.320, t=-3.89 and self-oriented decision making: β=-.237, t=-2.87) had positive effects on the reduction of procrastinating behavior (R^2=.269, R^2 adj=.263, SE=11.29, F=41.76, p.001); higher academic self-efficacy (self-engagement: β=.336, t=-4.50, interpersonal climate: β=-.202, t=3.43, and self-oriented decision making: β=-.220, t=2.85) had positive effects on future orientation (R^2=.411, R^2 adj=.403, SE=6.42, F=52.50, p.001); and, finally, higher academic self-efficacy (self-engagement: β=.386, t=5.35, others-oriented problem solving: β=-.220, t=3.72 and self-oriented decision making: β=.207, t=2.98) had positive effects on resilience (R^2=.505, R^2 adj=.498, SE=3.77, F=76.71, p.001). Results showed a strong impact of self-efficacy in the academic context on resilience, procrastination, and orientation to the future in university students and suggested to test mediation models; interventions about academic self-efficacy could be useful to improve ability to resist in stressful events in an academic context in a life span orientation.

sciforum-148342: Exploring Undergraduate Students' Perceptions of AI vs. Human Scoring and Feedback

Mackenzie L. Thomas *, Seyma N. Yildirim-Erbasli and Shruthi Hariharan

Department of Psychology, Concordia University of Edmonton, Edmonton T5B 4E4, Canada

Introduction

The use of artificial intelligence (AI) in educational assessment offers scalable solutions to traditional grading challenges, yet concerns about reliability, fairness, and acceptance remain, particularly in subjective domains like writing. This study examines undergraduate students' perceptions of AI-generated scoring and feedback compared to human evaluators.

Methods

A total of 159 undergraduates at a Canadian university reviewed standardized writing responses paired with scores and feedback from either a human evaluator or ChatGPT-4. They completed surveys assessing perceptions of AI evaluation before and after disclosure of whether the evaluator was AI or human.

Results

Students often struggled to identify the evaluator accurately. Overall, perceptions of AI scoring and feedback were moderate, but exposure to AI significantly reduced confidence in AI scoring. Both the source of grading and identification accuracy influenced perceptions. Human grading generally elicited more positive perceptions, whereas incorrect identification—when not combined with human grading—also led to more favorable perceptions. In contrast, the combination of human grading and incorrect identification resulted in more negative perceptions. Additionally, individual factors such as comfort with technology, familiarity with AI, and frequency of AI use significantly predicted students' attitudes toward AI.

Conclusions

These findings enhance our understanding of student attitudes toward AI in educational assessment, highlighting the role of digital literacy and prior exposure in shaping perceptions. In exploring how students interpret and respond to AI-generated feedback, this study contributes to educational psychology by illustrating the cognitive factors that influence engagement with academic evaluation. The results emphasize the importance of thoughtful implementation to build trust and support acceptance of AI tools in educational contexts that foster effective learning.

sciforum-151898: Prevalence and associated factors of bullying perpetration and victimization: results from a national, school-based survey in Brazil

Guilherme Welter Wendt

Department of Medical Sciences, Health Sciences Center, Western Parana State University, Francisco Beltrão Campus, Francisco Beltrão, 85601, Brazil

Background

Bullying is a serious behavioral issue for youth, and it can take many insidious forms, including physical aggression, verbal abuse, social exclusion, and cyberbullying, which leave lasting wounds on the victim (Barlett, 2017). Aim and conceptual framework: The long-term effects of bullying have ramifications well beyond the victim's immediate mood, often extending to academic outcomes, mental health, and social development (Gámez-Guadix et al., 2013; Palermiti et al., 2017). Thus, this study examined the prevalence of bullying perpetration and victimization in a large sample of Brazilian youth, exploring gender differences and the associations with self-reported support from parents.

Methods

This is a cross-sectional study that used both inferential and descriptive statistics to address the study's goals. The sample comprised 165,838 responses from Brazilian students.

Results

Alarmingly, 39.63% (95%CI: 39.39%, 39.87%) of the students reported being victimized, while 12.22% (95%CI: 12.06%, 12.38%) reported being a perpetrator. Gender differences emerged, indicating that girls were more victimized ($\chi 2(1)=644.767$, p.001), while boys were more involved with perpetration ($\chi 2(1)=1,159.127$, p.001). Those who reported receiving no parental support were more likely to be victims ($\chi 2(4)=2,188.740$, p.001) and perpetrators ($\chi 2(4)=1,132.270$, p.001).

Discussion

The findings have significant implications for comprehensive anti-bullying initiatives and emphasize strong family support to provide safer educational settings for youth in Brazil. The gender-specific patterns particularly highlight the necessity for interventions that respond to these different rates.

Conclusions

The prevalence of bullying behaviors in the sample is higher in comparison to developing countries, although the gendered pattern of victimization confirms the results of cross-cultural studies. Moreover, the essential role of parents in protecting youth development from involvement with bullying aligns with the scientific evidence in the specialized literature.

sciforum-161600: Student Engagement, Autonomy and Teacher Support in Romanian High Schools: Evidence from a National Study

Adela Mihaela Ţăranu and Simona Alexandra Pascal *

Institute of Educational Sciences

Introduction

High school years, overlapping with adolescence, are a critical period for the development of learning autonomy, self-regulation, and academic self-efficacy. This study, conducted in Romania in 2023, examines student engagement, autonomy, and perceived teacher support by focusing on high school students' perceptions of learning quality, self-regulated time management, and the perceived relevance of school tasks.

Methods

Using a mixed-methods design, the quantitative component consisted of a survey completed by 3,375 students from a nationally representative sample of 237 high schools. Qualitative data were collected through individual interviews with principals and student representatives, as well as focus groups with teachers and students, providing deeper insight into the school climate and relational dynamics that shape students' motivation.

Results

Results indicate tension between students' declared preference for autonomous learning and their reliance on teacher support. While around 70% of students state that they prefer to study independently, 84% report that they learn more effectively when teachers provide instructional and emotional support (clarifying content, offering feedback, and recommending additional learning resources). Furthermore, 61% report allocating extra time for additional preparation, suggesting an emerging awareness of the effort required for academic success and elements of self-regulated learning.

Conclusions

These findings underscore the importance of designing educational practices that foster both autonomy and autonomy-supportive teacher practices within a coherent and supportive school climate. They also open avenues for further research on the individual and contextual factors that shape students' engagement, self-regulation, and academic self-efficacy in Romanian high schools.

sciforum-160315: The Double-Edged Sword Effects of Teacher–AI Collaboration on Work Engagement: A Self-Determination Theory Perspective

Jingsong Sun [1], Yichong Lin [2], Xueya Hu [1], Ze Yu [1] and Qihai Cai [1,*]

[1] School of Business, Macau University of Science and Technology
[2] Faculty of Business, City University of Macau, Macau SAR 999078, China

The penetration of artificial intelligence (AI) is dramatically transforming higher education, yet the effects of its pervasive adoption remain inconclusive. By automating routine tasks, AI enhances teachers' operational efficiency, enabling them to reallocate cognitive resources toward high-impact activities and thereby deepening their professional engagement. However, overreliance on AI may also erode autonomy, diminish critical competencies, and foster cognitive dependence, potentially contributing to a sense of disconnection from the intrinsic value of teaching. This study examines how university teachers' collaboration with generative AI influences their work engagement. Based on self-determination theory, the study constructs a dual-pathway model in which teacher–AI collaboration increases work engagement via psychological availability but reduces it through work alienation, with digital competency moderating the process. Using three-wave data collected from 317 university teachers in China, results revealed that psychological availability mediates the positive effect of teacher–AI collaboration on work engagement, while work alienation mediates its negative effect. Importantly, digital competence serves as a crucial boundary condition, amplifying the positive effect via psychological availability while mitigating the negative effect through work alienation. This study extends the self-determination theory in human–AI collaboration settings by showing how basic psychological needs can be either supported or undermined, leading to opposite effects on work engagement. The findings offer actionable insights for managers to navigate digital transformation in higher education.

Session 5. Social Psychology

sciforum-161398: Bias in Perceptions of Children: Gender, Clothing, and Physical Attractiveness Effects

Lauren K. DeCoste * and Terry F. Pettijohn II

Coastal Carolina University

Introduction

This study explores how sex and clothing differences influence adults' perceptions of elementary school students. It predicts that male students will be rated higher in academic ability, behavior, and likeability compared to female students, as well as predicting that formally dressed students will be rated higher compared to informally dressed students.

Methods

Participants (N = 160) rated formally and informally dressed male and female students' perceived skills. The data was analyzed on SPSS using a 2 (Model Sex: Male or Female) x 2 (Clothing Formality: Formal or Informal) factorial ANOVA. This research utilized three surveys that measured perceived behavioral, academic, and social skills of the model, as well as likeability and interaction with the photo.

Results

Results indicated that there was a significant influence of sex differences on the perception of scholastic emotional engagement, F(1, 160) = 15.63, p .001, where boys (M = 3.20, SD = 0.87) were rated higher than girls (M = 2.68, SD = 0.74). Participants rated boys (M = 3.47, SD = 0.85) higher than girls (M = 2.95, SD = 0.92) in scholastic social engagement, F(1, 160) = 12.47, p .001. Clothing formality had a limited influence overall, only being significant for emotional disengagement, F(1, 160) = 7.04, p = .009. Formally dressed students (M = 2.82, SD = 0.97) were seen as experiencing fewer negative emotions at school compared to informally dressed students (M = 3.06, SD = 0.70). The Pearson correlation analysis indicated that participants' ratings of the models' physical attractiveness were significantly associated with academic ability, behavior, and likeability scores, ranging from r(160) = .225, p = .004.

Conclusions

These results suggest that adults' perceptions of children are influenced by gender and subtle cues like clothing and perceived attractiveness, whereby male students are rated more favorably. This could continue to perpetuate gender stereotypes in schools.

sciforum-161479: Cultural Experience and Cognitive Bias: Validating High-Order Aesthetic Judgment from Human to LLM

Hongyi Shi [1], Yi Li [2,*], Kaiping Peng [1] and Song Tong [3]

[1] Department of Psychological and Cognitive Sciences, Tsinghua University
[2] Faculty of Psychology, Beijing Normal University
[3] Department of Psychology, Faculty of Arts and Sciences, Beijing Normal University at Zhuhai

Western and Chinese traditional paintings exhibit profound cognitive and aesthetic differences: Western portraiture emphasizes perceptual realism and psychological states, while Chinese portraiture prioritizes holistic qi-yun and environment harmony. This cultural contrast raises the question of how culture shapes higher-order visual judgment and whether systematic aesthetic biases emerge. To address this, we propose a computationally grounded, experience-based approach. We first interviewed over 100 participants and used grounded theory to organize 43 aesthetic dimensions into four higher-order factors: Perceptual Realism, Expressive Power, Formal Organization, and Cultural Significance.

