



OPEN ACCESS

EDITED AND REVIEWED BY
Leonhard Schilbach,
Ludwig Maximilian University of
Munich, Germany

*CORRESPONDENCE
Sara Palermo
✉ sara.palermo@unito.it

RECEIVED 20 February 2024
ACCEPTED 21 February 2024
PUBLISHED 06 March 2024

CITATION
Morese R, Elliott E, Bilek E and Palermo S
(2024) Editorial: Women in brain health and
clinical neuroscience.
Front. Hum. Neurosci. 18:1388801.
doi: 10.3389/fnhum.2024.1388801

COPYRIGHT
© 2024 Morese, Elliott, Bilek and Palermo.
This is an open-access article distributed
under the terms of the [Creative Commons
Attribution License \(CC BY\)](https://creativecommons.org/licenses/by/4.0/). The use,
distribution or reproduction in other forums is
permitted, provided the original author(s) and
the copyright owner(s) are credited and that
the original publication in this journal is cited,
in accordance with accepted academic
practice. No use, distribution or reproduction
is permitted which does not comply with
these terms.

Editorial: Women in brain health and clinical neuroscience

Rosalba Morese¹, Elizabeth Elliott², Edda Bilek^{3,4} and Sara Palermo^{5,6*}

¹Faculty of Biomedical Sciences, Faculty of Communication, Culture and Society, USI Università della Svizzera Italiana, Lugano, Switzerland, ²Centre for Clinical Brain Sciences, University of Edinburgh, Edinburgh, United Kingdom, ³Wellcome Centre for Human Neuroimaging, University College London, London, United Kingdom, ⁴Central Institute of Mental Health, Mannheim, Germany, ⁵Department of Psychology, University of Turin, Turin, Italy, ⁶Neuroradiology Unit, Diagnostic and Technology Department, Fondazione Istituto di Ricovero e Cura a Carattere Scientifico, Istituto Neurologico Carlo Besta, Milan, Italy

KEYWORDS

gender gap, brain science, clinical neuroscience, depression, language, inter-group, sensory-processing sensitivity

Editorial on the Research Topic Women in brain health and clinical neuroscience

In the vast realm of scientific inquiry, women have played a pivotal yet often unacknowledged role in shaping our understanding of the intricate workings of the human nervous system. The research landscape, however, remains a challenging terrain for women, with <30% of researchers worldwide being female (<https://uis.unesco.org/en/topic/women-science>). Long-standing biases and gender stereotypes persist, casting a shadow over the potential of countless girls and women who could contribute significantly to science, technology, engineering, and mathematics (STEM) research.

As UNESCO underlines, science and gender equality are indispensable for achieving sustainable development. Breaking free from the chains of stereotypes and biases is imperative to pave the way for a future where talent knows no gender boundaries. It is in this context that Brain Health and Clinical Neuroscience proudly presents an editorial initiative aimed at spotlighting the remarkable contributions of female researchers in the field.

This initiative recognizes that gender equality is not just a moral imperative but a strategic necessity. The RT seeks to challenge the status quo and amplify the voices of women who have been instrumental in driving scientific advancements. The editorial is not just an acknowledgment of the achievements of these remarkable researchers but a call to action to transform traditional mindsets, promote gender equality, and inspire the next generation of women to pursue careers in STEM.

The Research Topic comprises six contributions represented by three original research articles, one brief research report, one systematic review, and one hypothesis and theory article.

The long-term potentiation (LTP) study by [Rygvoold et al.](#) reveals reduced LTP-like synaptic plasticity in neuropsychiatric disorders such as major depressive disorder and schizophrenia. With a large cohort of healthy adults, the research confirms that modulations in visually evoked potentials (VEP) are associated with depressive symptoms and stress, suggesting that LTP-like plasticity may serve as a vulnerability marker for the development of depressive symptoms.

Key et al. explore the iSPOT-D clinical trial database to uncover an association between auditory event-related potential responses, clinical symptoms, and also demographic features in major depressive disorder (MDD). The findings replicate an alteration of sensory, and also an alteration of attentional processes in MDD patients, with age influencing both the topographic distribution of responses and stimuli sensitivity, suggesting potential biomarkers for patient stratification in clinical trial design.

