

# Link between sleep problems, general and mental health, and happiness in an ethnically diverse sample of college students

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## Introduction

- Research has shown that a large number of college students experience sleep problems.
- Sleep problems among college students are associated with poor general and psychological health.
- Little is known about how happiness relates to sleep issues in this population.
- Diverse patterns of association are observed between different races/ethnicities as well as between different genders.
- This study examined the relationship between sleep problems, general health, and psychological health moderated by race/ethnicity, and gender in a diverse group of college students.

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## Methods (cont.)

Table 1. Measures, sample items and scoring criteria

Measures	Sample item	Scoring criteria
Sleep Issues	During the past 2 weeks, how much/how often have you been bothered by problems with sleep that affected your sleep quality over all?	Response options range from not at all to nearly everyday
General Health	In general, would you say that your health is	Response options range from excellent to poor
Kessler Psychological Distress Scale (K6)	How often did you feel down on yourself, no good, or worthless?	Response options range from 0 to 24, higher scores indicate higher levels of distress
Subjective Happiness Scale (SHS)	Some people are generally very happy. They enjoy life regardless of what is going on, getting the most out of everything. To what extent does this characterization describe you?	Response options range from 1 to 7. Higher number indicate more happiness.

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## Results (cont.)

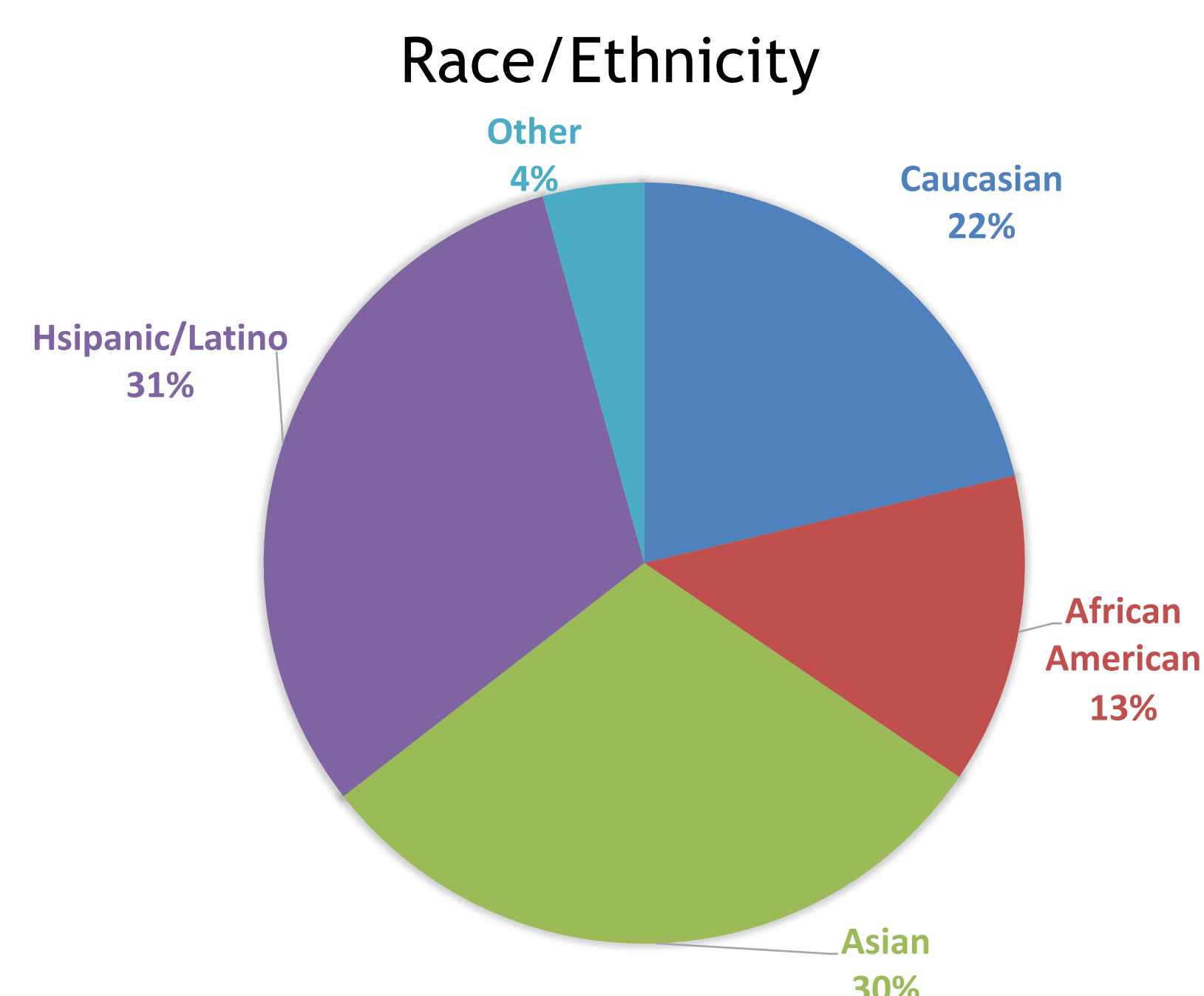
Table 2. Associations of sleep problems and outcomes stratified by ethnicity

Outcome Variable	Beta value	p value
<b>General Health</b>		
Caucasian	.373	< .001
African American	.172	ns
Hispanic	.129	ns
Asian	.130	ns
<b>Psychological Distress</b>		
Caucasian	.520	< .001
African American	.063	ns
Hispanic	.326	< .001
Asian	.350	< .001
<b>Happiness</b>		
Caucasian	-.306	< .001
African American	-.141	ns
Hispanic	-.124	ns
Asian	-.201	.011

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## Methods

- College students (N=538) participated in an online survey about health-related factors.
- Independent variable:** sleep problems
- Outcome variables:** general health, psychological distress, and happiness
- Covariates:** age, sex, race/ethnicity
- Multiple regression analyses were conducted adjusted by demographics.
- Moderation analyses were also examined by sex and race/ethnicity in separate models.



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## Results

- Sleep problems were positively associated with psychological distress (BETA= 0.342;  $p < .001$ ) and poor general health (BETA= 0.197;  $p < .001$ ), and negatively associated with happiness (BETA= -0.201;  $p < .001$ ) above and beyond covariates.
- The positive association between sleep problems and general health issues was only significant for Caucasians. There were no moderation effects by gender.
- The positive association between sleep problems and psychological distress was significant for Caucasians, Asians and Hispanics but not for African Americans. There were no moderation effects by gender.
- The negative association between sleep problems and happiness was significant for Caucasians and Asians but not for African Americans and Hispanics. This relationship was stronger for males.

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## Conclusions

- Findings indicate that sociodemographic factors need to be considered when examining links between sleep and health.
- Sleep problems seem to be related to general and psychological health similarly between females and males.
- Results suggest a need for sleep intervention programs in college students to be tailored to specific ethnicities and genders.
- Future research should aim to replicate these findings and potentially explore psychosocial mechanisms of these associations.
- Longitudinal data collection may allow to explore temporal associations between sleep and health.

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