To avoid imposing Western standards, we employed Qwen—a Chinese-trained Large Language Model (LLM)—as a computational proxy, using this participant-derived framework to evaluate 2,000 historical portraits (1,000 Western, 1,000 Chinese). Results showed that, despite acknowledging Chinese strengths in Formal Organization and Cultural Significance, Qwen significantly favored Western works overall (0.001">$d = 0.78, p 0.001$), particularly due to high sensitivity to chiaroscuro and anatomical detail within the Perceptual Realism dimension. This bias aligns with the cross-cultural distinction between object-focused (Western) and field-dependent (East Asian) perceptual styles. Methodologically, this demonstrates that even culturally informed LLMs can reproduce dominant aesthetic norms if the evaluation framework is implicitly biased. Theoretically, it confirms that high-level aesthetic judgment is mediated by implicit evaluative schemas. This study offers an empirically grounded pathway toward more culturally equitable paradigms in AI-assisted cognitive science.

sciforum-162864: Emotional Psychometric Evaluation of Words in a Tourism Context

Alberto Ruiz-Osta [1,*], Eduard Cristobal-Fransi [1], Carlos Lamela-Orcasitas [2] and Casandra I. Montoro [3]

[1] Dept. Business Management, Faculty of Law, Economics and Tourism, University of Lleida, C/ Jaume II, 73, CP. 25001, Lleida, Spain
[2] Dep. Marketing, Faculty of Economics and Business, Complutense University of Madrid, 28223 Pozuelo de Alarcón (Madrid), Spain
[3] Department of Psychology, University of Jaén, 23071 Jaén, Spain

Introduction

Affective lexical datasets based on valence, arousal, and dominance have greatly advanced the characterization of the behavioral, autonomic, and neurophysiological correlates of emotion. However, most studies using these datasets have been conducted in neutral, decontextualized settings, which limits their usefulness for investigating emotional dynamics in more ecologically valid scenarios.

Method

To address this gap, 711 Spanish words were evaluated within a simulated tourism scenario designed to induce a situated affective state. Participants aged 18–29 planned a leisure trip and subsequently rated each word on valence and arousal in relation to that trip. These ratings were compared with established normative values obtained in neutral contexts. Additionally, potential differences based on gender, verb conjugation, and destination preferences were examined.

Results

A significant and consistent increase in arousal ratings was observed when words were evaluated in the tourism context. No statistically significant differences in arousal—or in any of the additional parameters analyzed—were found as a function of gender, verb conjugation, or destination preferences.

Conclusions

The findings demonstrate clear contextual modulation in emotional lexical evaluation, particularly in arousal. This work highlights the need to develop context-specific affective word datasets to align stimulus materials with the situational demands of studies conducted in particular thematic contexts, thereby enhancing the ecological validity of their results.

sciforum-164925: Stigma as a behavioural determinant of healthy ageing: ageism and dementia as illustrative contexts

Shyh Poh Teo

PAPRSB Institute of Health Sciences, Universiti Brunei Darussalam, Brunei Darussalam

Introduction

Stigma is a social and psychological construct that shapes beliefs, attitudes, and behaviours across the life course. Stigma related to related to ageing and dementia influence expectations about capability, recovery, and participation. Ageism is defined by the World Health Organization as stereotypes, prejudice, and discrimination based on age, shapes how older adults are perceived and how they perceive themselves. Dementia-related stigma compounds these effects, contributing to delayed help-seeking and reduced access to supportive and rehabilitative interventions. This paper examines stigma as a behavioural determinant of healthy ageing, using dementia and ageism as illustrative constructs.

Methods

A focused conceptual review was undertaken, drawing primarily on World Health Organisation policy documents and frameworks addressing ageism and healthy ageing, alongside selected literature on dementia stigma and behavioural responses in care-seeking and service provision. The review synthesises evidence on how stigma operates at individual and professional levels, with particular attention to behavioural consequences, which subsequently affect clinical outcomes.

Results

The synthesis indicates that ageism normalises assumptions of decline, dependency, and limited capacity for change in later life. These can be internalised by older adults, reducing engagement in health-promoting behaviours. This may also shape professional expectations and decision-making regarding treatment options. In dementia, stigma is associated with delayed recognition of symptoms, reluctance to seek diagnosis, and lowered expectations regarding rehabilitation or cognitive support. Among treatment providers, this may contribute to therapeutic nihilism, resulting in under-referral to rehabilitation, cognitive stimulation, and psychosocial interventions.

Conclusions

Stigma such as in ageism and dementia are behavioural determinants that undermine healthy ageing by shaping beliefs, expectations, and actions at both individual and institutional levels. Addressing stigma is essential to improve help-seeking, support engagement with treatment and rehabilitation, as well as enable more inclusive approaches to healthy ageing and dementia.

sciforum-159075: Testing a Dual-Pathway Model: How Event-Specific Attributions Shape Divergent Responses to Cyberbullying

Mengyang Liu

City University of Hong Kong

Introduction

Cyberbullying victimization is a potent social stressor that increases the risk of maladaptive social media use, yet the distinct psychological pathways leading to this outcome remain poorly explained. This study tests a novel Event-Specific Attribution-Moderated Dual-Pathway Model, proposing that victims' subjective interpretation of the social encounter directs them toward divergent behavioral patterns.

Hypotheses

We hypothesize that the immediate meaning-making process following a cyberbullying incident triggers two distinct pathways: (1) internal–stable attributions will potentiate a harm-avoidance pathway (internal–stable → experiential avoidance → problematic use), whereas (2) external–unstable attributions will potentiate a reward-seeking pathway (external–unstable → compensatory incentives → problematic use).

Materials and Methods

A randomized between-subjects experiment is proposed (N=300). Participants will be exposed to a standardized cyberbullying vignette. Their interpretations of the event (attributions) will be measured with established scales. The hypothesized mediators will be assessed as follows: experiential avoidance will be measured using a validated scale, while compensatory incentives will be gauged through state-level motivations for social belonging and self-esteem restoration. The primary outcome, state-specific propensity for problematic social media use, will be assessed using a well-established scale, adapted to capture state-specific responses. Data will be analyzed using Structural Equation Modeling (SEM) to formally test the hypothesized dual-pathway model.

Results and Discussion

This study is designed to provide causal evidence for how divergent social information processing leads to problematic outcomes. The anticipated findings will advance our understanding of post-victimization behavior by shifting the focus from "who the person is" to "how the person makes sense of a negative social event," offering a precise framework for developing tailored, cognition-focused interventions.

sciforum-162349: The Ethics of Seeing: Contextual Moderation of Altered Image Acceptability

Chin Wei Ho * and Paul Skarratt

School of Psychology and Social Work, Faculty of Health Sciences, University of Hull, Hull HU6 7RX, United Kingdom.

Digital communication environments increasingly normalise both photo-editing and generative AI, intensifying concerns about whether images continue to function as credible records of reality. This study investigates how audiences evaluate unedited, Photoshopped, and AI-generated images in social media, news, and advertising contexts, and tests whether ethical judgments about truthfulness account for variation in acceptance of altered images. In a mixed factorial online experiment, 709 adults recruited via Prolific were randomly assigned to one of three alteration conditions in which selected images were unedited but were described to be as either unedited, Photoshopped, or AI-generated. Participants viewed three images (one per context) and rated acceptance of use, perceived ethical violation, perceived authenticity, and perceived deviation from truth on multi-item Likert scales. Results show that image-editing in the news context was consistently evaluated as least acceptable and most ethically problematic, with AI-labelled images eliciting the highest ethical concerns. Across context conditions, alteration labels reduced acceptance mainly by increasing perceived deviation from truth, which heightened ethical violation, whereas perceived authenticity did not explain this pathway. Overall, the findings suggest that acceptance of altered images primarily reflects a moral appraisal of truthfulness and underscore the need for appropriate governance and legislation that ensures perceived fairness, transparency, and context-appropriate use of AI and edited imagery.

sciforum-161424: The Influence of Adult Sibling Relationships on Empathy & Prosocial Behavior

Bridget Marie Manges * and Kristi Barnes

Psychology, Marietta College

There is a significant body of research linking empathy with prosocial behaviors e.g., (Ruci et al., 2018). Previous research has explored the impact of sibling relationships on prosocial behavior during childhood (Beffel et al., 2022), however, few studies have systematically examined the enduring effect of sibling relationship quality on feelings of empathy and prosocial tendencies into adulthood (Van der Graaff et al., 2018). Gilligan et al. (2024) is a notable exception that documents a positive relation between the quality of adult sibling relationships and empathy. This suggests that adults with high quality sibling relationships embody more prosocial attitudes. The purpose of the current study is to add to the literature documenting the continued positive impact of adult sibling relationship quality on empathy and prosociality, by examining both traditional kinship and complex relationships. The current study will also explore how Appalachian identity impacts the quality of adult sibling relationships. Consistent with previous research (Lin et al., 2024), it is expected that total scores on the Lifespan Sibling Relationship Quality Scale (LSRS; Riggio, 2000) will account for unique variance in prosocial behavior (PTM; Carlo & Randall, 2002) beyond that explained by scores on the Empathy Assessment Scale (EAS; Malakciouglu, 2022). This will be tested using multiple linear regression modeling. Further, it is expected that Appalachians will report higher scores on all outcome variables (i.e., LSRS, EAS, and PTM scores). Independent samples t-tests will be used to examine mean differences. Data from this study can be used to inform interventions across the lifespan, relevant to different types of sibling relationships (i.e., biological, step, etc.) and sensitive to cultural differences (i.e., regional identity). Data will be collected anonymously using Qualtrics though email and social media ads. Data collection will be completed by the end of February.

sciforum-159643: The Social Learning of AI: How Human Collective Behavior Accelerates Machine Intelligence through Recursive Feedback

Jingsheng Wang [1,*] and Jindan Hou [2]

[1] School of Journalism and Communication, Northwest University, Xi'an 710127, China
[2] School of Journalism, Yunnan University, Kunming 650000, China

The emergence of large language models represents a pivotal phenomenon for behavioral sciences, demonstrating how machine intelligence is socially constructed through human interaction. This study investigates the social learning mechanisms through which human collective behavior accelerates the development of artificial intelligence's social cognition. We propose a novel theoretical framework positing that AI undergoes a rapid socialization process via a recursive feedback loop with human trainers. To examine this, we employed a mixed-methods approach combining quantitative behavioral analysis with qualitative case study. We analyzed the textual outputs of a language model from its base training through supervised fine-tuning to Reinforcement Learning from Human Feedback, assessing its responses across standardized social scenarios for prosociality, coherence, and normative alignment. Concurrently, we conducted a qualitative examination of the human feedback process, including analysis of rater guidelines and interviews with AI trainers. Quantitative results showed a statistically significant increase in prosocial and normative responses following human feedback training, indicating a clear behavioral shift toward human social standards. Qualitative analysis revealed this shift is driven by a recursive social learning cycle where human raters, as proxies for collective social preferences, systematically reinforce desirable behaviors in the AI. The model internalizes these reinforced patterns and generates new behaviors, which are then evaluated and corrected again, creating a closed-loop socialization system operating at unprecedented scale and speed. This research provides a behavioral science framework for understanding AI development, positioning machines as active participants in a dynamic social system whose intelligence is constructed through recursive behavioral reinforcement, with significant implications for bias mitigation and human–AI ecosystem design.

Session 6. Health Psychology

sciforum-165523: Changes in mind-wandering frequency and phenomenology in cancer patients following an 8-week mindfulness intervention

Alessio Matiz [1,2,*], Bruna Scaggiante [3], Marina Bortul [4] and Cristiano Crescentini [2]

[1] Dept. of Human Sciences, Link Campus University, Rome, Italy
[2] Dept. of Languages and Literatures, Communication, Education and Society, University of Udine, Udine, Italy
[3] Dept. of Life Sciences, University of Trieste, Trieste, Italy
[4] Lega Italiana Lotta ai Tumori (LILT) Trieste, Italy

Mindfulness training (MT) has been shown to be beneficial for the mental health of cancer patients, but the underlying processes of change are not fully understood. The literature has overlooked the impact of MT on the frequency and phenomenology of mind-wandering (MW), characteristics that have been linked to mental health outcomes.

