Multilevel Influences on Sleep in Latino Children

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Background

Sleep plays an important role in the well-being of a child. From learning and academic performance to health function, sleep is vital to the development of a child (Agostini and Centofanti, 2021).

Children who receive less than eight hours of sleep daily have an increase of mental health, physical, and emotional health concerns (Agostini and Centofanti, 2021).

Although poor sleep leads to several consequences, less is known about what affects sleep in Latino/Hispanic children.

Objective / Hypothesis

1. Identify individual, social, and environmental-level antecedents of sleep duration, quality, and timing in Latino youth.

2. To enhance best practices for improving sleep tailored to this vulnerable group.

Methods

Participants:
Inclusion criteria:
- Latino/Hispanic children and parent self identified as Latino/Hispanic
- Ages 10 – 12 years old
- Within a 20-mile radius from California State Long Beach
- Recruitment Procedures: Participants are recruited using community-based methods. Examples; word-of-mouth, email and social media outlets.
- Consent Procedures includes parent permission, child assent, and adult consent.

Procedures:
1. Survey Procedures: access child factors related to sleep, including psychosocial, behavioral, social and environmental factors.
2. Dietary Assessment Procedures: Dietary intake among 24-hour dietary recalls (including 1 weekend and 2 weekdays).
3. Actigraphy Procedures: participants will wear a wrist-placed Actiwatch Spectrum (Philips Respironics) accelerometer, for 14 consecutive days, 24-hours per day to capture sleep and activity levels, supplemented with a wear log and sleep diary.
4. EMA Procedures: participants will respond to survey prompts using an EMA mobile phone for 14 continuous days.

Design and Analysis:
- Quantitative micro-longitudinal design
- Multilevel regression analysis via SAS v. 9.4

Measures:
- Macronutrients (g): fat, protein, and fiber.
- Food groups: vegetables, fruits, grains, dairy, protein.
- NCI Automated Self Administered 24-hour Software (ASA24)
- Sleep duration, quality, and timing (Philips-Respironics Inc., n.d.) (Buysse et al., 1989).
- Psychological factors (perceived-stress) (Cohen and Williamson, 1988).

Results

Focus: Quantitative aspect of research.

List of activities completed:

- Consent visits: focuses on the requisites of the study and child consent.

- Lab Meetings: bi-weekly meetings regarding the status of our project. Also, aims to address overall lab issues.

- Outreach and recruitment: including parks and virtual phone calls.

- Enrollment: follow-up with scheduling consent appointments after outreach and recruitment process.

- Training: increase knowledge among the effects of sleep and diet. In addition, partake on recruitment, consenting, data collection, diet recalls, survey administration, and anthropometric measures.

Conclusion

The long-term goal of the research is to reduce childhood obesity among ethnic minority children by addressing sleep as part of the etiology of obesity.

Expected outcomes of the MIMIS project: To identify what influences sleep. We expect factors at multiple levels of influence will affect sleep duration, timing and quality. Levels of influence measured includes; community (neighborhood safety), psychological/interpersonal (perceived stress and parental conflict), and behavioral (24-hour diet recall and activity levels).

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References