

Sleep Deprivation & Suicidality in Adolescent Males

A Systematic Review

PRESENTERS:

Lubna Qureshi, BSN, RN

Tracy R. Vitale, DNP, RNC-OB, C-EFM, NE-BC

Cheryl Holly, EdD, RN, ANEF, FNAP

BACKGROUND

- Sleep deprivation and insomnia is associated with self-harm behaviors, suicidal ideation and suicidal attempts in adolescents (1, 3, 4).
- Suicide: 2nd leading cause of death in US (2).
- Global increase: 7.4 to 10.3 per 100,000 (5).
- 2010 to 2019, adolescent suicide mortality increased significantly from **18.5 to 22.4/100,000 in males** VS. 5.2 to 6.8/100,000 in females (6).

WHY ADOLESCENT MALES?

The number of completed deaths by suicides in adolescent males is higher than females*

Adolescent males are **UNDERSERVED** in "health-care delivery systems, public health and policy, and research arena"

METHODOLOGY

KEYWORDS: Adolescent; depression; dyssomnia; gender; Insomnia; mental health; suicidal behavior; suicide; sleep deprivation; sleep disturbance; sleep duration; students.

Types of Participants

Adolescent male between the ages of 13 and 18 (± 1), that engaged in suicidal behavior; have suicidal thoughts, attempted or have died by suicide and reported disturbed sleep. Any country of origin, race, ethnicity, socio-economic status, or educational level.

Settings

Primary care clinics, acute care hospital, community mental health centers, schools, and private practices.

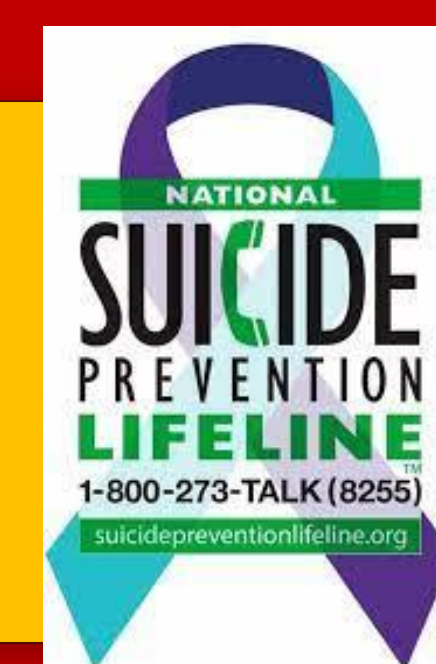
Methodological Quality

Studies assessed independently by two reviewers for methodological validity prior to inclusion, appraised to meet criteria and extracted using JBI SUMARI.

RESULTS

Insufficient sleep is associated with an increased likelihood of suicidal ideation, planning and attempts in adolescent males.

Study	Participant characteristics	Groups	Outcomes measured	Main description of results
Jang SI, Lee KS, Park EC. 2013.	Adolescent males (7-12th grade)	Total 5244 adolescent males 944 reported sleep deprivation	18% sleep deprived	(OR)=0.96, 95% (CI)=0.84 to 1.09 (Suicidal Ideation) (OR)=0.94, 95% (CI)=0.72 to 1.22(Suicidal Attempts)
Park WS, Kim S, Kim H. 2019.	Adolescent males (7-12th grade)	Total 24371 adolescent males 18829 reported sleep deprivation	77% sleep deprived	N=2178 9.09% reported Suicidal ideation
Gong Q, Li S, Wang S, Li H, Han L. 2020.	Adolescent males (7th grade) Data collected 2016 and 2018 for follow up	Total 768 adolescent males 159 reported sleep deprivation	21% sleep deprived	(OR)=2.18, 95% (CI)=1.97 to 3.98 (Suicidal Ideation) (OR)=2.97, 95% (CI)=1.39 to 6.38 (Suicidal Attempts) <i>*Adjusted odds ratio after logistic analysis from follow up study</i>



The Healthy People 2030 objective is to reduce the rate of suicide attempts from 8.9 to 1.8 attempts per 100 adolescents. (health.gov)

DISCUSSION

- The prevalence rates in the included studies provide adequate support to better understanding the impact sleep deprivation has on suicidal and self injurious behaviors in male youth.
- The data provided in this review requires devoting additional efforts in highlighting the need for suicide prevention studies and the issues surrounding overall mental health for this population.
- More understanding of mediating factors is needed to target the interventions such as cellphone use, alcohol and drug use, as well as co-occurring neurological or physiological disorders (narcolepsy, sleep apnea).

SUSTAINABILITY EVIDENCE TRANSLATION

Findings of this review will be included in quality improvement project in developing a pilot study to include sleep screening at intake to address sleep in a child and adolescent partial unit.

IMPLICATIONS:

Clinical Practice

This review supports the need for routine and thorough assessment for sleep disturbances and/or sleep hygiene in young adolescent males and intervene as early as possible.

Healthcare Policy

The prevalence reported in this review define the need for improved screening, increased education, better research and overall improved coordination of care in the community.

Quality/Safety

The project emphasizes the need for better detection of sleep problems to decrease related injuries and/or fatalities.

Economics

Addressing sleep deprivation related suicidality has a clear fiscal incentive and doing so can save costs for the entire healthcare system.

Contact Info:

Lubna Qureshi caylub80@gmail.com

*Excluding some Asian countries such as India, Sri Lanka and China as well as Cuba, Ecuador and El Salvador, the ideation and attempts are however higher in females than in males in all reported studies

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