The role of sleep in emotional memory processing in PTSD patients

de Boer, M.D.; Nijdam, M.J.; Hofman, W.F.; Olff, M.; Talamini, L.M.

Published in:
European Journal of Psychotraumatology

DOI:
10.3402/ejpt.v4i0.21127

Citation for published version (APA):
The role of sleep in emotional memory processing in PTSD patients

M. De Boer1, M. J. Nijdam2, W. F. Hofman1, M. Olff2 and L. M. Talamini1
1Brain and Cognition group, Department of Psychology, Cognitive Science Center Amsterdam, University of Amsterdam, The Netherlands; 2Department of Psychiatry, Centre for Psychological Trauma, Academic Medical Centre at University of Amsterdam, The Netherlands

Sleep appears to play an important role in emotional memory processing and emotional coping. Disturbed sleep (nightmares and insomnia) is one of the key symptoms of posttraumatic stress disorder (PTSD) and may play an important role in the aetiology and/or maintenance of PTSD. Polysomnographic studies in PTSD patients have reported mainly on changes in REM characteristics and arousal regulation. However, little is known about the relation between sleep disturbances and emotional memory processing in PTSD. A previous sleep study in healthy subjects suggests the occurrence of adaptive changes in sleep architecture after emotional experiences, which benefit emotional housekeeping and the attenuation of emotional responses towards negative emotional experiences (manuscript under submission). The current controlled patient study assesses the impact of an induced, emotionally distressing experience on sleep parameters in PTSD patients, including the distribution of sleep stages, REM sleep-related variables, and EEG power spectral parameters. In addition, we will analyse how sleep changes in response to the stressor relate to emotional attenuation over sleep. The main experimental groups are traumatized police officers and veterans with PTSD (N = 25) and without PTSD (N = 25). We will also include a control group of non-trauma exposed controls (N = 25). The experimental set up involves presentation of neutral or distressing film fragments in the evening, followed by polysomnography (EEG – F3, F4, C4, O2- referenced to linked A1 + A2; EOG; EMG; ECG; respiratory signals; limb movements) of undisturbed, whole night sleep, and cued recall of film content on the next
Physiological reactivity of individuals with PTSD and support during a trauma-oriented social interaction with a significant other: a gender-comparative analysis

S. Guay¹, N. Nachar², M. E. Lavio³, A. Marchand⁴ and K. P. O’Connor⁴
¹School of Criminology, University of Montreal, Canada; ²Department of Psychology, University of Montreal, Canada; ³Department of Psychiatry, University of Montreal, Canada; ⁴Department of Psychology, University of Quebec in Montreal, Canada

Overt behavioral support processes and physiological responses are dimensions that have been much overlooked in the exploration of the links between social support and posttraumatic stress disorder (PTSD). A multi-method strategy was developed to study physiologically reactive behavior during a supportive interaction with a significant other. The mean and variability of heart rate (HR) of 52 participants with PTSD (40 women) were respectively measured in four phases: (1) a 2-minute resting baseline, (2) a 10-minute neutral interaction with the significant other, (3) a 15-minute active interaction with the significant other evoking the impacts of PTSD on their lives, and (4) a 2-minute recovery phase. Our results revealed a significant increase in HR responses during the trauma-oriented discussion. This HR response increase was significant in comparison to all other control periods, i.e., the preceding neutral discussion with a significant other as well as the initial and final resting periods (p < 0.01). Men and women from our sample showed similar HR mean and variability during each phase. Although there was no link between the intensity of PTSD symptoms (measured with the CAPS) and women’s HR at all phases, significant positive correlations were found for men during phases 1, 3, and 4 (rs > 0.62, ps < 0.05) with HR variability. During phase 3, the more the men expressed emotions to their significant other, the less HR variability was observed (p = 0.40, p < 0.05). Our findings suggest that PTSD symptoms are more strongly associated with the physiological reactivity of men before, during, and after an interaction with a significant other about their trauma. Clinical strategies addressing these issues will be discussed.