A randomized controlled trial was conducted with an exploratory sample of 30 women with breast cancer. Inclusion criteria included completion of chemotherapy at least three months prior to enrollment; if cancer therapies had been concluded, this must have occurred within the past ten years. An online 8-week MT program was delivered to 19 participants, while the remaining participants were wait-listed. At pre- and post-intervention, perceived MW frequency in daily life (measured using the Mind-Wandering Questionnaire), MW frequency during a 10-minute task involving attention to the breath, and phenomenology of MW experienced during the task (measured with the Thought Characteristics Questionnaire) were assessed. An additional sample of 44 women with breast cancer was enrolled, and data are currently being collected.

Exploratory analyses of variance showed that, at post-intervention, the MT group significantly reduced perceived MW frequency in daily life compared to controls ($p=0.02$). The reduction in MW frequency during the attention task was not statistically significant between groups ($p=0.33$). Regarding MW phenomenology, the MT group exhibited significant decreases in the amount of visual imagery ($p=0.01$), degree of intentionality ($p=0.04$), and intensity of associated emotions ($p=0.01$).

These preliminary findings suggest that MT may modulate MW characteristics in breast cancer patients. These results will be extended to the full sample. MT appears to reduce the perceived frequency of MW in daily life and to alter certain salient phenomenological dimensions of MW. Future research in oncology settings should explore the relationship between these MW changes and mental health outcomes following MT.

sciforum-160158: Empathy and Cognitive Behavior Therapy in Oncology—strategies for intervention

Monica Tarcea [1,*], Anamaria Hambetiu [2], Liana Contiu [2], Tiberiu Szekely [3] and Calin Craciun [4]

[1] Department of Community Nutrition, Faculty of Medicine, "George Emil Palade" University of Medicine, Pharmacy, Science and Technology of Târgu Mures, 540142 Târgu Mures, Romania
[2] PhD School, Faculty of Medicine, "George Emil Palade" University of Medicine, Pharmacy, Science and Technology of Târgu Mures, 540142 Târgu Mures, Romania
[3] Department of Oncology, Faculty of Medicine, "George Emil Palade" University of Medicine, Pharmacy, Science and Technology of Târgu Mures, 540142 Târgu Mures, Romania
[4] Department of General Surgery no 3, Faculty of Medicine, G.E. Palade University of Medicine, Pharmacy, Science and Technology from Targu-Mures, Romania

Introduction

Cancer diagnosis has a significant impact on both the body and mind of the person involved, as well as on their relatives, and requires multidisciplinary team intervention to support the patient's outcomes and quality of life, as well as engagement with medical humanities and responsibility. We aimed to underscore in what manner cognitive–behavioral therapy, open communication, empathy, motivational interviewing, and other communication strategies can make a difference and help cancer patients make informed decisions, in addition to the specific medical therapy they receive.

Methods

A systematic review was undertaken according to PRISMA guidelines. To be included, studies were required to be written in English, published in the last five years, follow European guidelines for oncology therapy and observational study designs, cover social–psychological areas, include strong statistics, and relate to keywords such as cognitive behavior, oncology, and oncohumanities. Based on the outcomes, we will present a model of a framework sustaining onco-humanities training interventions for students and specialist members of an interdisciplinary team addressing cancer patient management.

Results

Starting from the eight recent representative observational studies taken into account, targeting various age groups, European countries and cultures, education level and health policies, we conclude that some of the standard tools and strategies the healthcare team can take into account are based on a personalized diet, physical daily activities, sleep management, mental and emotional balance, behavior and preventive practices, cognitive therapies, social and meaningful activities, and stress reduction, in relation to the medical staff involved in specific healthcare programs.

Conclusions

We sustain the importance of awareness and training programs for the healthcare members, psychologists, dietitians, kinetotherapists, and patients' navigators, based on onco-humanities aspects, cognitive behavior strategies, and critical thinking strategies, focused on lifestyle interventions, communication tools for the patients and their families, or team collaboration methods.

sciforum-134363: Resilience as a Protective Factor Against Obstetric Violence and Adverse Childhood Experiences in the Perinatal Mental Health of Women

Verónica García-Tribaldos [1,*] and Laura Lacomba-Trejo [2]

[1] Faculty of Psychology and Speech Therapy, Universitat de València, Valencia 46010, Spain
[2] Department of Developmental and Educational Psychology, Faculty of Psychology and Speech Therapy, Universitat de València, Valencia 46010, Spain

Introduction

Exposure to Adverse Childhood Experiences (ACEs) has been linked to poorer mental health outcomes across the lifespan, with potential exacerbation during the perinatal period. Obstetric violence (OV), defined as disrespectful or non-consensual care during childbirth, may further increase vulnerability.

Objective

To examine associations between ACEs, OV, and resilience and explore whether resilience acts as a protective factor for perinatal mental health.

Methods

A cross-sectional online survey was administered using convenience sampling. Inclusion criteria were as follows: being 18 years or older, having given birth within the previous 12 months, and having Spanish nationality. A minimum sample size of 543 participants was required to detect small correlations ($r \approx .12$) with $\alpha = .05$ and 80% power; the final sample exceeded this threshold. A total of 848 participants (M_age = 34.29; SD = 4.05) completed validated measures: the Adverse Childhood Experiences Questionnaire (ACEQ), the Obstetric Violence Scale (EVO), and the abbreviated Connor–Davidson Resilience Scale (CD-RISC). The primary outcomes were ACEs and OV, with resilience examined as a protective variable. Data were analyzed with descriptive statistics and Pearson correlations using SPSS v.28.

Results

Significant ACEs were reported by 11.67% of participants. OV scores were relatively low (M = 21.45; SD = 10.43), and 65.45% showed high resilience. Resilience was negatively correlated with ACEs ($r = -.12$, $p \leq .001$) and OV ($r = -.18$, $p \leq .001$). ACEs and OV were positively correlated ($r = .16$, $p \leq .001$).

Conclusions

ACEs appear to increase vulnerability to OV experiences in the perinatal period, while resilience may buffer the psychological impact of both. These findings highlight the importance of promoting resilience and addressing early adversity to support maternal mental health.

sciforum-164498: Attachment Styles and Family Well-Being in Adult Women

Laura Viqueira Gutiérrez

International University of Valencia

The type of attachment acquired during childhood and adolescence influences interpersonal relationships in adulthood. The aims of this study were: (1) to analyze the relationship between attachment style and family satisfaction and family stress in adult women; and (2) to explore, in a non-causal and descriptive manner, the associations between adult attachment dimensions, family functioning, and the presence of a stable partner.

A cross-sectional study was conducted with 233 women aged 25 years or older (M = 34.21, SD = 7.72). Participants were recruited through non-probabilistic convenience sampling via social networks. Family satisfaction was assessed with the Family Satisfaction Scale, family stress with the Family Stress Scale, and adult attachment with the Adult Attachment Questionnaire, which evaluates low self-esteem, hostile conflict resolution, expression of feelings, and emotional self-sufficiency. The presence of a stable partner (≥ 6 months) was included as a dichotomous covariate. Descriptive statistics, k-means cluster analysis to classify secure versus insecure attachment, logistic regression, ANOVAs, and stepwise multiple linear regressions were performed.

Securely attached women reported significantly higher family satisfaction and lower family stress than those with insecure attachment. Low self-esteem and emotional self-sufficiency were positively associated with family stress and negatively associated with family satisfaction. In addition, women with a stable partner showed lower levels of low self-esteem and emotional self-sufficiency. Regression models indicated that family stress, family satisfaction, and partnership status accounted for a significant proportion of the variance in attachment dimensions.

These findings provide novel evidence on the links between adult attachment and family well-being in women, contributing to a better understanding of relational dynamics and informing potential psychological interventions to improve family and couple functioning.

sciforum-158312: Beyond Belief: The Role of Health Anxiety and the Health Belief Model in UV Risk Exposure Among Australian Adults

Chloe Marie Maxwell-Smith * and Amy Garic

Discipline of Psychology, School of Population Health, Faculty of Health Sciences, Curtin University, Perth 6012, Australia

Excessive ultraviolet (UV) radiation exposure is a significant public health concern. Current interventions often draw upon the Health Belief Model (HBM) to promote sun-safe behaviours; however, there is still unexplained variance in health risk behaviours. This study investigated the incremental predictive utility of health anxiety in explaining variance in UV risk exposure beyond the HBM in Australian adults. We hypothesised that health anxiety would account for a statistically significant portion of variance beyond the HBM.

A quantitative, cross-sectional correlational design was employed with 201 Australian adults (Mage = 25.86, SD = 11.45; 79% female). Participants completed an online survey including a demographic questionnaire, a Health Belief Model Questionnaire, the Health Anxiety Inventory, and the Sun Exposure Protection Index. Hierarchical multiple regression analysis was used.

Results indicated that age, entered in Block 1, accounted for a significant 10.9% (p .001) of variance in UV risk exposure. HBM constructs, entered in Block 2, accounted for an additional significant 23.7% (p .001). However, health anxiety, added in Block 3, accounted for a non-significant 1.0% of additional variance (p = .096). The total model, with a large effect size (f^2 = .555), accounted for 35.7% (p .001) of variance.

This suggests that while age and HBM constructs are significant predictors of UV risk exposure, health anxiety does not account for additional variance. Public health campaigns focusing on HBM components may remain central, with further research needed to explore other psychological factors influencing UV risk.

sciforum-158919: Central Sensitization as a Predictor of Poor Outcomes After Peripheral Treatments in Chronic Pain: A Systematic Review and Meta-Analysis

Dolores Santiago Ramírez [1,*], Laura Fischer-Jbali [2], Gustavo A. Reyes del Paso [1] and Casandra I. Montoro [1]

[1] Department of Psychology, University of Jaén, Jaén, 23071, Spain
[2] Department of Psychology, University of Innsbruck, 6020 Innsbruck, Austria

Introduction

Chronic pain often persists despite peripheral interventions, with approximately 20–30% of patients showing poor responses, likely due to central sensitization (CS), a heightened central nervous system response that amplifies pain. This study aimed to systematically review and meta-analyze the relationship between CS and treatment outcomes following peripheral interventions.

Method

A systematic review and meta-analysis were conducted, synthesizing evidence from 24 studies that examined the association between central sensitization and outcomes after peripheral treatments in chronic pain patients. The analyses assessed how CS influenced post-treatment pain intensity and clinical symptoms like functionality.

Results

The systematic review revealed that patients with greater CS experienced poorer outcomes after peripheral interventions. The meta-analysis confirmed that higher levels of CS were significantly associated with increased pain severity and worse functionality following treatment. Heterogeneity among studies was partly explained by pain type, particularly chronic low back pain, which moderated both pain and health outcomes. Moreover, assessment methods, notably the use of the Central Sensitization Inventory (CSI) and Visual Analog Scale (VAS), moderated the relationship between CS and pain severity. No evidence of publication bias was detected, and findings remained robust in sensitivity analyses.

