

Lack of sleep linked to depression and suicidal thoughts among adolescents

The aim of this study was to examine the relationship between sleep and both depression and suicidal thoughts among middle school students in Stockholm County. Nearly half of the students slept less than the recommended eight hours per night on school days. The study revealed that short sleep duration on school days and poor sleep quality are associated with an increased risk of depression and have a direct connection to suicidal thoughts.

The aim of the study presented in this fact sheet was to describe the relationship between sleep and depression, as well as suicidal thoughts among middle school students in Stockholm County. The results regarding sleep and depression have also been published in a scientific article (1).

Sleep during adolescence

Getting enough sleep is crucial for the physical health, academic performance, emotion regulation, and mental well-being of adolescents (2,3). Adolescents aged 13 to 18 years need 8–10 hours of sleep per day (4).

During adolescence, the biological sleep-wake cycle and natural “clock” for sleep and wakefulness known as chronotype (“early bird”, “night owl”) becomes delayed. This means that adolescents stay awake longer in the evening and go to sleep at later times. Additionally, sleep during adolescence is influenced by increased social activities, academic demands, and extended screen time, which can shift adolescents' bedtime towards later times (2). Due to early school start times (usually at 8 a.m.), their sleep duration is limited, and many adolescents do not get enough sleep. Several adolescents also experience difficulties related to sleep quality, such as waking up during the night and feeling tired in the morning.

Research study in Stockholm County

This study included 8449 (depression analysis) and 4433 adolescents (suicidal thoughts analysis) in grades 7–9 in 116 schools in Stockholm County. In the study, students reported their sleep habits, and this information was used to calculate their average sleep duration, both on school days and weekends, as well as their chronotype (1). Students also answered questions about how often they had

experienced problems related to their sleep quality, the number of perceived depressive symptoms, and suicidal thoughts.

Adolescents don't get enough sleep

Middle school students in this study slept an average of 7:53 hours on school days and 9:18 hours on weekends (1). The study shows that 46% of students slept less than 8 hours on school days, and 18% slept less than 7 hours. There was also evidence that many adolescents have a biological sleep rhythm (chronotype) that is not compatible with common school start times. For 93% of adolescents, early school start times (at 8 a.m.) mean waking up when their biological clock is still set to “nighttime”, and that they do not get the recommended 8 hours of sleep.

Sleep linked to depression

Depressed adolescents slept an average of 7:11 hours on school days, compared to 8:04 hours among non-depressed adolescents. Among adolescents with depression, only 31% met the recommendation of 8–10 hours of sleep, compared to 59% among non-depressed adolescents. Less sleep on school days increased the risk of adolescents experiencing depression (statistically significant). The magnitude of this effect can be interpreted as follows: Sleeping 30 minutes more on school days was associated with 10% lower odds of having depression. In addition to the effect of sleep duration, there was also an increased risk of depression among adolescents with poorer self-perceived sleep quality (statistically significant). Regarding chronotype, the results showed that adolescents with a later chronotype (“night owl”) were more likely to experience depression than those with an earlier chronotype (“early bird”) (statistically significant).

Adolescents with depression had a chronotype that was, on average, one hour later than adolescents without depression.

Sleep and suicidal thoughts

This study showed that less sleep on school days was associated with a higher likelihood of suicidal thoughts among adolescents (statistically significant). Adolescents who had suicidal thoughts during the past two weeks slept, on average, one hour less than adolescents without suicidal thoughts. Moreover, poorer self-perceived sleep quality was associated with an increased risk of suicidal thoughts (statistically significant).

The results indicated that the association between sleep (both sleep duration and sleep quality) and suicidal thoughts persisted even after controlling for the effect of depression. In other words, there is an association between sleep and suicidal thoughts beyond what is explained by depression.

Efforts to promote sleep

There is a great need for efforts promoting sleep among adolescents in Sweden to prevent negative consequences for their health and development. Several studies show that a later school start in the morning allows adolescents to get more sleep and has positive effects on academic performance and mental health (5). It is recommended that students from seventh grade and above should ideally not start school earlier than 9:00 a.m. (see also elevhalsoportalen.se).

Although the results from this study rely on cross-sectional analyses that do not provide information on the direction or causes of the relationship between sleep and mental health, the study points to the benefit of integrating knowledge about sleep and promoting healthy sleep habits into programs for suicide prevention and the promotion of mental health among adolescents.

References

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