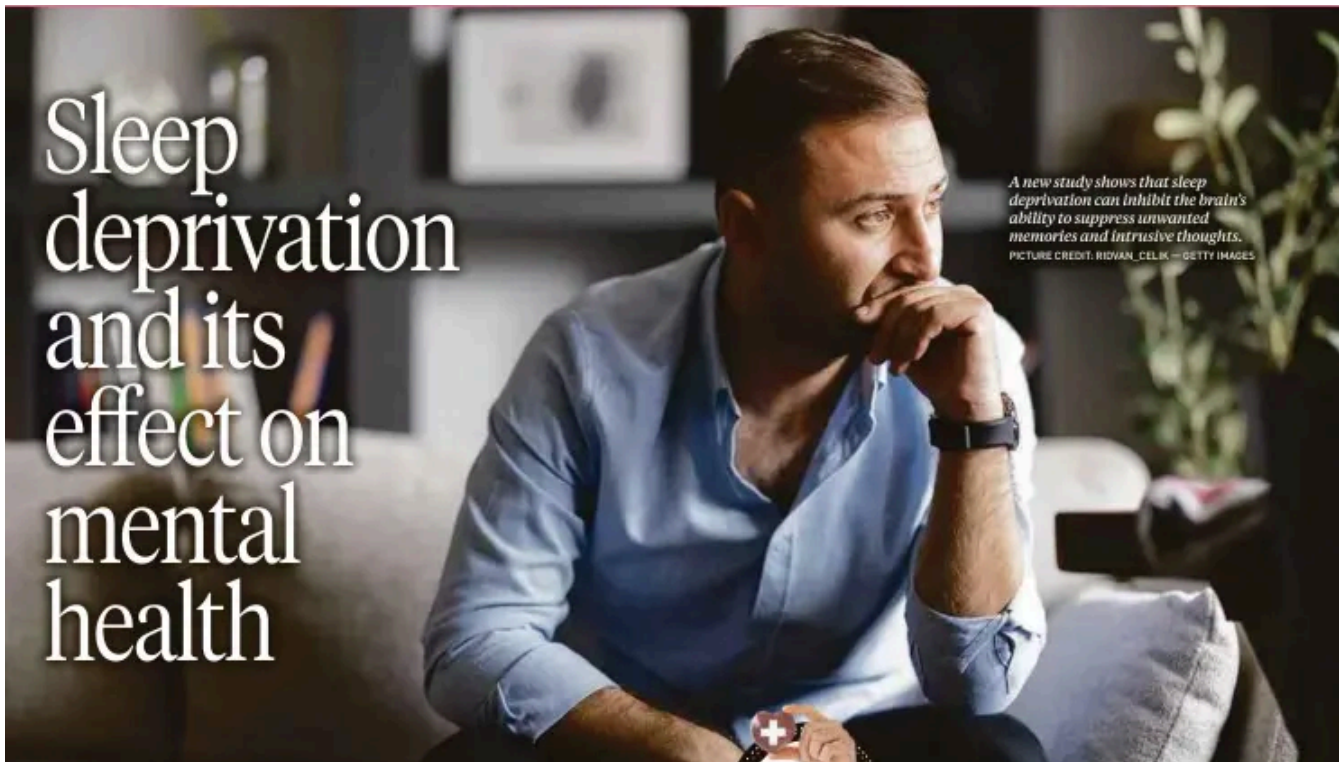


## Sleep deprivation and its effect on mental health

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SLEEP — an activity that takes up a third of our lives — is central to many essential biological processes. When sleep is disrupted, the effects on health are immediately felt, particularly on the brain, which becomes less able to filter out intrusive thoughts, a new study from scientists in the UK reveals.



In the study published in the journal 'PNAS', a British research team highlights the crucial importance of sleep in maintaining our mental well-being.

A good night's sleep is thought to help the brain control intrusive thoughts, those unexpected and often disturbing ideas that arise without warning, and often out of context.

Researchers demonstrated this in an experiment involving 85 healthy adults. Half of them had a healthy night's sleep, while the other half stayed awake all night.

Next, all participants were shown faces they had seen before, each previously associated with an image depicting a scene. Some of these scenes depicted emotionally negative situations, such as a car accident or a fight. For each face, participants had to either remember the associated scene, or attempt to suppress the memory of the scene.

Using functional MRI scans, the researchers studied how the volunteers' brains reacted when they were asked to recall or suppress emotionally striking scenes.

In well-rested participants, they found increased activation of the right dorsolateral prefrontal cortex, a brain region essential for the control of thoughts, emotions and actions.

Simultaneously, activity in the hippocampus, the small brain area usually involved in memory recall, was reduced. This indicates that these individuals had a better ability to shut down the re-emergence of intrusive memories.

“Suppression is a very clever function of the brain as it weakens all of the connecting traces of the memory, thereby inhibiting us from joining up all the dots to retrieve the full picture of the experience when it is triggered by an external stimulus,” explains study coauthor Dr Scott Cairney, quoted in a news release.

On the other hand, sleep-deprived people were unable to activate the area of the brain involved in suppressing unwanted memories. “Consequently, they could not quash memory-related processes in the hippocampus that give rise to intrusive thoughts,” says Dr Cairney.

These findings have particular resonance in the field of mental health. Anxiety, depression and post-traumatic stress disorder (PTSD) are often linked to sleep problems.

By gaining a deeper understanding of brain mechanisms, the researchers hope to pave the way for targeted treatments combining behavioural therapies and improved sleep quality for people experiencing these conditions.

This study reaffirms the crucial importance of sleep in preserving our mental well-being. At a time when sleep disorders are on the rise worldwide, it highlights the need to ensure quality sleep to protect our psychological health.