Discussion

These results demonstrate a strong association between CS and poor response to peripheral treatments in chronic pain patients. The moderating role of chronic low back pain suggests that individuals with CS in this subgroup are especially vulnerable to suboptimal outcomes. Consequently, these findings highlight the importance of avoiding unnecessary invasive procedures and emphasize the need for tailored interventions targeting the central nervous system in patients exhibiting signs of CS, even when initially considered suitable for peripheral interventions.

sciforum-165571: Cognitive and Decisional Effects of Companion Presence During Medical Decision Making: A Systematic Review With Narrative Synthesis of Human Studies

Jhon Ostanin [1,*], Beatriz De Faria Sousa [1] and Helena De Azeredo Miranda [2]

[1] FIU Herbert Wertheim College of Medicine
[2] Charles E. Schmidt College of Medicine at FAU

Introduction

The role of family or other companions during adult medical consultations may influence patient understanding and decisions, but its cognitive and decisional impacts are incompletely understood. We conducted a systematic review with narrative synthesis of human studies examining how companion presence affects patient information processing and decision outcomes in clinical settings.

Methods

A systematic search of Cochrane, PubMed, and Embase identified English-language studies published between 2000 and 2025. Of 794 records identified, 9 duplicates were removed; 785 titles and abstracts were screened, and 22 full-text articles were reviewed. Eligible studies involved adults (≥18 years) with medical decision-making capacity engaged in real-world medical decisions with an in-person companion, defined as a family member, partner, friend, or informal caregiver. Seven peer-reviewed studies met inclusion criteria, including cross-sectional, cohort, and mixed-method designs across surgical, primary care, cardiology, transplant, and cancer screening contexts. No formal risk-of-bias assessment was performed due to methodological heterogeneity.

Results

Communication and engagement outcomes were most frequently reported. Three studies demonstrated significantly increased patient verbal participation, including greater question-asking, when companions were present or actively engaged, particularly in surgical and primary care consultations. Companions often asked complementary questions regarding treatment options and next steps. Decisional outcomes were less commonly assessed. Two studies using validated measures, including the Decisional Conflict Scale, found that higher emotional distress or depressive symptoms in patients or caregivers were associated with greater decisional conflict during dyadic decision making. The remaining studies reported mixed or context-dependent effects, with limited benefit when patient–companion informational alignment or role expectations were poor.

Conclusion

Across seven heterogeneous studies, companion presence was associated with increased patient engagement but variable decisional outcomes. Findings are observational and context-specific, highlighting the importance of aligning roles and expectations to support effective shared decision making.

sciforum-165446: Cumulative Psychosocial Vulnerability and Patterns of Alcohol and Stimulant Use in Adolescence

Ana-Maria Dădulescu *, Cristiana Glavce and Suzana Turcu

Francisc I. Rainer Institute of Anthropology, Romanian Academy, Bucharest, 050474, Romania

Adolescence is a critical developmental period characterized by increased experimentation with psychoactive substances and heightened sensitivity to social influences. From a health psychology perspective, substance use behaviors are shaped by the cumulative interaction of individual, social and contextual factors. While adolescent alcohol use is widely recognized as a major public health concern, stimulant consumption (coffee and energy drinks) is often viewed as normative, despite its frequent co-occurrence with other risk behaviors. This study examines whether cumulative psychosocial vulnerability differentially predicts alcohol and stimulant use among adolescents.

A cross-sectional study was conducted on 521 adolescents using self-administered questionnaires. Outcomes included self-reported consumption of alcohol, energy drinks and coffee. Binary logistic regression analyses were performed for each type of consumption, including demographic (sex, age), contextual (residence; living with/without family), socio-economic (perceived family income), behavioral (smoking) and psychosocial (perceived peer influence) predictors. To assess cumulative effects, a composite behavioral score was constructed (mean of standardized indicators) reflecting personal, social and contextual stability, with higher values indicating lower psychosocial vulnerability. Correlational analyses and logistic regressions were used to test associations between the composite score and consumption behaviors.

The composite behavioral score was negatively and significantly associated with alcohol consumption (OR = 0.51, p = .002), indicating substantially lower odds of alcohol use among adolescents with more stable psychosocial profiles, yet was not significantly associated with coffee or energy drink consumption. Smoking and perceived peer influence emerged as strong predictors of both alcohol and energy drink use, whereas coffee consumption was associated primarily with living conditions. Large effect sizes were observed for differences in psychosocial vulnerability by gender (with boys exhibiting higher vulnerability) and residential environment (adolescents from rural areas), highlighting structural disparities relevant to adolescent health. Overall, findings suggest that cumulative psychosocial vulnerability is particularly relevant for alcohol use, whereas stimulant consumption appears more normative and context-dependent.

sciforum-160682: Democratizing Urban Well-being: Virtual Biophilic Interventions Mitigate Socioeconomic Disparities in Environmental Perception and Affect

Cleiton Ferreira [1,*], Paula Latorre [2], Aurora Molina-Muñoz [2] and Francisco Nieto-Escamez [2,3]

[1] Instituto Federal de Educação, Ciência e Tecnologia do Rio Grande do Sul (IFRS), Campus Rio Grande, Rio Grande, Rio Grande do Sul, Brasil.
[2] Dept. Psychology, University of Almeria, Almeria, 04120, Spain
[3] Centro de Investigación para el Bienestar y la Inclusión Social (CIBIS), Universidad de Almería, Almería, 04120, Spain

Introduction

Urban environments significantly influence mental health, yet access to restorative green spaces is often stratified by socioeconomic status (SES). This study investigates whether digital biophilic interventions in Virtual Reality (VR) can enhance psychological well-being and mitigate the affective gap between neighborhoods of different socioeconomic levels.

Methods

A fully counterbalanced 3 × 2 within-subjects design was employed in this exploratory pilot study. A convenience sample of sixteen participants (university students; normal/corrected vision; no VR contraindications) were exposed to VR scenes of three neighborhoods (Low, Medium, High SES), each presented as Original and Bio-enhanced (with digital vegetation). No a priori power calculation was performed, consistent with the study's exploratory phase. Self-reported measures (PANAS, Perceived Stress, Relaxation, Liking) were analyzed using Repeated-Measures ANOVA (with Greenhouse–Geisser correction where applicable), followed by Bonferroni-adjusted post hoc tests to examine significant main and interaction effects.

Results

Our results revealed that bio-enhanced scenes significantly increased Positive Affect ($p = .006$) and Relaxation ($p = .004$) compared to original designs. Crucially, a significant Condition × SES interaction (p .001) was found for Liking scores. While original scenes showed a steep preference gradient favoring High-SES neighborhoods, bio-enhanced conditions eliminated this disparity, yielding uniformly high ratings across all SES levels. However, Perceived Stress remained driven by neighborhood SES ($p = .021$), with Low-SES scenes eliciting higher stress regardless of vegetation.

Discussion

Our findings suggest that while biophilic interventions are effective in boosting positive affect and perceived restoration, basal stress reactions may be tethered to structural environmental cues. Importantly, the study demonstrates that biophilic design can act as an equalizer for aesthetic and affective appreciation, offering a pathway for promoting health equity in urban planning.

sciforum-161609: Efficacy of Biofeedback Interventions for Fibromyalgia: A Systematic Review of Randomised Controlled Trials

Jannick Flicker [1,*], Casandra Isabel Montoro Aguilar [2] and Laura Rachel Fischer-Jbali [1]

[1] Institute for Psychology, University of Innsbruck, 6020 Innsbruck, Austria
[2] Institute for Psychology, Universidad de Jaén, 23071 Jaén, Spain

Background

Fibromyalgia syndrome (FMS) is a chronic pain disorder characterised by widespread musculoskeletal pain, fatigue, non-restorative sleep, and psychological comorbidities such as depression and anxiety. As pharmacological treatments show limited effectiveness, guidelines recommend multimodal approaches, including mind–body interventions. Biofeedback is one such option, providing real-time feedback on physiological signals to support self-regulation. A 2013 meta-analysis reported promising effects for EMG-based biofeedback on pain, whereas findings for other modalities or secondary outcomes were inconsistent. Since then, several randomised controlled trials (RCTs) have examined EEG- and HRV-based biofeedback and broadened assessed outcomes, yet results remain fragmented.

Objective

This systematic review aimed to update and synthesise RCT evidence on the efficacy of EMG-, EEG-, and HRV-based biofeedback in adults with FMS. The primary outcome was pain intensity at post-intervention. Secondary outcomes included health-related quality of life, sleep, fatigue, and psychological symptoms.

Methods

The review followed PRISMA 2020 and was registered with PROSPERO. A systematic search was conducted in PubMed, Web of Science, PsycINFO, and Scopus. Eligible studies were RCTs evaluating stand-alone biofeedback with a clearly defined control group. Risk of bias was assessed using RoB 2. Due to heterogeneity and incomplete reporting, a narrative synthesis was performed.

Results

Ten RCTs (13 reports; N = 600) met inclusion criteria. Overall risk of bias was predominantly high or raised some concerns. Across sham-controlled EEG neurofeedback trials, no consistent superiority over sham for post-intervention pain was found. EMG biofeedback showed heterogeneous findings, and several trials lacked complete between-group estimates. No HRV biofeedback trial reported a validated pain measure. Secondary outcomes showed no reproducible between-group differences. Adverse events, when reported, were mild.

Conclusions

Current RCT evidence does not support a reproducible short-term benefit of biofeedback over sham for pain in FMS. Effects against non-sham comparators are mixed, and reporting quality is limited. Further adequately powered sham-controlled trials with complete outcome reporting are needed.

sciforum-161017: Emotional Writing Therapy: Effects on Fibromyalgia Symptoms

Lidia Amaro Díaz [1,*], Laura Fischer-Jbali [2] and Casandra I. Montoro Aguilar [1]

[1] Department of Psychology, University of Jaén, 23071 Jaén, Spain
[2] Institute of Psychology, University of Innsbruck, 6020 Innsbruck, Austria

Fibromyalgia (FM) is a chronic pain condition that negatively affects patients' quality of life and functionality. Recent studies indicate that emotional disclosure can positively modulate pain perception, cognitive performance and other FM symptoms. This study evaluated the effects of Emotional Writing Therapy (EWT) on emotional variables, clinical pain, cognitive performance (attention, processing speed, mental flexibility and motor function) and functional outcomes (fatigue, quality of life, sleep and overall disease impact) in patients with FM. Two groups were randomly assigned: a disclosure group (30 patients who wrote about stressful events) and a neutral group (30 patients who wrote about time management). EWT lasted 4 days. Psychological and functional assessments were conducted, as well as the Trail Making Test (TMT) and an emotional task (Picture Frame, PF), before and after the intervention. Daily variables, such as mood, anxiety, affect, pain, perceived stress, fatigue and psychological well-being, were measured using Visual Analogue Scales (VASs). At the end of the intervention, a satisfaction questionnaire was administered, and follow-ups were conducted at 1, 3 and 6 months. Both groups showed comparable pre–post improvements in emotional factors, pain perception, and quality of life. However, a significant group × time interaction indicated that only the emotional writing group achieved greater reductions in anxiety, mood disturbance, and stress, along with increases in positive affect and psychological well-being from the second day onward. Overall, emotional writing yields specific emotional benefits beyond those of time-management writing, although both approaches are beneficial. Thus, the choice of intervention should be tailored to the patient's clinical profile.

sciforum-124060: Enhancing Cognitive Function and Reducing Fatigue Through Occupational Therapy: Evidence from Postoperative Care in Older Adults

Myrto Patagia Bakaraki [1,*] and Theofanis Dourbois [2]

[1] University of West Attica, Athens 11521, Greece
[2] KESYTHES

Introduction

Postoperative fatigue and cognitive dysfunction are common and debilitating complications, especially among older adults. These issues impair physical recovery, diminish autonomy, and reduce overall quality of life. While occupational therapy (OT) has shown potential in mitigating these symptoms, its specific contributions—particularly those involving chronobiological alignment—remain underexplored.

