

April 4, 2019

Alissa Sughrue

Policy Coordinator, NAMI Texas (Texas affiliate of the National Alliance on Mental Illness)

Email: policy.fellow@namitexas.org

Phone: 512-693-2000

House Bill 1602 (Hernandez): Relating to the time at which instruction may begin in public schools; making an appropriation.

NAMI Texas is a nonprofit 501(c)3 organization founded by volunteers in 1984. We are part of the nation's largest grassroots mental health organizations and we exist to help improve the quality of life for individuals with mental illness and their families. Around the state, we have 27 local NAMI affiliate organizations and approximately 2,000 members.

Brain development and sleep¹

“The prefrontal cortex is responsible for the regulatory integration of sleep/arousal and affection/attention and functions to integrate cognition and emotion into goal-directed behaviors. Inattention, emotional responses, and behavioral problems are likely elicited because of the impact that sleep deprivation has on the function of the prefrontal cortex, which is located in the central nervous system.”¹

The prefrontal cortex is responsible for the regulatory integration of sleep/arousal and affection/attention and functions to integrate cognition and emotion into goal-directed behaviors. The prefrontal cortex continues to develop throughout childhood and adolescence, with important neurobiological changes occurring during puberty. Puberty, therefore, is an important period during which sleep and behavioral regulation are coupled with cognitive processes.”¹

Students need an appropriate amount of sleep to cope with stress and make rational decisions. This means that when a student is consistently not receiving 8 hours or more of sleep, they have less control over their emotions and behavior. They are more likely to engage in bullying, school violence, physical fighting, unintentional injury, alcohol use, marijuana use, or other substance use.²

Mental health and sleep

When students consistently don't get enough sleep, they experience worse mental health outcomes. Teenagers with disturbed sleep are more likely to experience as a consequence of sleep deprivation²:

- Depression
- Anxiety
- Anger
- Inattention
- Conduct problems.
- Impaired cognitive function
- Daytime sleepiness
- Fatigue.

Insufficient sleep can cause depressive symptoms in individuals who would otherwise not have depression because clinical depression and sleep deprivation both impact how the brain processes serotonin and dopamine.³

Insufficient sleep can also worsen symptoms for those with a mental health disorder.

- 90% of children with depression experienced some type of sleep problem, and they are more likely to experience a relapse during treatment if they do not get enough sleep.⁴
- Manic episodes for those with bipolar disorder may also be triggered by insufficient sleep.⁴

If we are not providing students with opportunities to get enough sleep, we may be harming their treatment and recovery.

Suicide and sleep

Chronic sleep deprivation increases the likelihood of suicide.

- 1 in 8 Texas high school students had attempted suicide in the past year in 2017, twice the national average.⁵
- Students are almost twice as likely to attempt suicide if they did not get eight hours or more of sleep on an average school night.⁵

Sleep is one risk factor for suicide that is highly treatable and reducing suicide will need to include strategies to ensure individuals at risk receive healthy amounts of sleep every day.

Conclusion

The research on adolescent sleep habits, mental health, and suicide makes it clear: one of the easiest ways to help students with their mental health and well-being is to promote policies that help them develop healthy sleeping habits every day. NAMI Texas strongly supports HB 1602 because of the vital role sleep plays in mental health. We urge this committee to look at this bill and other strategies to prioritize student sleep.

References

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4. Harvard Health Publishing (2019). Sleep and mental health. Harvard Medical School.
5. Division of Adolescent and School Health (2018). Youth Risk Behavior Survey. Data Summary and Trends Report 2007-2017. Center for Disease Control.