Miscellaneous

Development and validation of a scale to measure trauma-related guilt and shame

K. Derks¹, W. Van Der Veld¹, G. Naring¹, E. Becker¹ and J. Krans²
¹Behavioural Science Institute, Radboud University Nijmegen, The Netherlands; ²University of New South Wales, Sydney, Australia

Although scholars agree that emotions of guilt and shame are critical in the development of posttraumatic stress disorder (PTSD) symptoms after a traumatic event, measurement instruments of these emotions in relation to trauma are still limited. Additionally, the existing scales generally measure trauma-related guilt, and the emotion of shame is often not included, even though a body of clinical research on psychological trauma indicates that the emotion shame is important in the development and course of PTSD symptoms. Moreover, the existing measures fail to recognize that these moral trauma-related emotions do not only have a cognitive component but also a behavioral reaction. As guilt is essentially a constructive moral emotion, associated with feelings of responsibility and agency, it results in a desire to repair what one has possibly done wrong. However, this repair behavior is not part of the existing instruments that measure trauma-related guilt. Just like guilt, shame has, next to the cognitive component (negative self-evaluations, “I am a bad person”), its own behavioral element: withdrawal (e.g., hiding). Shame makes one want to withdraw and to avoid dealing with the consequences of traumatic events. We addressed these issues by developing and validating a new scale that measures both trauma-related guilt and shame experiences. The scale contains two guilt subscales that assess negative behavior-evaluations (cognitive) and the tendency to repair (behavioral) following a traumatic event, and two shame subscales that measure negative self-evaluations and withdrawal behavior following a traumatic event. Our scale’s ability to distinguish these two classes of reactions (cognitive and behavioral) and its ability to include both trauma-related guilt and shame represents a vital advantage of the scale over existing instruments. Consequently, it has the potential to be an important tool for identifying trauma-related guilt and shame.

The degree of dissociative and posttraumatic stress in oncology

A. Gallo
Dipartimento di Scienze dell’Uomo, Università degli studi di Urbino “Carlo Bo”, Italy

A traumatic event is considered a stressful event that overwhelms the resilience of the subject. A traumatic event can be an isolated incident or repetitive causing a chronic trauma in the patient. The shift to the subjective experience of trauma led to a definition of traumatization as an individual response at cognitive, affective and defensive levels. In this sense, an event becomes “traumatic” according to the way in which the subject experiences it in his or her inner world, i.e., in relation to the quality of his or her personal reality. Traumatic experiences act on splitting up higher integrative functions and this creates the existence of dissociative phenomena and psychopathological disorders such as posttraumatic stress disorder (PTSD). The disruption resulting from psychological trauma however does not seem to be a defense of the mind, but rather a side effect that has grave repercussions on the ability of the individual to regulate emotional, and metacognitive capabilities in relation to one’s own identity. The seriousness of the dissociative disorder and PTSD when associated with traumatic histories of development can worsen the prognosis if they are present as an illness in combination with other disorders. In fact, if we try to analyze a dramatic context such as cancer, it is noted that the communication of a poor diagnosis can be characterized as a critical time for the development of this phenomenon. In this situation, it seems to be essential for a specific intervention to reduce symptoms and return the patient to a normal level of functioning in order to be able to manage the organic pathology.

References


Psychometric properties of the Hungarian versions of the Impact of Event Scale-Revised and the Impact of Future Events Scale

K. Fodor¹ and D. Perczel Fornitos²
¹Department of Clinical Psychology, Semmelweis University, Budapest, Hungary; ²Doctoral School of Mental Health Sciences, Semmelweis University, Budapest, Hungary

A study that investigated the psychometric properties of the Hungarian versions of the Impact of Event Scale-Revised (IES-R; Weiss & Marmar, 1996) and the Impact of Future Events Scale (IFES; Deeprose & Holmes, 2010) in a sample of healthy subjects is presented. The IES-R is a 22-item self-report measure that assesses subjective distress along three subscales after traumatic events. The previously available and validated Hungarian version of the Impact of Event Scale (Horowitz et al., 1979) is updated and retranslated to fully assess all posttraumatic symptoms. The IFES is a 24-item scale that was developed based on the IES-R and assesses the impact of intrusive, prospection, personally relevant imagery.