Materials and Methods

This mixed-methods study evaluated the effects of a specialized OT program on 60 postoperative patients aged 65 and older. Interventions emphasized cognitive engagement activities, energy conservation strategies, and alignment with individual circadian rhythms. Quantitative assessments included the Montreal Cognitive Assessment (MoCA) and the Fatigue Severity Scale (FSS), administered preoperatively and at two and six weeks post-intervention. Additionally, semi-structured interviews were conducted to capture patient perspectives on the therapy's subjective impact.

Results and Discussion

Participants who received the tailored OT intervention demonstrated statistically significant improvements in MoCA scores (p 0.01) and reductions in FSS scores (p 0.05). Notably, patients whose therapy schedules were adjusted based on chronotype exhibited the greatest cognitive gains and fatigue reduction. Thematic analysis of qualitative data revealed improvements in sleep quality, motivation, and perceived cognitive clarity, suggesting that circadian-informed OT promotes not only functional recovery but also emotional and behavioral resilience. These findings highlight the value of integrating neurorehabilitation techniques with chronobiological principles to optimize patient outcomes in postoperative settings.

sciforum-160813: Fibromyalgia and emotional vulnerability: exploring the roles of psychological inflexibility and anxiety sensitivity

Lidia Amaro Díaz *, Gustavo A. Reyes del Paso and Casandra I. Montoro Aguilar

Department of Psychology, University of Jaén, 23009 Jaén, Spain

This study examined the influence of psychological inflexibility (experiential avoidance) and anxiety sensitivity on psychological and personality variables associated with fibromyalgia syndrome (FMS), as well as on pain perception and heart rate variability (HRV), an indicator of emotional regulation. Thirty-eight FMS patients and thirty-seven healthy controls completed assessments of experiential avoidance, anxiety sensitivity (physical, cognitive, and social), alexithymia, and Eysenck's personality traits (neuroticism, extraversion, psychoticism) in a single session. Therefore, pain perception was evaluated using pressure algometry and the McGill Pain Questionnaire (MPQ), and HRV was recorded via electrocardiogram. FMS patients showed higher experiential avoidance and greater anxiety sensitivity. They also exhibited higher neuroticism and more difficulties identifying and expressing emotions. Additionally, they demonstrated lower pain thresholds and tolerance compared to controls. HRV values were also lower in the FMS group, indicating a reduced physiological capacity for emotional regulation. In FMS patients, greater experiential avoidance was associated with higher neuroticism and alexithymia, as well as lower pain tolerance. Regarding anxiety sensitivity—particularly its cognitive dimension—higher levels were linked to greater alexithymia, lower HRV, and reduced pain tolerance. In healthy controls, although experiential avoidance showed some associations with alexithymia and neuroticism, it was not related to pain perception or HRV. Psychological and emotional variables, particularly neuroticism, mediated the relationship between experiential avoidance and anxiety sensitivity (predictors) and pain tolerance (outcome). Overall, the findings indicate that FMS patients display a more vulnerable emotional and physiological profile, characterized by heightened pain sensitivity and reduced emotional regulation capacity. Psychological inflexibility and anxiety sensitivity may play a significant role in the maintenance and intensity of pain in FMS, although their impact on pain appears to be largely driven by their association with neuroticism as the key mediating factor.

sciforum-165517: Identifying the relationship between outdoor public spaces and university students' psychological performance

Giuseppe La Selva *, Manuela Longo and Lucia Monacis

Department of Humanities - University of Foggia

Several studies provided evidence that outdoor public spaces around university campuses have a significant impact on students' psychological functioning, mental well-being, and overall satisfaction. In addition, psychological restoration has been considered the primary mediator in the relationship between outdoor public spaces (as environmental interventions) and students' psychological performance on university campuses, while other factors, such as place attachment, have largely been overlooked.

Therefore, the current study examined the mediating role of psychological restoration and place attachment in the relationship between perceived environmental qualities of outdoor public spaces and mental well-being and satisfaction among Italian university students.

A cross-sectional design was employed to collect data from a convenience sample of Italian university students enrolled at the University of Foggia. Participants completed an online survey comprising a socio-demographic section, Perceived Environmental Qualities Index (PEQI), Psychological Restoration Scale, Place Attachment Scale and self-reported scales measuring mental well-being and satisfaction. A structural equation model was applied to the data. The tested models included the seven dimensions of PEQI as predictors and mental well-being and satisfaction as outcomes for each model.

The sample consisted of 350 university students (94.4% female; 4.9% male; 0.7% prefer not to say). Results generally indicated a significant mediating role of both place attachment and psychological restoration on students' psychological performance, although different patterns of associations emerged for mental well-being and satisfaction. These findings shed light on the mechanisms through which common space characteristics affect students' performance and offer valuable insights for urban design. In this direction, our investigation could assist designers, planners, and policymakers in developing a deeper understanding of how the characteristics of outdoor public spaces influence students' psychological performance.

sciforum-161607: Lifestyles Profiles among Higher Education Students

Inês Conceição *, Maria João Trigueiro and Raquel Simões de Almeida

Psychosocial Rehabilitation Laboratory, Center for Rehabilitation Research, E2S, Polytechnic Institute of Porto

Background

Higher education students' lifestyle profiles are closely associated with their health, well-being, and academic participation, making their monitoring particularly relevant in higher education settings. This study describes and compares the lifestyle profiles of students from the Polytechnic of Porto (P.Porto, North of Portugal) in two consecutive academic years, 2024 and 2025.

Objective

The objective was to characterise students' lifestyles and to compare lifestyle dimensions between independent samples of P.Porto students assessed in 2024 and 2025.

Methods

A cross-sectional, observational and analytical design was used. Lifestyle was assessed using the "FANTASTICO Lifestyle" questionnaire, administered to a convenience sample of 745 students in 2024 and 469 students in 2025. Data were collected through self-report and analysed using descriptive statistics and between-group inferential tests appropriate for independent samples.

Results

The 2025 student sample showed higher overall lifestyle scores and more favourable profiles in most lifestyle dimensions compared with the 2024 sample. Improvements were particularly evident in physical activity, sleep and stress management, and introspection, while less favourable patterns were observed in tobacco use and indications of higher alcohol consumption, especially among students living away from home or combining study and employment.

Conclusions

This cross-sectional comparison suggests that, although several aspects of students' lifestyles became more favourable between 2024 and 2025, there were simultaneous indications of increased tobacco use and a tendency towards higher alcohol consumption in specific subgroups. These findings underline the importance of reinforcing health-promotion strategies in higher education, with particular attention to students who are displaced from home or engaged in employment alongside their studies. For Occupational Therapy, the observed patterns are relevant because lifestyle factors are closely linked to students' ability to engage meaningfully in everyday occupations such as studying, self-care, and social participation, highlighting opportunities for targeted, evidence-informed interventions that support sustainable health habits and occupational performance.

sciforum-161626: Obscura: Urban Mystery—Development of a Gamified mHealth Solution to Promote Physical Activity in Young Adults

Guilherme Ramos Pinto *, José Miguel Nunes, Raquel Simões Almeida and Maria João Trigueiro

Psychosocial Rehabilitation Laboratory, Center for Rehabilitation Research, E2S, Polytechnic Institute of Porto

Introduction

Physical inactivity is a major global public health issue among young adults (18–30 years old), whose transitions into higher education and the workforce often reinforce sedentary behaviors. Barriers include lack of motivation and monotony. Innovative mHealth strategies integrating Augmented Reality (AR) and gamification are essential to support adherence to World Health Organization recommendations.

Objectives

This project aimed to develop and evaluate a prototype mobile application, Obscura: Urban Mystery, designed to enhance the frequency and intensity of physical activity through an immersive narrative.

Project Description

Following a user-centered co-design process with young adults and Occupational Therapists, a high-fidelity prototype was developed. The user assumes a detective's role; progression requires "recharging" a virtual device through aerobic and strengthening exercises. Gamification elements (leaderboards, daily challenges) maximize engagement. Preliminary usability testing (n=5) via "think-aloud" protocols confirmed intuitive navigation but suggested refinements in GPS calibration.

Monitoring Methodology

Evaluability will be assessed through a pilot quasi-experimental pre–post study with a convenience sample of 30 university students (inclusion: sedentary lifestyle; exclusion: exercise contraindications). Validated measures include IPAQ-SF (physical activity), WHO-5 (well-being), PSQI (sleep quality), and Borg Scale (perceived exertion), supplemented by smartphone sensor data (pedometer/GPS). Ethical approval and informed consent were secured, including GDPR-compliant encryption for sensitive geolocation data.

Conclusions

Obscura: Urban Mystery offers a promising response to inactivity by combining digital entertainment with health promotion. For Occupational Therapy, it represents a potential therapeutic resource to support meaningful engagement in leisure and health-management occupations, encouraging active participation and occupational balance.

sciforum-165216: Parental Divorce, Emotional Security, and Family Satisfaction in Emerging Adulthood: The Role of Attachment and Emotional Disengagement

Laura Vigueira Gutiérrez [1,*], Paloma López-Hernández [1], Alejandro Cano Villagrasa [1], Sandra Hoyos [2], Irene Cano-López [3] and María José García-Rubio [1]

[1] Universidad Internacional de Valencia (VIU)
[2] Universidad Católica del Uruguay
[3] Universidad de Valencia

Parental divorce constitutes a salient relational context associated with emotional adjustment and family functioning in emerging adulthood. Drawing on Attachment Theory and Emotional Security Theory, this cross-sectional study examined associations between parental divorce or separation, attachment patterns, emotional security, emotional disengagement, and perceived family satisfaction. The sample comprised 496 Spanish female university students aged 18–30 years, recruited during the 2024 academic year; 28% reported parental divorce or long-term separation (n = 139), and 72% came from intact families (n = 357). Parental divorce referred to legal divorce or stable separation occurring prior to adulthood. Participants completed standardized self-report measures of adult attachment, family satisfaction, family stress, and emotional security. Attachment styles were identified using k-means clustering, retaining a two-cluster solution (secure = 46.2%; insecure = 53.8%). MANOVA results indicated that participants from divorced families reported higher family stress (η^2_p = .096), worry (η^2_p = .074), and emotional disengagement (η^2_p = .024), alongside lower family satisfaction (η^2_p = .053) and emotional security (η^2_p = .036). Secure attachment was associated with greater family satisfaction (η^2_p = .100) and emotional security (η^2_p = .086), and lower stress-related outcomes. Spearman correlations showed strong associations among emotional security, disengagement, and family satisfaction. Mediation analyses, estimated as statistical models of indirect effects using bootstrapped 95% confidence intervals, indicated that emotional disengagement was associated with lower family satisfaction both directly (β = –0.42) and indirectly via reduced emotional security (β = –0.65). These findings are consistent with an indirect-effect model rather than causal inference. Results underscore the relevance of attachment and emotional security in perceived family functioning, particularly in the context of parental divorce.

