

## Psychology

# Sleepiness can disturb our social life

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*When you feel sleepy, you may prefer going to bed over chatting with friends. Indeed, our study shows that sleepiness is linked to social activity as well as motivation. Reducing sleepiness by taking a nap or drinking coffee may help you to become more socially active, which may, in turn, be beneficial for your sleep habits.*



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Imagine you would never again see your friends or family and how empty your life would be. It's obvious that social interactions benefit our mental health and wellbeing. This is also something that the Covid-19 pandemic has reminded us of, as we now have to rely on technology-assisted hangouts like Zoom-birthday parties and Netflix-co-viewing apps. However, beyond society-level quarantine, other things might also affect your social behavior – such as your sleep habits.

[We previously showed that insufficient sleep decreases one's motivation to socialize.](#) We believe that this is because sleepiness – the feeling of wanting to sleep – is a strong motivator for human behavior. In other words, when sleepy, you are less likely to want to do anything other than go to bed.

But in this earlier study, we only asked sleepy people how much they felt like doing different things, such as going on a date or closing their eyes. This means that we could not say for sure whether their responses would reflect their actual behavior.

We thus set out to understand how sleep duration and sleepiness affect social behavior in real life. We took advantage of the rich data collection from another study, conducted in 2005-2006. In this study, over 800 participants reported their nightly sleep duration and what they had been doing every 30 minutes from 7 am to 1 am for three weeks. They also reported their sleepiness every three hours while awake. All potential behaviors were divided into categories such as working, eating, personal care, and social activity. The category of social

activity included visits to family members, having a conversation, going to a party, etc.

Analyzing this dataset, we first wondered whether sleepiness was associated with social activity. Our results showed that when participants felt more sleepy than usual, they were less likely to socialize. In line with this, if participants socialized despite feeling sleepy, they spent less time doing so compared to when they were feeling alert. This was especially true for evenings and weekends, when people can more freely choose how they spend their time. During weekdays and working hours, most of us are working and thus unlikely to attend social events.

Surprisingly, unlike sleepiness, sleep duration did not strongly predict participants' social activity. Regardless of whether they slept longer or shorter than usual, participants showed no change in their social behavior the next day. However, short sleepers – who usually slept less than 7 hours per night – were the exception: when they slept even less than usual, they spent less time with people the following day, and vice versa. On the other hand, the amount of daytime social activity participants had

predicted a change in their sleep duration that night. When participants socialized with others during the day, they slept longer the following night. In contrast, during the evening, long social activity resulted in shorter sleep. This suggests that social activity, like physical activity, is beneficial for a healthy sleep drive unless it happens late in the evening.

In conclusion, we found that sleep, sleepiness, and social interactions are intertwined in interesting ways. Sleepiness is associated with a decrease in social activity as well as motivation. Therefore, reducing sleepiness – by taking a nap, going outside in the daylight, or drinking coffee – may help you be more socially active. Furthermore, being socially active during daytime and early evening may be beneficial to sleep.

It is important to note that, as the data we used was sampled 15 years ago, our study does not cover today's most prominent social activity – social media. Future studies including social media would expand the horizons to understand how sleep and sleepiness interact with social life.