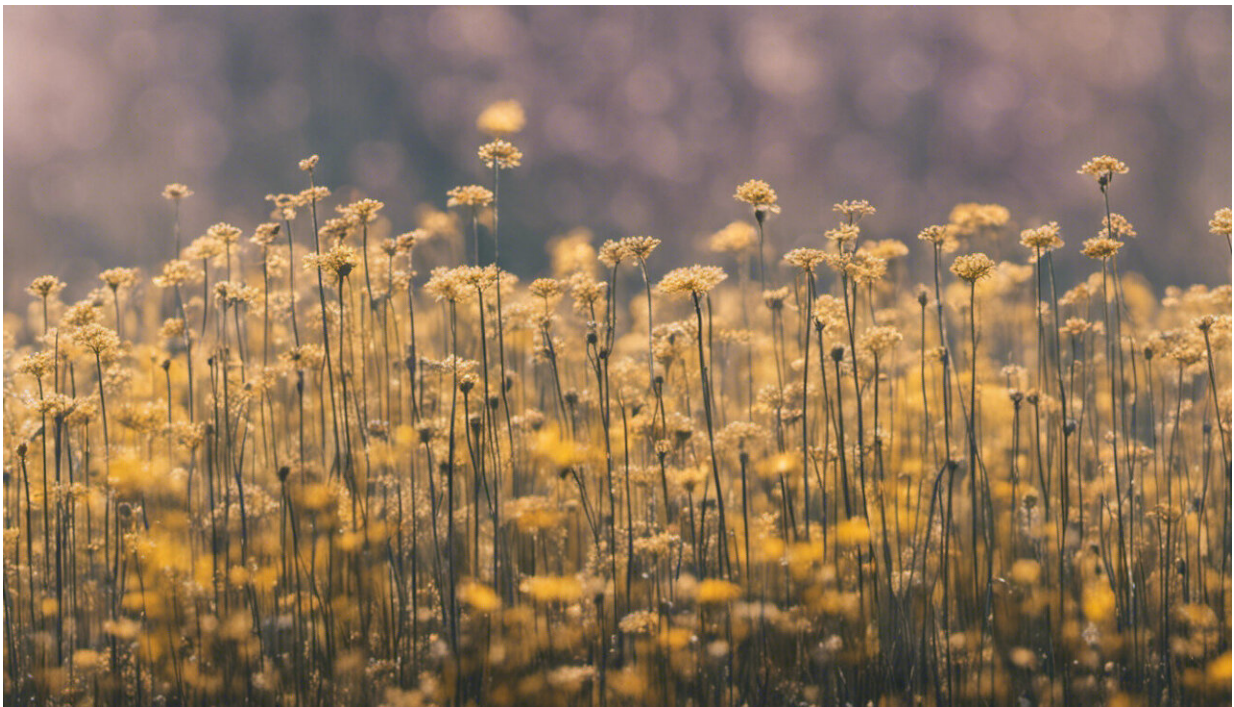


Just 16 minutes of sleep loss can harm work concentration the next day

April 30 2019, by Soomi Lee, David M. Almeida, Orfeu M. Buxton And Ross Andel



Credit: AI-generated image ([disclaimer](#))

Have you had a less-than-stellar performance review lately? Do you daydream, or are you making bad decisions?

It might not be about your job but about your [sleep](#). And it's not all your

fault.

We each study different aspects of health and aging. A recent study we conducted found that [poor sleep](#) may inhibit judgment and [lead to off-task and distracting thoughts at work](#). Making sleep a priority can improve [cognitive performance](#) at [work](#).

Less sleep, less concentration

Using eight-day diary data from a sample of 130 middle-aged workers in a U.S. IT firm, we found that a previous night's sleep characteristics predicted next-day "cognitive interference," or the experience of off-task and distracting thoughts.

To measure this, we used a 5-point frequency (0=never to 4=very often) and averaged responses on nine items that measure the experience of off-task and distracting thoughts than usual. For example, one of the questions was "How often did you have thoughts that kept jumping into your head today?"

On days following shorter and poorer quality sleep than usual, workers reported more cognitive interference. Across the participants, sleeping just 16 minutes less than usual was associated with one additional point on the cognitive interference scale the next day.

The participants also reported that after experiencing more cognitive interference on a particular day, they would go to bed earlier and wake up earlier than usual due to fatigue.

The link between previous night's sleep and next-day cognitive interference was more apparent on workdays, less on non-workdays. Perhaps participants have more opportunities for cognitive interference and less opportunities for sleep during workdays. The results suggest that

putting a larger emphasis on optimizing sleep health will result in more effective work performance.

From this study's results, we deduce that shortened sleep may reduce work productivity. Previous lab-based [experimental studies](#) have shown that sleep deprivation, such as restricting sleep duration to four or five hours has negative effects on performance in cognitive tests.

However, there has been a lack of observational studies examining the relationship between sleep and cognitive functioning in participants' own daily lives. Our study adds empirical evidence that poorer sleep the night before work will result in slower mental activity, delayed decision-making and potentially an increase in mistakes.

Less sleep, more stress

In previous collaborative work, I (Soomi Lee) also found that [poor sleep can lead to experiencing more stressors](#) and conflict the following day. On days following shorter and poorer quality sleep than usual, participants reported higher work-to-family conflict than usual. And on days following shorter sleep and lower quality sleep than usual, participants reported less time for themselves to exercise, and also less time for their children.

Data for [both studies are from a larger study](#) called the Work, Family & Health Study, which was designed to examine multi-site companies within the information technology and the nursing home sectors.

The two studies used a sample of IT workers, which represents a higher-income, professional-level workforce. Workers in this occupational sector tend to work long hours and experience a permeable boundary between work and personal life. Overtime work, frequent phone calls after work hours, late work-related emails, and early bird meetings, such

as 7 a.m. or 8 a.m. meetings, may disrupt workers' sleep.

The findings show that workers' sleep can impact job performance in multiple ways, including decision making and intrusive thoughts. Sleep complaints are prevalent in the adult population, especially among workers. [About 40 percent of U.S. workers](#) report insomnia symptoms. These symptoms can impair middle-aged workers' daily functioning in multiple ways. Thus, paying attention to sleep health appears important even for successful working life.

Along the same lines, employers also need to make efforts to promote or at least not systematically disrupt their employees' sleep; good sleep may promote work productivity and make a less stressful workplace.

Some sleep tips

To prioritize sleep, individuals and organizations need to act. Organizations could create and support a culture that minimizes any sleep-disruptive activities from work, such as work-related phone calls during non-work hours, any sense of obligation to respond to after hours emails, and early bird meetings.

Individual employees could also establish good sleep routines and follow them every day. For example, they need to shut off phones and ignore emails after a certain hour, after 9 p.m. for example, in order to turn on a relaxed mode before bedtime and get at least seven hours of sleep.

Regular exercise can also be beneficial to have good quality sleep. A challenge is that most workers feel they have too much to do and no time for sleep and exercise. However, they need to cut off the vicious cycle between poor sleep and poor performance. When sleep is stolen on a day-to-day basis, there will be a high cost to pay in terms of health in later life, and perhaps productivity tomorrow.

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