Keywords: parental divorce, emerging adulthood, adult attachment, emotional security, family satisfaction, emotional disengagement.

sciforum-138101: Prediction of Positive Dyadic Coping in Women After Perinatal Loss

Verónica García-Tribaldos [1,*], Rebeca Santamaría-Gutiez [1,2], Ana Pereira-González [1] and Laura Lacomba-Trejo [3]

[1] Faculty of Psychology and Speech Therapy, Universitat de València, Valencia 46010, Spain
[2] Clinical Psychology Department, General Hpspital of Hospital, Valencia 46014, Spain
[3] Department of Developmental and Educational Psychology, Faculty of Psychology and Speech Therapy, Universitat de València, Valencia 46010, Spain

Perinatal loss represents a highly stressful life event that can significantly affect women's emotional well-being and intimate relationships. Prior research suggests that adverse childhood experiences (ACEs), insecure romantic attachment (i.e., attachment anxiety and avoidance), feelings of guilt, and mental health problems may influence how couples cope with such losses. This cross-sectional study aimed to identify which combinations of these variables predict high or low levels of positive dyadic coping in women following perinatal loss. A convenience sample of 60 Spanish women who had experienced perinatal loss completed an online battery of self-report measures, including ACEs (ACE Questionnaire), romantic attachment (ECR-S), an ad hoc guilt item rating guilt intensity from 0 to 10, and a self-reported indicator of current mental health problems. Data were analyzed using fuzzy-set Qualitative Comparative Analysis (fsQCA), a set-theoretic statistical–analytic technique suited to identifying multiple causal pathways and configurations of conditions leading to a given outcome. Results showed that the absence of attachment avoidance was a necessary condition for high dyadic coping. Additionally, specific sufficient configurations emerged for both high and low coping. High dyadic coping was associated with combinations including low attachment avoidance, low attachment anxiety, and low guilt. Conversely, low dyadic coping was best explained by pathways involving high attachment avoidance together with high guilt or a history of childhood adversity. These configurations accounted for 74% of high-coping cases and 77% of low-coping cases. Overall, our findings highlight the importance of considering how psychological and relational factors interact to shape coping responses after perinatal loss. The configurational perspective offered by fsQCA underscores the need for flexible, personalized interventions that promote emotional closeness and strengthen emotion regulation within couples to foster adaptive coping following such a profound loss.

sciforum-135774: Psychological well-being, emotional coping and quality of life of cancer survivors

Dr. Kalliopi Megari [1,2,*], Efthymios Karagiannis [1], Dr. Aristea Ladas [1] and Christos A. Frantzidis [3]

[1] Department of Psychology, CITY College, University of York Europe Campus, Thessaloniki 54626, Greece
[2] Department of Psychology, University of Western Macedonia, Florina 53100, Greece
[3] School of Engineering and Physical Sciences, University of Lincoln, Lincoln LN6 7TS, United Kingdom

Introduction

One of the many challenges faced by cancer survivors is the impact their disease has on their psychological and cognitive well-being. Higher emotional resilience and flexibility in cancer patients may improve their quality of life and reduce their risk of developing anxiety and depression, according to research. This study aims to analyze the emotional functioning of fifty-two cancer survivors regarding gender differences (21 females/31 males).

Methodology

Differences between genders in emotional functioning among cancer survivors were investigated using a cross-sectional observational design. This strategy was chosen to enable the evaluation of psychological, emotional, and cognitive consequences at one particular moment after cancer therapy is finished. Convenience sampling was used to select participants from survival support groups and oncology outpatient clinics. Inclusion criteria: adults > eighteen years old, diagnosis of cancer and completion of the initial course of treatment, the ability to comprehend the language; no known neurological or mental health issues. Fifty-two cancer survivors (21 females and 31 males) made up the final sample. The administered tools used for anxiety, depression, quality of life were STAI, Zung and QoL Questionnaie. In addtion, there was a cognitive assessement for cognitive functions.

Results

Patients' Mean age was 52,3 (SD 6.78) and mean years of education were 15,21 (SD 5,93). Our findings indicate that females experience more negative emotions and express their negative emotions in comparison to males (p=0.01). Family and socioeconomic factors are involved in the emotional changes that results in psychological difficulties. Furthermore, following chemotherapy, patients with many cancer types may experience cognitive issues related to short-term memory, executive skills, and visuospatial perception (p=0.001).

Conclusions

Females experience more negative emotions and express their negative emotions in comparison to males. Compared to young and middle-aged patients who typically have to juggle employment and family responsibilities in addition to their cancer treatment, elderly patients typically experience less emotional discomfort.

Session 7. Child and Adolescent Psychiatry

sciforum-160601: Integrative Insights into ODD: Neurocognitive and Social Mechanisms

Wiktoria Maria Wójcik

Psychology Department, The Maria Grzegorzewska University, Warsaw 02-353, Poland

Oppositional Defiant Disorder (ODD) is increasingly conceptualized as a condition driven by interacting emotional, social–cognitive, and neurocognitive mechanisms that disrupt daily functioning [2]. This integrative review summarizes current evidence on therapeutic interventions that target these interconnected domains [6].

Methods

Literature Search. Peer-reviewed studies and clinical guidelines published between 2014 and 2025 were identified through structured searches in EBSCO, ScienceDirect, PubMed, and the National Library of Medicine, as well as professional organizational websites. The literature primarily comprised cross-sectional, longitudinal, neuroimaging, and intervention studies focusing on emotional-processing interventions, Theory of Mind (ToM), executive functions, neurodevelopmental risk factors, and parent–child interpersonal neural synchrony (INS).

Results

Children with ODD frequently exhibit ToM impairments—nearly two-thirds exceed clinical cutoffs—highlighting a core socio-cognitive mechanism underlying oppositional behaviour [3]. Training in facial-emotion recognition improves ToM and behavioural inhibition [5], while emotion-oriented therapy significantly reduces ODD and anxiety symptoms by reorganizing maladaptive emotional responses [1]. Neurodevelopmental findings show that autistic-like social interaction difficulties and ADHD-related attentional/impulsivity profiles represent gender-specific risk pathways [4]. Neuroimaging evidence further indicates that reduced mother–child INS during interaction tasks is associated with higher ODD severity, reflecting diminished attunement and weaker shared emotion-regulation processes [*7*].

Conclusions

Taken together, the evidence most strongly supports emotional processing, Theory of Mind, executive functioning, and parent–child neural synchrony as core domains implicated in ODD and as primary targets for developmentally informed, multimodal interventions.

sciforum-162423: Identifying the Relationship Between Neurocognitive Functions and Quality of Life in Early Childhood Neurodevelopmental Disorders

Dr. Kalliopi Megari

[1] School of Science, Department of Psychology, CITY University Legal Entity, University of York, Europe Campus, Thessaloniki 54621, Greece
[2] Department of Psychology, UOWM, Florina

Background and Objective

Numerous neurocognitive domains are frequently disrupted in children with neurodevelopmental disorders (NDDs), which may have an impact on their quality of life (QoL). However, little is known about the precise neurocognitive determinants of quality of life and how they relate to family-centered, participation-focused rehabilitation. The purpose of this study was to (1) investigate correlations between important neurocognitive functions (e.g., attention, executive function, social cognition, language) and overall and domain-specific quality of life and (2) assess if these interactions vary among children with particular NDD groups, ASD, ADHD, and CP.

Methods

Sixty-four children with ASD, ADHD, and CP, between the ages of 6 and 8 years, who met the DSM-5 diagnostic criteria, were included in this cross-sectional study. Standardized tests such as NEPSY-II, BRIEF-2, digit span, and trail making were used to measure neurocognitive functioning, and PedsQL was used to measure quality of life (QoL) using both child- and caregiver-reported versions where developmentally appropriate. To identify the neurocognitive domains that best predicted QoL results, primary analyses included regression, correlation, and group comparison.

Results

The QoL domain, such as social functioning, was significantly positively correlated with executive function (r = 645, p .05). According to regression analysis, 74% of the variance in overall QoL scores was explained by attention. There were differences between the NDD groups, with the ASD group exhibiting weaker correlations between QoL and executive function (p.01).

Conclusions

Our results show that certain neurocognitive processes, especially, e.g., executive control and attention, are crucial in determining children with NDDs' quality of life. These findings provide credence to the incorporation of neuroplasticity-based, family-centered, participation-oriented rehabilitation strategies that prioritize daily activity engagement, social interaction, and communication over deficit normalization. For children with NDDs, focusing on these neurocognitive areas may offer a significant route to improving functional outcomes and practical quality of life.

sciforum-164408: Indirect Digital Exposure to War and Armed Conflict and Mental Health Outcomes in Children and Adolescents: A Systematic Review

Beatriz De Faria Sousa * and Manal Imran

Florida International University

Introduction

Children and adolescents are increasingly exposed to war and armed conflict through social-media platforms disseminating real-time graphic content. The psychiatric consequences of indirect, digitally mediated exposure remain poorly defined. This review examined reported associations between digital exposure to war-related content and mental-health outcomes in youth.

Methods

This exploratory systematic review followed PRISMA guidelines but was not prospectively registered. PubMed, CINAHL, Embase, and Google Scholar were searched for studies published between 2015 and 2025 examining digital or social-media exposure to war, armed conflict, or mass-violence content among individuals ≤18 years. Quantitative, qualitative, and mixed-methods studies were eligible. Outcomes included stress, anxiety, depressive symptoms, post-traumatic symptoms, dissociation, internalizing symptoms, and sleep disturbance. A qualitative, domain-based assessment of study quality and risk of bias was conducted, focusing on study design, measurement methods, and confounding. Due to substantial methodological heterogeneity, no pooled meta-analysis was performed.

Results

Nine studies published between 2021 and 2025 were included, encompassing approximately 2,000 adolescents aged 11–19 years from the Middle East, Europe, and North America. Most studies were cross-sectional, with one mixed-methods study. Greater exposure to war-related digital media, particularly graphic or frequent exposure, was consistently associated with worse mental-health outcomes, including perceived stress ($p = 0.0196$), dissociation ($r = 0.29$), depressive symptoms ($\beta \approx 0.05$, p 0.001), and post-traumatic symptoms ($\beta \approx 0.18$, p 0.05). Qualitative findings described intrusive imagery, emotional overload, sleep disruption, and heightened threat perception. Female adolescents consistently demonstrated greater symptom severity than males.

Conclusions

Indirect digital exposure to war is associated with clinically relevant psychiatric symptoms in adolescents. Interpretation is limited by cross-sectional designs, self-reported exposure, and outcome heterogeneity. Nevertheless, consistent findings support routine clinical screening for digital trauma exposure and targeted media-literacy and child-focused preventive strategies during periods of global conflict.

