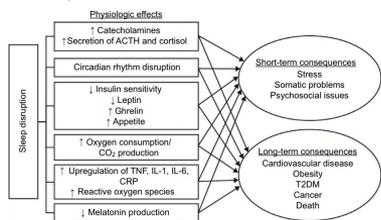


## Purpose

Sleep disorders are prevalent among adolescents, but they remain undiagnosed. Epidemiological studies show that prevalence rates are between 18-40% among adolescents. Yet, only 3.7% of sleep disorders from ICD-9 diagnoses are being documented. Undiagnosed sleep issues can affect academic performance and behavior and lead to neurocognitive and metabolic impairments in the future. Barriers remain in primary care offices, preventing diagnosis of sleep disorders.



**Figure 1: Proposed mechanism of the physiological effects following sleep disturbances.** Adapted from Medic G, Wille M, Hemels MEH.

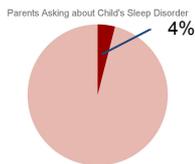
## Objectives

Barriers to diagnosing sleeping disorders among adolescents aged 13-18 in primary care offices will be analyzed, and screening, management, and policy changes are proposed to improve diagnosis in the future.

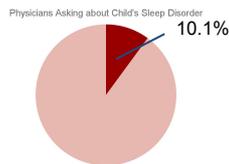
## Methods

- Literature review search
- Databases: pubmed, google scholar
- Inclusion criteria: "sleep disorders in adolescence", "barriers to sleep disorder diagnoses"

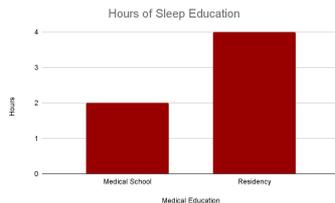
## Results



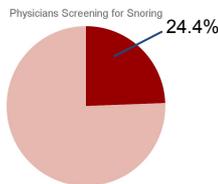
**Figure 2: Percent of parents inquiring about child's sleep problems.** 24.4% of parents recognized that their child was not getting proper sleep, but only 4% inquired about it during primary care visits.



**Figure 3: Percent of physicians inquiring about patients sleep problems.** 10.1% of primary care physicians asked about sleep problems during their history gathering.



**Figure 4: Number of hours on sleep education during medical training.** Medical schools spent an average of 2 hours on sleep education and about 4 hours during residency and as a result physicians did not feel confident in their ability to screen, evaluate, and treat for sleep issues. Only 18% of pediatricians believe they had adequate training of sleep medicine.



**Figure 5: Physicians screening for snoring in adolescent patients.** The Section on Pediatric Pulmonology of the American Academy of Pediatrics (AAP) in 2002 initiates screening for all children and adolescents for snoring, but only 24.4% of pediatric patients were screened for snoring during normal check-up visits.

## Discussion/ Conclusion

The discrepancy between prevalence rate and diagnosis rate in diagnosing sleep disorders in adolescents is apparent.

Improving practice can improve the health of adolescence. These practices include:

- Community education on proper sleep in school and community settings.
- Qualified physicians can be hired to teach about sleep in relevant blocks.
- Increase non-didactical educational opportunities related to sleep education such as journal clubs and guest lectures.
- Standardizing the use of pediatric sleep toolkits to better identify and diagnosis sleep problems.
- Required section about sleep in EMR so that it becomes a regular part of the routine questioning
- Utilization of wearable smartwatches to track sleep.

Proper screening and diagnosis is important because of the numerous short term and long term consequences of poor sleep quality and quantity.

## Citation

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