Using smartphones to reduce pre-sleep threat vigilance that contributes to insomnia

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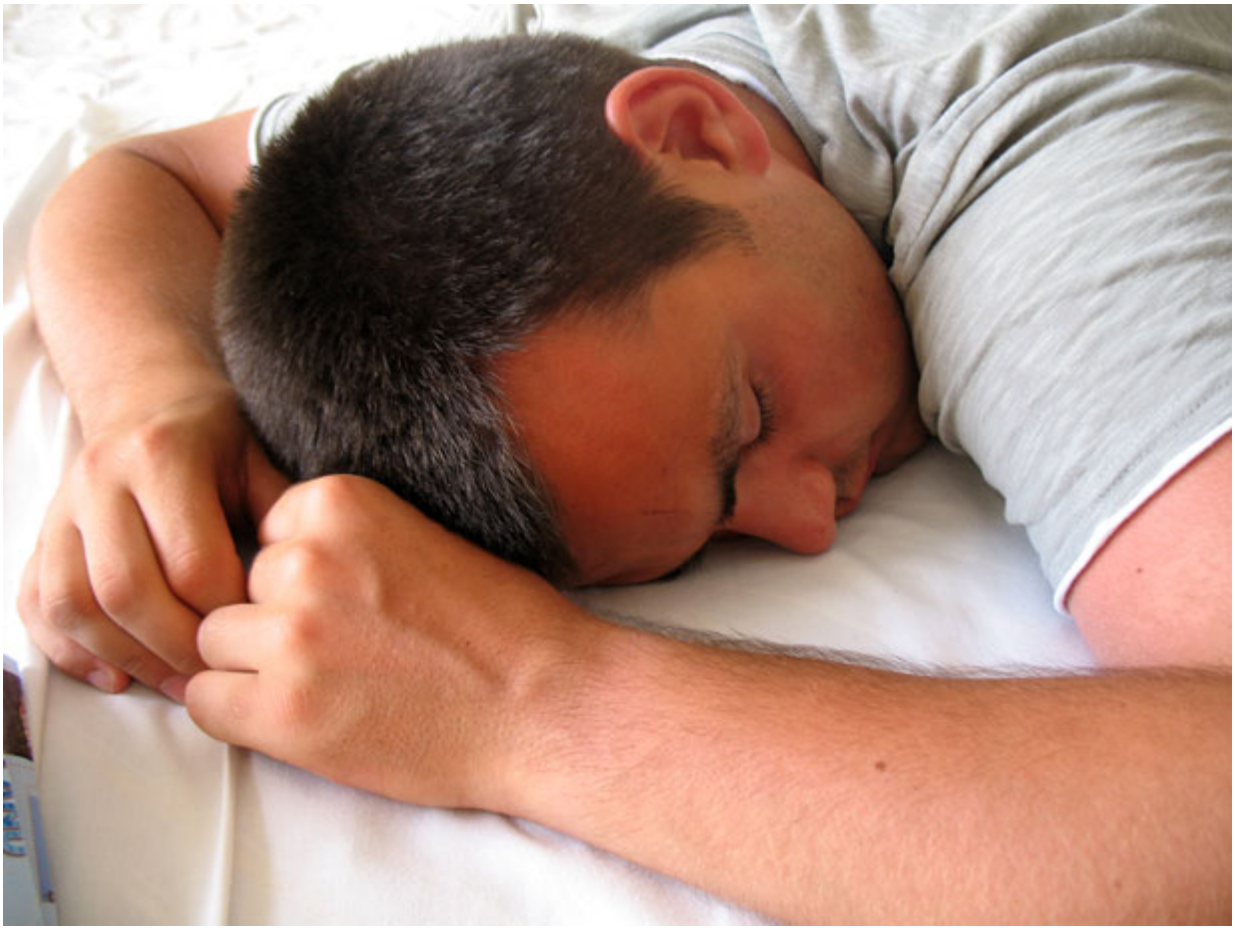

Credit: Vera Kratochvil/public domain

An investigation published in the current issue of *Psychotherapy and*

Psychosomatics indicates how the smartphone may have a potential in the treatment of insomnia.

Cognitive models of insomnia propose that attentional vigilance for threat during the pre-sleep period may play a causal role in insomnia by elevating physiological and psychological arousal to produce a state that is incompatible with the initiation of sleep.

Consistent with such theoretical accounts, studies have confirmed that insomnia is associated with patterns of biased attention favoring sleep-related threatening information. Converging research has shown that attentional bias assessment methodologies, such as the attentional probe task, can be converted to attentional bias modification (ABM) tasks. Using such tasks, it has been shown that modification of biased attention for threat can achieve therapeutic benefits in conditions where this bias is implicated, including anxiety and mood disorders.

The authors aimed to assess whether targeted delivery of an ABM task during the pre-sleep period could reduce symptoms of insomnia and the cognitive symptoms of pre-sleep arousal.

The study lasted 8 days (7 nights). The first 2 days served as a baseline period in which participants completed self-report measures and wore the sleep monitor, but did not complete the ABM or control task. These initial baseline days were followed by 5 consecutive 'task completion days' in which the participants completed, immediately prior to bed, an ABM task (ABM condition) or a non-training control task (control condition) on their smartphone.

Overall, results suggest that attentional bias modification targeting vigilance for sleep-related threat during the pre-sleep period has the capacity to reduce cognitive arousal and improve insomnia symptoms, providing a crucial step towards establishing a novel intervention for

insomnia.

These findings provide encouragement that targeted ABM could be used not only as a potential treatment for insomnia, but also with other conditions that implicate attentional bias (and consequent anxious arousal), as being acutely problematic at specific points in time.

More information: Patrick J.F. Clarke et al. Assessing the Therapeutic Potential of Targeted Attentional Bias Modification for Insomnia Using Smartphone Delivery, *Psychotherapy and Psychosomatics* (2016). DOI: 10.1159/000442025

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