Session 8. Organizational Behaviors

sciforum-165012: The Anxiety Paradox of AI Training in High-Stakes Operations and Supply Chain Management: An Integrated Perspective from Control-Value Theory and Organizational Support Theory

Yuan Wang [1,*], Yanji Duan [2] and Hao Tan [1]

[1] University of Electronic Science and Technology of China
[2] USA

In the time-critical, tightly coupled workflows of operations management (OM) and supply chain management (SCM), pervasive employee anxiety regarding job displacement, loss of control, and professional obsolescence constitutes a critical barrier to successful AI adoption. Prior research often conflates this anxiety with generic technostress or treats it merely as an antecedent to performance outcomes, failing to conceptualize it as a distinct, multi-dimensional psychological phenomenon. To address this gap, we conducted a naturalistic field experiment in a Chinese smart-automobile firm, implementing a three-week structured AI training program that integrated technical upskilling with psychological support components. Grounded in an integrative framework of Control-Value Theory (CVT) and Organizational Support Theory (OST), we examined the direct effect of this intervention on AI-induced anxiety and the moderating roles of Technology Self-Efficacy (TSE, as a proxy for perceived control) and Perceived Organizational Support (POS, as a regulator of value appraisal). Our findings reveal a counterintuitive "anxiety paradox": despite its benevolent intent, the training's short-term net effect was a significant increase in average employee anxiety, effectively functioning as a new "job demand." Further analysis shows that while POS effectively buffered anxiety during the initial training phase, its effect attenuated during the application phase. Conversely, the moderating effect of TSE was statistically non-significant, likely due to the acute cognitive load and algorithmic opacity inherent in high-pressure OM/SCM contexts, which masked TSE-based differences. These findings establish AI-induced anxiety as a core element in understanding human-AI collaboration and demonstrate how standardized AI training can inadvertently exacerbate anxiety by creating a "high-value, low-control" imbalance. Practically, our study underscores the necessity for organizations to adopt staged,精细化 (refined) intervention strategies that prioritize restoring employees' perceived control, rather than implementing one-size-fits-all training rollouts.

sciforum-159631: Fostering e-Government Procurement Success: The Role of Servant Leadership and Organizational Change Readiness

Hulumtaye Belayneh Dejene [1,*], Tariku Tesfaye Haile [2,3], Qaiser Mohi Ud Din [4] and Belay Belete Anjullo [3]

[1] Business School, Harbin Institute of Technology, Harbin 150001, China
[2] School of Mathematics, Harbin Institute of Technology, Harbin, 150001, China
[3] Department of Statistics, College of Natural and Computational Sciences, Arba Minch University, Arba Minch, Ethiopia
[4] School of Economics and Management, Harbin Engineering University, Harbin 150001, China

Public procurement shows one of the most important economic activities of the government, which plays a central role in achieving policy objectives and providing public value. Despite the vital role of digitalisation, many developing countries continue to face persistent challenges in implementing e-government procurement (e-GP) systems. While e-GP enhances transparency and accountability, its effective use depends not only on system design but also on leadership and organisational readiness for change. Servant leadership is characterised by employee empowerment, ethical role modelling, trust building, and support for learning; it is theorised to reduce change resistance and enhance employees' technology acceptance beliefs. However, there is a significant gap in the literature on integrating leadership with organisational change readiness for effective technology utilisation in the public sector. Thus, drawing on the technology acceptance model (TAM), this study examines the influence of servant leadership on the actual use of e-GP systems, with a particular focus on the mediating roles of organisational change readiness and perceived ease of use. To achieve the goal, survey data were collected from 318 government employees directly involved in e-GP activities, and the proposed hypotheses were tested using a structural equation model. The results indicate that servant leadership has a significant indirect effect on the actual use of e-GP systems by strengthening organisational change readiness and increasing perceived ease of use. Both mediators demonstrate strong, positive relationships with e-GP usage, indicating that leadership shapes technological use primarily through organisational and perceptual mechanisms. Furthermore, this study provides theoretical contributions by extending TAM from a focus on adoption intentions to actual system usage, thereby enriching the model with organisational and leadership dimensions within public-sector digital governance. It also offers practical implications for policymakers, highlighting that fostering servant leadership and preparing organisations for change are essentials for achieving effective digital procurement reforms.

sciforum-167282: How Psychological Experiences Shape Metaverse Adoption in Professional Settings: Evidence from China

Aasir Ali

School of Management, Zhengzhou University, Zhengzhou, China

The metaverse is increasingly viewed as an immersive digital environment with the potential to transform professional interaction, collaboration, and decision-making. While prior studies have largely emphasized technological features and performance outcomes, the psychological and behavioral mechanisms underlying metaverse adoption decisions remain insufficiently understood, particularly in non-Western professional contexts. Addressing this gap, the present study examines how perceived social presence, immersive flow, and perceived usefulness shape metaverse adoption intention among Chinese professionals, while accounting for the inhibiting role of technology anxiety. A quantitative behavioral research design was employed, drawing on survey data collected from 402 Chinese professionals working in technology, education, marketing, and service-related sectors. To enhance psychological realism and behavioral engagement, participants were first exposed to a scenario-based vignette depicting a professional metaverse workspace prior to completing the questionnaire. Measurement items were adapted from established psychological and behavioral scales, and the hypothesized relationships were tested using structural equation modeling. The results indicate that perceived social presence significantly enhances immersive flow experiences ($\beta = 0.46$, p 0.001). Immersive flow, in turn, positively predicts perceived usefulness ($\beta = 0.39$, p 0.001) and metaverse adoption intention ($\beta = 0.34$, p 0.001). Perceived usefulness also demonstrates a strong direct association with adoption intention ($\beta = 0.41$, p 0.001). In contrast, technology anxiety exerts a significant negative effect on adoption intention ($\beta = -0.29$, p 0.01) and weakens the positive behavioral influence of immersive flow. Overall, the proposed model explains 58% of the variance in metaverse adoption intention. This study contributes to behavioral science and organizational behavior literature by clarifying how affective experiences and cognitive evaluations jointly shape technology-related decision-making. The findings offer practical insights for organizations and system designers seeking to reduce psychological barriers and foster adaptive engagement with immersive digital work environments.

Session 9. Experimental and Clinical Neurosciences

sciforum-158426: Alterations in Emotional Processing in Fibromyalgia Syndrome: Event-Related Potentials and Modulatory Effects of tDCS

Casandra I. Montoro Aguilar [1,*], Pilar Ruiz-Medina [1], Laura Fischer-Jbali [2] and Gustavo Adolfo Reyes del Paso [1]

[1] Department of Psychology, Faculty of Humanities and Education Sciences, University of Jaén, Jaén, 23071, Spain
[2] Department of Clinical Psychology, Psychology Institute, University of Innsbruck, Innsbruck, 6020, Austria

Introduction

Fibromyalgia syndrome (FMS) is characterized by chronic widespread pain, altered emotional processing, and central sensitization, which may share neurophysiological mechanisms. Transcranial direct current stimulation (tDCS) shows potential to modulate these disturbances, yet few studies have assessed its effects on emotional and cognitive processing using objective neurophysiological measures.

Methods

We examined emotional processing, pain, and central sensitization, as well as the effects of tDCS over the left dorsolateral prefrontal cortex, in FMS patients and healthy controls. Participants completed the dot-probe task twice with neutral, happy, anger, and pain-related images while event-related potentials (ERPs) were recorded with electroencephalography (EEG). Between sessions, anodal or sham tDCS was applied. Pain threshold, tolerance, and central sensitization were also assessed.

Results

At baseline, FMS patients exhibited increased N1, N170, and N250 amplitudes and reduced P1, P3, P5, and P6 amplitudes in frontal and centro-parietal regions relative to controls. After sham, P1, P3, and P5 increased and N170 and N250 decreased across the sample, whereas these components remained stable after tDCS, except for P3 and N250 responses to pain images at centro-parietal sites, showing opposite effects to sham. Minor frontal differences in sham effects were observed between groups. Sequential processing delays from fronto-central to parieto-occipital regions were also noted. In patients, higher pain and greater central sensitization were associated with increased amplitudes of P1, P3, N1, N170, and N250 for both pain and anger images.

Conclusions

FMS patients show early hyper-reactivity and altered attentional processing, with reduced late evaluative responses and compensatory increases in early attentional and facial encoding processes. tDCS selectively enhanced intermediate affective recognition (↑N250) while reducing attentional/evaluative demands (↓P3) for pain images. Patients with higher pain and central sensitization levels exhibited compensatory cortical hyperactivation, highlighting tDCS as a promising tool to modulate neural processing of pain-related and emotional stimuli in FMS.

sciforum-165950: Benchmark of Subtyping Pathological Stimulus Persistence and Confabulation in Multimodal AI

Bin Hu

Canadian Open Digital Health (OpenDH) program and Department of Clinical Neurosciences, Cumming school of Medicine, University of Calgary

Introduction

Large visual-language models (VLMs) frequently exhibit "hallucinations," yet these errors are often treated as undifferentiated stochastic failures rather than specific cognitive deficits. In clinical neuroscience, pathological visual persistence, known as palinopsia, occurs when a patient continues to see a visual form after it has been removed from the environment. This study introduces a novel clinical-neuroscience testing platform designed to turn AI hallucinations into measurable cognitive phenotypes. By applying psychophysical rigor to VLM evaluations, we aim to detect and subtype visual persistence in AI agents compared to human baselines.

Methods

We developed Snellen-based engines for standardized visual acuity control and the Persistent Stimulus-Response Generation (PSRG), allowing structured A-B-C trial sequence consisting of stimulus-on, blank camera-on, and blank camera-off phases. Gemini Live Models were primed with tumbling "E" stimuli and subsequently presented with null trials (0 px stimuli or camera-off states). Persistence was operationalized as any contentful claim of an "E" orientation during these null trials.

Results

The data revealed that VLMs are highly susceptible to instructional and perceptual palinopsia. Following successful priming, models showed high persistence rates, often reporting directional orientations for over 20 consecutive blank trials. Statistically, these hallucination-like states manifested through significant reaction time instability and "motor block" phenomena, characterized by fragmented vocalizations and processing delays. Mechanistic subtyping successfully differentiated between context-dependent persistence during live camera feeds and procedural confabulations that persisted even when the system signaled a camera-off state.

Conclusions

This research demonstrates that AI hallucinations can be rigorously quantified using extinction metrics and persistence curves derived from clinical psychophysics. The manifestation of motor blocks and directional fixation suggests that these failures are tied to internal processing congestion or failures to flush visual buffers. This framework provides a critical new benchmark for AI alignment and safety, offering a pathway to diagnose and mitigate specific cognitive failure in multimodal AI.

sciforum-165966: Mitigating Temporal Confabulation and Improving Calibrated Perception in Real-Time Vision–Language Models

Shahryar Wasif * and Bin Hu

Canadian Open Digital Health (OpenDH) program and Department of Clinical Neurosciences, Cumming school of Medicine, University of Calgary

Introduction

Real-time vision–language models (VLMs) can exhibit “cognitive-like” failure patterns, including temporally unstable judgments, persistence of incorrect hypotheses, and overconfident confabulations under uncertainty. Conventional single-image benchmarks do not isolate these time-dependent behaviors. We present CMC (Confabulation Mitigation & Calibration), a lightweight reliability wrapper, and evaluate it within a shared cognitive testing platform that probes interpretable perceptual and metacognitive functions in both humans and AI.

Methods

The platform targets three functions relevant to hallucination-like errors: visual perception and orientation discrimination, temporal stability of belief across successive observations, and confidence calibration under time constraints. We used a Tumbling-E orientation task with randomized staircase difficulty to stress perceptual decision-making while recording response time, timeouts/abstentions, and step-to-step consistency. CMC combines selective re-analysis via change detection, a risk score that integrates temporal instability signals with uncertainty features, and a confirmation stage that routes high-risk outputs to verification or calibrated responses (verify/hedge/abstain). Human trials used a 3-second response budget; AI trials used a longer budget to distinguish perceptual failure from system latency.

Results

In 40 Tumbling-E trials, baseline accuracy was 50% (20/40) without CMC and improved to 75% (30/40) with CMC v1. CMC further reduced temporally unstable behaviors by escalating high-risk steps to verification and suppressing overconfident outputs when evidence was weak or timeouts were likely.