In prior research, **Lock and Keong** proposed a novel taxonomic framework for interpreting white matter tract profiles using diffusion tensor imaging (DTI), validated in Classic Normal Pressure Hydrocephalus (NPH). In this study, they apply the Periodic Table algorithm to analyze Complex NPH and observe widespread reductions in subcortical deep gray matter structures, supporting the retention of Classic NPH-associated imaging features and emphasizing injury patterns over individual measures in DTI interpretation.

Farshchi et al. address the limited understanding of the neurophysiological processing of negation in natural language, particularly in the context of spoken language. While previous research based on written stimuli suggested processing costs related to negation, the study developed an auditory paradigm replicating these costs but revealing distinct patterns of ERP effects. The findings suggest that processing negation in spoken language may be less effortful, possibly due to the natural flow of speech reducing variability in neural responses, as opposed to the written word-by-word paradigm.

Saarinen et al. investigate whether there is a neural inter-group bias between minority and majority members based on ethnicity and explored differential neural processing of various ethnic groups. The results indicate that ethnic minority members did not exhibit the bias, while ethnic majority members displayed biased responses toward minority members in brain regions associated with several neural processes such as facial elaboration, and attention.

Morellini et al. propose that highly sensitive people may be particularly susceptible to social exclusion conditions beyond the physical pain, offering insights for developing interventions to support their wellbeing. While not pathological, sensory-processing sensitivity (SPS) may increase vulnerability to risk conditions during vulnerable life periods ad childhood and adolescence.

In celebrating the achievements of *Women in brain health and clinical neuroscience*, we not only honor their individual contributions but also challenge the prevailing norms that

hinder the full realization of their potential. Our continually evolving neurocognitive model, grounded in advancements concerning social cognition (**Morese and Palermo, 2020, 2022**), metacognitive-executive functions and their intricate interactions with neurodegenerative diseases (**Morese et al., 2018; Palermo et al., 2018**), acquired brain injuries and pathologies (**Palermo et al., 2014, 2019**), represents a step toward creating a future where talent is recognized and celebrated regardless of gender. This approach fosters an environment where the scientific community thrives on the diverse perspectives and experiences that women bring to the table, emphasizing the importance of inclusivity and equity in advancing research and innovation.

Author contributions

RM: Writing – review & editing. EE: Writing – review & editing. EB: Writing – review & editing. SP: Conceptualization, Supervision, Writing – original draft.

Funding

The author(s) declare that no financial support was received for the research, authorship, and/or publication of this article.

Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

The author(s) declared that they were an editorial board member of Frontiers, at the time of submission. This had no impact on the peer review process and the final decision.

Publisher's note

All claims expressed in this article are solely those of the authors and do not necessarily represent those of their affiliated organizations, or those of the publisher, the editors and the reviewers. Any product that may be evaluated in this article, or claim that may be made by its manufacturer, is not guaranteed or endorsed by the publisher.

References

- Morese, R., and Palermo, S. (2020). Altruistic punishment and impulsivity in Parkinson's disease: a social neuroscience perspective. *Front. Behav. Neurosci.* 14:102. doi: 10.3389/fnbeh.2020.00102
- Morese, R., and Palermo, S. (2022). Feelings of loneliness and isolation: social brain and social cognition in the elderly and Alzheimer's disease. *Front. Aging Neurosci.* 14:896218. doi: 10.3389/fnagi.2022.896218
- Morese, R., Stanziano, M., and Palermo, S. (2018). Commentary: metacognition and perspective-taking in Alzheimer's disease: a mini-review. *Front. Psychol.* 9:2010. doi: 10.3389/fpsyg.2018.02010
- Palermo, S., Andò, A., Salatino, A., Sirgiovanni, S., De Faveri, L., Carassa, A., et al. (2019). Selective emotional dysregulation in splenium agenesis. A case report of a patient with normal cognitive profile. *Front. Psychol.* 10:631. doi: 10.3389/fpsyg.2019.00631
- Palermo, S., Leotta, D., Bongioanni, M. R., and Amanzio, M. (2014). Unawareness of deficits in ischemic injury: role of the cingulate cortex. *Neurocase.* 5, 540–555. doi: 10.1080/13554794.2013.826686
- Palermo, S., Stanziano, M., and Morese, R. (2018). Commentary: anterior cingulate cortex and response conflict: effects of frequency, inhibition and errors. *Front. Behav. Neurosci.* 12:171. doi: 10.3389/fnbeh.2018.00171