may protect against intrusions (Kleim &Wilhelm). The symposium will be concluded with a general discussion (Hagenaars) on how the results may inform intervention strategies.

The Role of Tonic Immobility and Behavioural Control in Intrusion Development

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Background: Tonic immobility (TI; involuntary motor inhibition during threat) has been implicated in the onset of posttraumatic stress disorder (PTSD) in previous studies, using cross-sectional designs and (retrospectively measured) TI. Only one study examined spontaneous TI responses in a more controlled setting, using experimental trauma (a 'trauma film'). TI during the 'trauma film' was indeed associated with increased frequency of intrusive memories of the film (Hagenaars & Putman, 2011). Interestingly, high attentional control (the ability to focus and switch attention) buffered against this effect. Reduced controllability was indeed proposed to stimulate PTSD development. In experiments, behavioural control was related to reduced stress when anticipating threat. However, findings are less consistent or scarce for the impact period and post-threat period. *Objective*: Replicate the TI x Control interaction1 (but with behavioural control) for the impact and post-threat period. *Method*: Sixty-four participants watched an experimental trauma (negative pictures) while being allowed to close their eyes or not. Spontaneous TI was measured after picture viewing; intrusions were recorded in a diary in the subsequent week. Informative hypotheses were tested with Bayesian analyses. *Results*: TI predicted intrusion development. Moderation (TI x Control) and non-moderation (main effect of TI only) were both adequate models, with no preference for either. *Conclusions*: We replicated earlier cross-sectional findings regarding TI using a longitudinal trauma-analogue design. The role of behavioural control may be complicated and/or indirect.

Reference

Hagenaars, M.A., & Putman, P. (2011). Attentional control affects the relationship between tonic immobility and intrusive memories. Journal of Behavior Therapy and Experimental Psychiatry, 42, 379–383.

Associations between Trauma, Sleep and Memory Processing: Results from Two Analogue Studies

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Background: Extensive evidence indicates that sleep plays an active role in memory consolidation. Moreover, sleep has been found to preferentially enhance emotional memories and may modulate the affective tone of these memories. Based on this line of research, recent studies have examined the impact of sleep on memory-related symptoms of PTSD (i.e. intrusive re-experiencing). However, findings are inconsistent as to whether sleep alleviates or aggravates re-experiencing symptoms. *Objective*: In the present studies, we address these conflicting findings (Experiment 2) and examine how an analogue trauma affects sleep architecture (Experiment 1). *Method*: In Experiment 1 (N = 30), we investigated the effects of a 'trauma' film on subsequent sleep architecture. Participants were exposed to a 'traumatic' or neutral film before sleeping under laboratory conditions. In Experiment 2 (N = 41), we examined how sleep modulates explicit and implicit trauma memory in an analogue procedure. Participants were exposed to 'traumatic' picture stories before a night of sleep or partial sleep deprivation. In the morning, participants completed tests of explicit and implicit memory for 'trauma'-related stimuli. *Results*: Experiment 1 revealed overall sleep time to be significantly reduced in the 'trauma' film condition. Moreover, correlational analyses suggest that specific REM sleep features were linked to reduced analogue PTSD symptoms. In Experiment 2, sleep was found to enhance recollection of 'trauma'-related stimuli without affecting implicit memory. *Conclusions*: The present findings provide further insights into the role of sleep in trauma memory and PTSD. Future studies are required to further investigate the underlying processes by which sleep affects intrusive re-experiencing.

The Role of Sleep in the Development of Experimental Trauma Memories

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Background: Re-experiencing of emotional memories in form of intrusive memories is a hallmark PTSD symptom and thought to be related to dysfunctional encoding and subsequent lack of integration into existing autobiographical memory networks. Sleep is a key player in the integration of new memories. It may also, over the course of multiple nights, reactivate and consolidate memories and reduce distress. We previously demonstrated that sleep in the night after experimental trauma, compared to wake, led to fewer and less distressing intrusive emotional