The team, led by Nicole Tang, Professor of Clinical and Health Psychology at the University of Warwick, asked 119 participants to rate their sleep quality at intervals throughout the day using timed surveys sent to their mobile phones. The surveys also asked participants about their mood, any social or physical activities they engaged in, and how positive or negative these activities were.

It revealed that 91.1% of participants changed their perception of sleep quality as the day unfolded. The team, pre-empting that these changes may simply be due to bad memory, incorporated a memory test and found that participants were able to accurately recollect their initial impressions of their sleep. It was found that engaging in positive physical activity was associated with improvements to judged sleep quality, suggesting that what happens the following day influences how we think we slept the night before.

Adam Sanborn, co-author and Professor of Psychology at the University of Warwick, said "The role that the day plays in determining the previous night's sleep quality seems more important than first believed. Rather than robotically calculating sleep variables, it seems that our assessment of sleep quality is open to new information and reflection. As our day unfolds, new information is used to better inform the perception of sleep quality, specifically positive physical activity the next day."

Lead author Nicole Tang added: "The fact that we saw sleep quality judgment change as the day unfolds does not mean that sleep quality is an unreliable measure, somehow being less scientific or informative than sleep quality scores calculated from device measurements. Instead, it is helpful to think of sleep quality as a different dimension of sleep whereby our evaluations of both sleep and post-sleep experience matter."

Ptolemy Banks, co-author and researcher at the
University of Warwick, said: "From a clinical perspective, understanding how we arrive at judgements of good or bad sleep quality is crucial to understanding patients with insomnia and other sleep-related conditions. Also, in providing sleep interventions, there may be benefits to be reaped by adopting a 24-hour perspective, focusing on both improving sleep experience at night as well as enhancing activity engagement during the day."


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