

Special Issue on
**Neural Correlates and Behavioural Changes in
 Posttraumatic Stress Disorder and Traumatic Brain Injury**

CALL FOR PAPERS

Posttraumatic Stress Disorder (PTSD) and Traumatic Brain Injury (TBI) are both conditions that severely affect wellbeing and may seriously limit functioning in daily life. Their impact on wellbeing and daily life is even more severe whenever PTSD and TBI are copresent. Indeed, brain injuries are often the result of a traumatic and stressful experience.

In recent years, as a consequence of human-made disasters (wars, terrorism, sexual assault, child abuse, etc.) and natural traumatic events (earthquakes, tsunamis, floods, being diagnosed with terminal illness, etc.), PTSD and TBI have been recognised as responsible for the most limiting and severe impairments following deployments. However, today in everyday life, TBI more commonly results from the motor vehicle collisions, acts of violence, falls, or sporting activity. TBI involves damage to the brain caused by an external force. Severity of TBI is typically described in terms of mild or moderate/severe and is measured by the Glasgow Coma Scale score as well as the duration of the posttraumatic amnesia. The severity of TBI interacts differentially with PTSD. Recently, neuroimaging studies demonstrated different traumatic events result in different neural modifications. This provides new insights into how focused therapeutic treatments for a particular condition could be more effective than others.

Due to its severe and long-lasting consequences, especially for active young adults, TBI represents a great burden on national healthcare systems (i.e., in terms of cost, therapy, and long-term assistance). For such a reason, researches aimed at improving the current rehabilitation treatments as well as reducing the consequences of the caregivers' experience (e.g., vicarious traumatization, burnout, and stress reactions) are mandatory. There is a great interest in identifying early predictors of PTSD, the possible mechanisms that may impact on the nature of PTSD following TBI, the differential diagnosis between PTSD and TBI psychological sequelae, and the efficacy of pharmacological and cognitive approaches in the treatment of these disorders.

A more advanced understanding of these two conditions is desirable to determine new methods for early and accurate diagnoses, PTSD prevention programs, and the development of improved training for health providers. Recent advances in functional imaging methods can help achieve these aims, enabling comparative investigations of neurobehaviour, neuroanatomy, and neurophysiology pertaining to cognitive and emotional processes underlying PTSD.

Potential topics include but are not limited to the following:

- ▶ Structural MRI changes related to PTSD, results coming from fMRI regarding behavioural and emotional answers and changes in neural correlates of PTSD, electroencephalogram (EEG) and event-related potentials (ERPs) studies, and changes induced by noninvasive brain stimulation techniques
- ▶ Behavioural studies aimed to individuate new tools sensitive to early and differentiate diagnosis and new rehabilitation and psychotherapeutic procedures
- ▶ Role played by cognitive and physiological features characterizing PTSD in TBI
- ▶ Psychiatric and emotional changes underlying TBI
- ▶ Quality of life of caregivers and patients with TBI and negative consequence on the patients' rehabilitative outcome
- ▶ Rehabilitative outcomes: a comparison among different types of treatment
- ▶ Sleep disorders in PTSD and in TBI
- ▶ Posttraumatic seizures and posttraumatic epilepsy: complications from TBI
- ▶ Current concepts on genetic predictors in PTSD associated with clinical and subclinical aspects
- ▶ Discoveries from preclinical models
- ▶ Posttraumatic growth after traumatic experiences

Authors can submit their manuscripts through the Manuscript Tracking System at <https://mts.hindawi.com/submit/journals/bn/ncbti/>.

Papers are published upon acceptance, regardless of the Special Issue publication date.

Lead Guest Editor

Anna Maria Giannini, Sapienza
 University of Rome, Rome, Italy
annamaria.giannini@uniroma1.it

Guest Editors

Laura Piccardi, University of L'Aquila,
 L'Aquila, Italy
laura.piccardi@cc.univaq.it

Cecilia Guariglia, Sapienza University of
 Rome, Rome, Italy
cecilia.guariglia@uniroma1.it

Paola Verde, Flight Experimental
 Centre, Rome, Italy
paola.verde@aeronautica.difesa.it

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