Conclusions

Evaluated as a cognitive testing problem rather than a static captioning task, CMC improves both accuracy and cognitive-faithful reliability, supporting rigorous neuroscience-aligned research and safer deployment of real-time VLM systems.

sciforum-165549: Anesthetic Choice and Antidepressant Response in Electroconvulsive Therapy: A Systematic Review

Helena De Azeredo Miranda [1,*], Jhon Ostanin [2] and Beatriz De Faria Sousa [2]

[1] Charles E. Schmidt College of Medicine at FAU
[2] FIU Herbert Wertheim College of Medicine

Introduction

Electroconvulsive therapy (ECT) is a highly effective treatment for severe depression, including treatment-resistant depression (TRD). Modern ECT is performed under general anesthesia, raising the question of whether different anesthetic agents can influence the antidepressant efficacy of ECT. This systematic review examines how anesthetic choice affects therapeutic outcomes in patients with depression undergoing ECT.

Methods

This review followed PRISMA 2020 guidelines. We searched Cochrane, PubMed, and EMBASE (2000–2025) for comparative studies of anesthetics in adult patients with TRD receiving ECT. Primary outcomes were depression severity improvement, response/remission rates, and number of ECT sessions to response. Of 547 records identified, 463 abstracts were screened. 45 full-text articles were assessed, and 31 studies met inclusion criteria for final analysis. Data were qualitatively synthesized due to heterogeneity.

Results

Across 31 studies, anesthetic choice influenced the speed of antidepressant response, particularly within the first one to two treatment sessions. Ketamine used as an induction or adjunct anesthetic was repeatedly associated with significantly faster reductions in depressive symptom severity. Several trials reported greater early symptom improvement and higher early remission rates with ketamine-based anesthesia, suggesting that ketamine-based anesthesia may warrant consideration during ECT. By the end of an ECT course, depressive symptom scores generally converged across anesthetic groups. Evidence regarding whether ketamine reduced the total number of ECT sessions required was mixed.

Conclusions

Anesthetic selection meaningfully influences the temporal efficiency of ECT for depression. Ketamine-based anesthesia is consistently associated with more rapid antidepressant response, particularly during early treatment sessions, while overall end-of-course efficacy appears comparable across anesthetic agents. Earlier symptom relief may be clinically important in patients with severe, treatment-resistant, or high-risk depression where rapid improvement is critical. These findings support reframing anesthetic choice as a modifiable component of ECT that can shape treatment dynamics rather than a neutral procedural factor.

sciforum-165525: Does General Anesthesia Influence Long-Term Cognition or Dementia Risk? A systematic review of postoperative cognitive trajectory in older adults

Helena De Azeredo Miranda [1,*], Beatriz De Faria Sousa [2] and Jhon Ostanin [2]

[1] Charles E. Schmidt College of Medicine at FAU
[2] FIU Herbert Wertheim College of Medicine

Background

General anesthesia (GA) is commonly administered to older adults undergoing surgery, raising concern that anesthetic exposure may contribute to cognitive decline or dementia. Although short-term postoperative cognitive dysfunction is known, its relationship to later-life cognitive outcomes remains uncertain. We systematically reviewed studies examining whether GA exposure in older adults is associated with cognitive impairment.

Methods

Following PRISMA 2020 guidelines, we searched PubMed, Embase, and the Cochrane (2000-2025). Of 97 records identified, 13 duplicates were removed, 84 unique records were screened, 21 full-text articles were assessed, and 5 observational cohort studies met inclusion criteria (adults ≥60 years with GA exposure and cognitive follow-up ≥3 months). Studies limited to regional anesthesia, sedation without GA, or lacking objective cognitive outcomes were excluded. Risk of bias was assessed using the Newcastle-Ottawa Scale.

Results

Among the included studies, evidence on GA's cognitive impact was mixed. Two large cohort studies (n≈1,700-1,800 each) using neuropsychological test scores reported that cumulative GA exposure was associated with a small but significant acceleration of cognitive decline (≈0.2 SD additional 5-year decline). Conversely, another cohort (n≈4,000) found no increased risk of dementia or Alzheimer's disease associated with GA (0.86, 95% CI 0.58-1.28). In two smaller surgical cohorts, 25% exhibited transient slowing in processing speed at 3 weeks after GA, and 34% showed objective cognitive decline at 3 months postoperatively. Only 13% perceived cognitive problems and subjective complaints were more linked to depressive symptoms.

Conclusions

Limited evidence suggests that GA in older adults is not strongly linked to permanent cognitive deterioration or dementia. GA may modestly hasten cognitive decline in some individuals, but significant long-term impairment has not been consistently demonstrated. Short-term cognitive changes occur in a subset of patients but resolve within months. Overall, the cognitive impact of GA appears mild, with other factors likely playing larger roles in late-life cognitive health.

sciforum-160391: Long-term curcumin supplementation in patients with anxiety prevents monocyte activation and reduces systemic sCD14 levels (a monocyte activation marker)

Jose Joaquin Merino [1,*], Maria Jesús Pelaz Fernández [2], José María Parmigiani-Cabaña [3], José María Parmigiani-Izquierdo [4], Rubén Fernández-García [5] and María Eugenia Cabaña-Muñoz [6]

[1] 1 Facultad de Farmacia. Universidad Complutense de Madrid. Dpto. Farmacología, Farmacognosia y Botánica (UCM). 2 Instituto Pluridisciplinar (UCM), Madrid, Spain 3 Grupo de Medicina Regenerativa, Instituto de Investigación Sanitaria Hospital 12 de Oct
[2] BIONORDIC, Valladolid, Spain
[3] Clinica CIROM, Murcia, Spain
[4] Clínica CIROM (Murcia, Spain)
[5] Departamento de Enfermería, Fisioterapia y Medicina. Universidad de Almeria (Spain)
[6] Clínica CIROM (Murcia, Spain). Private Dentist Practice, Private Clinic, 30001 Murcia, Spain.

Stress can accelerate the progression of neurological and neuropsychiatric diseases. In fact, chronic stress is linked to hypertension, anxiety, and depression, which increase oxidative stress and promote neuroinflammation, which are factors involved in age-related dementia. Curcumin, the active principle from *Curcuma longa*, plays anti-inflammatory and antioxidant roles and mitigates detrimental effects of stress. Stress often promotes depression, activates distinct neuronal circuits in the brain and provokes neuroinflammation and neurodegeneration. Acute stress has short-term effects on the immune system, including changes in the number and composition of circulating monocytes, and increases cytokine levels. Mediators of inflammation have been found to be higher in individuals with depression, while stress-induced increase in blood monocyte levels is independent of monocyte subtypes. Stress affects monocyte levels in pathological chronic stress-related conditions, including anxiety and depression or post-traumatic stress disorder.

Since pharmacological anti-stress drugs have some adverse effects, long-term curcumin supplementation (1800 mg/day) over 90 consecutive days in patients with moderate anxiety prevented sCD14 increase casued by stress; additionally, MCP-1-induced overproduction by anxiety as a chemotactic mechanism can activate monocytes in certain neurological conditions. Both increases in sCD14 and MCP-1 levels were reverted by curcuminoids in patients with anxiety. Thus, curcumin prevented anxiety behaviour, due to decreased cortisol and reduced systemic cytokine levels in patients with moderate anxiety.

sciforum-161054: Reflection of phobic scenarios in virtual reality based on EEG data and intelligent video streaming

Mikhail Oppedisano [1,*] and Sergey Lytaev [2]

[1] Saint Petersburg State Pediatric Medical University
[2] St. Petersburg State Pediatric Medical Unversity

Introduction

Throughout everyday life, people encounter potentially traumatic events. Under the influence of both mental and physical factors, chronic neuropsychic stress develops, leading to changes in the nervous system's excitability threshold, thereby disrupting the subject's functional comfort.

This research aimed to analyze the dynamics of the functional state (FS) of healthy subjects exposed to phobic virtual reality scenarios using EEG recordings and muscle activity analysis using intelligent video streaming analysis.

Methods

A total of 20 volunteers, 12 women and 8 men, aged 19–20 years were selected. Immersion in a dynamic virtual environment was achieved using a portable personal computer and a VR program simulating heights and crowd danger. Psychoemotional state and responses to the simulation were recorded using a 21-channel EEG. At the same time, an approach was used to assess muscle movements of linear segments of the body and face using a commercial smartphone camera, followed by processing using proprietary software. Modern AI methods make it possible to classify FS and behavioral activity based on the analysis of external features obtained from a video camera.

Outcomes

Virtual reality exposure to heights (a multi-floor building landing) was accompanied by an increase in the average amplitude of the EEG alpha rhythm by 3.8±1.4%, theta rhythm by 9.1±0.7%, delta rhythm by 4.7±2.6%, and beta rhythm by 34.1±6.1%, indicating generalized cerebral irritation.

Intelligent video monitoring displays a motor activity algorithm and acceptable results for respiratory activity at an average respiratory rate. The motion detection algorithm demonstrated 100% accuracy in both detecting body part movements and determining the direction of movement.

Conclusions

This finding opens the door to optimizing currently used algorithms for the automatic detection of phobic disorders based on EEG data, particularly AI algorithms.

sciforum-165920: Temporal Reliability of Sequential Perceptual Decisions in Humans and Artificial Agents

Avneek Sandhu [1,*] and Bin Hu [2]

[1] Canadian Open Digital Health (OpenDH) program and Department of Clinical Neurosciences, Hotchkiss Brain Institute, University of Calgary, Calgary, Alberta Canada
[2] Canadian Open Digital Health (OpenDH) program and Department of Clinical Neurosciences, Cumming school of Medicine, University of Calgary

Introduction

Human perception is inherently temporal, shaped by deadlines and uncertainty. While behavioral science interprets hesitation and response switching as signals of cognitive control, AI evaluation typically relies on static accuracy, ignoring how decisions evolve. As Vision-Language Models (VLMs) become decision partners in time-sensitive tasks, we need metrics that quantify their reliability over time. We introduce the Temporal Hallucination Index (THI), a behaviorally grounded metric designed to measure temporal instability and enable direct human–AI comparison.

Methods

THI captures response failures including delays, timeouts, drift, and persistence. We operationalized THI using a classic Tumbling-E visual acuity task implemented with a randomized staircase to modulate difficulty (arcmin). The protocol imposes specific time constraints (3s for humans; 17s for AI) and records choices, reaction times, and confidence. This granular tracking allows us to dissociate simple perceptual limits from failures in decisional stability and temporal control.

Results

Under matched conditions, humans exhibited high temporal stability (THI = 0.03), maintaining consistent responses and sub-two-second reaction times even as perceptual difficulty increased near threshold. In contrast, AI systems showed substantial instability (THI = 0.23). This was marked by frequent timeouts, rapid response reversals ("flip-flopping"), and persistence errors, despite the systems being granted significantly longer response windows. These findings reveal qualitative disparities in processing consistency rather than just visual acuity.

Conclusions

THI provides a robust tool for quantifying temporal instability. By mapping AI "temporal hallucinations" to established human behaviors—like inconsistency and perseveration—THI enables principled comparisons of reliability. This framework highlights critical divergences in temporal cognition, offering a new lens for evaluating confidence and control in artificial agents compared to biological ones.

MDPI AG
Grosspeteranlage 5
4052 Basel
Switzerland
Tel.: +41 61 683 77 34

Behavioral Sciences Editorial Office
E-mail: behavsci@mdpi.com
www.mdpi.com/journal/behavsci


MDPI