



THE INFLUENCE OF ATHLETICS AND SCHEDULES ON SLEEP HEALTH AND 24-HOUR MOVEMENT BEHAVIORS IN ADOLESCENTS

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MOOVE & SNOOZE LAB
UMASS AMHERST

BACKGROUND

- Physical activity and high school athletics have many benefits for youth development.⁵
- Highly demanding and variable schedules may negatively impact sleep health and daytime movement behaviors outside of athletic events.^{2,4}
- Limited number of experimental studies regarding high school athletes' sleep and movement behaviors.¹
- The influence of sleep quality on performance and health-related outcomes in young athletes remains unclear.²
- There is a lack of evidence between acute sleep deprivation and physical performance.³

PURPOSE

Objective 1: To determine if there are differences in 24-hour movement behaviors and sleep health among adolescents in this community between students who engage in athletic programs and those who do not.

Objective 2: To identify the time commitment, volume, and timing of athletic events among the students that engage in athletic programs, and to explore whether these aspects differ by type of sport or program.

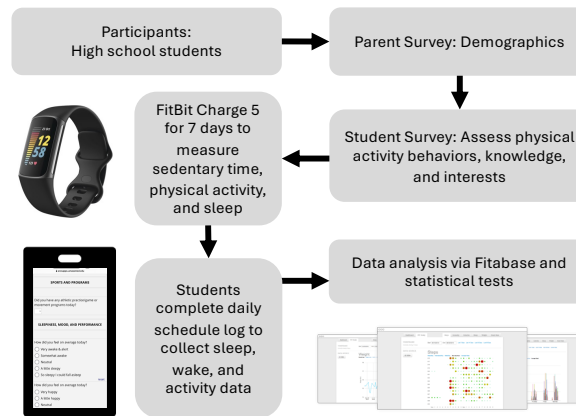
Objective 3: To determine if among student-athletes, the timing of athletic events, as well as the timing variability, influences: a) overall sleep health measures, b) sleep variability, and c) daytime movement behaviors outside of athletic events.

B'town Moves Study



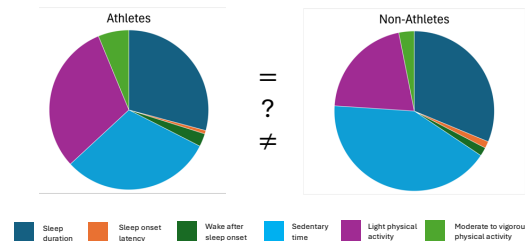
Assessing Physical Activity in Students and Schools

METHODS



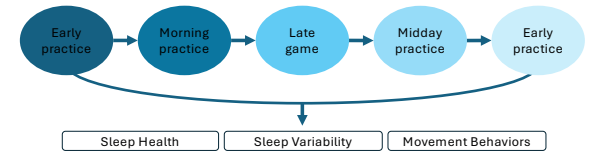
PLANNED ANALYSES

Objective 1: Independent *t* tests to identify differences in 24-hour behaviors and sleep health between students who engage in athletic programs and those that do not



Objective 2: Summary statistics to describe time commitment, volume, and timing of athletic events of students

Objective 3: Findings from multilevel models presented for daily associations of above factors on sleep and daytime movement behaviors



We anticipate that adolescents with higher or more variable athletic commitments will report and demonstrate poorer sleep health, compared to adolescents with lower or no athletic commitments.

SUMMARY & FUTURE DIRECTIONS

- We may not be able to generalize our findings, given our participants are from one school district in one community. Additional research to explore associations in other schools or communities with varied populations may be needed.
- Larger studies and different types of study designs (e.g. longitudinal, interventional) could help establish benchmarks for optimal sleep quality in different adolescent populations.
- Confounding variables (e.g., varied school system structures, screen time, drug use, light exposure, demographics) should be factored into any conclusions that are drawn.
- Pediatricians, coaches, teachers, and parents should all have access to and promote resources that provide education about sleep health

REFERENCES

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