

Mediating Effects of College Students' Personal Development on the Relationship Between Sleep Behaviors and Reported Overall General Health

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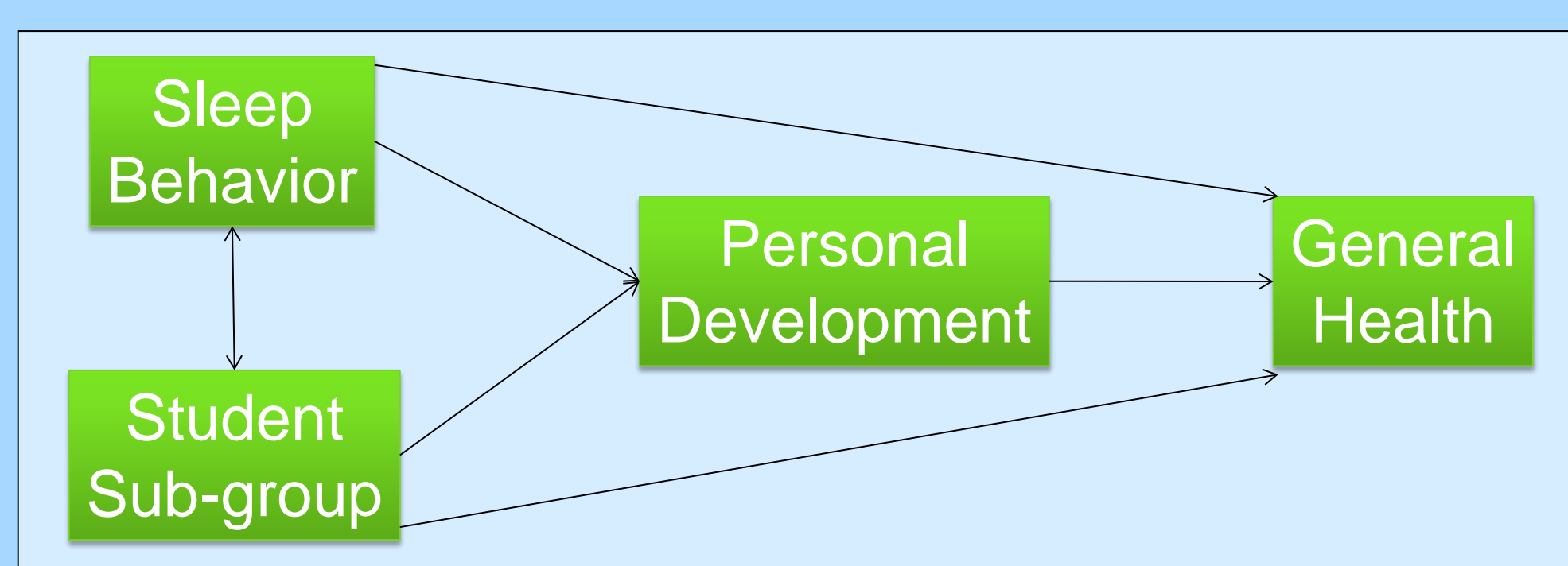
1 Background

University attendance includes various activities and experiences that can have a unique impact on psychosocial development and adult health behaviors, and can influence life course outcomes such as short- and long-term health and quality of life.^{1, 2} Healthier students tend to do better while at college, which helps support their progression through university, and can be significantly related to improved health status after graduation.³⁻⁷

Getting low quality of sleep is associated with increased tension, irritability, depression, confusion, and decreased productivity, affability, ability to concentrate, psychomotor response, and performance on tasks.⁸⁻¹⁰

College attendance is associated with major shifts in sleeping patterns. How well a student manages the task of determining when and how much to sleep each day is associated with achievement and development while at college.¹¹

Personal development, which includes factors such as social integration, developing a deeper personal sense of self, and enhancing problem-solving skills, may be the most crucial ingredients for students to feel positive enough about college to endure the stressors, achieve academic success, and enjoy the many opportunities for growth and development.²



Theoretical model of study.

2 Methods

Research question: To what extent does the overall general health status of different student sub-groups vary according to their sleep behaviors, and to what extent does personal development mediate that relationship?

This study was based on non-experimental cross-sectional survey data¹²⁻¹³ that was collected in collaboration with the American College Health Association at an elite, urban, American, Ivy League university in 2009.

- 1820 traditional-age undergraduate students (32% response rate)
- Web-based survey
- Chi-squares, ANOVA, logistic regression
- Barron & Kenny model of mediation¹⁴

3 Results

Number of Nights of Sleep to Feel Rested in Last 7 Days			
Sub-group	5 or more	4 or fewer	P-value
Sex**			.0001
Male	20.5%	71.0%	
Female	29.0%	79.5%	
Race/Ethnicity**			.001
White	27.7%	72.3%	
Black**	12.6%	87.4%	
Hispanic	25.6%	74.4%	
Asian/Pac Islander**	19.8%	80.2%	
Multiracial/Other	22.7%	77.3%	
Sexual Orientation			.20
Heterosexual	23.6%	76.4%	
GLBU	27.6%	72.4%	
Year in School**			.0001
1 st	19.5%	80.5%	
2 nd	21.2%	78.8%	
3 rd	25.7%	74.3%	
4 th	31.4%	65.6%	
Service Volunteer			.06
Yes	21.9%	78.1%	
No	25.7%	74.3%	
Athlete			.09
Yes	28.2%	76.6%	
No	23.4%	71.8%	
Fraternity/Sorority			.14
Yes	19.9%	80.1%	
No	24.6%	75.4%	
General Health**			.0001
Excellent, V. Good	78.1%	22.9%	
Good, Fair, Poor	65.8%	34.2%	
$\chi^2(1, 1820)=23.19$			
Mean Personal Development Score**			.0001
F(1, 17.69)=18.92	21.4	19.59	

Note: Differences between race/ethnicity groups are noted using White as the reference group. GLBU=Gay, lesbian, bisexual, and unsure.
*p<.05, **p<.01

Bivariate Analyses

- A significantly lower proportion of Black and Asian/Pacific Islander students reported good overall general health.
- A significantly higher proportion of student athletes and student volunteers reported good overall general health.
- Students further along in their academic careers and student volunteers had significantly higher personal development scores.

Regression Analyses

- Students reporting poor sleep habits were about half as likely to report good overall general health.
- Students reporting higher personal development scores were more likely to report good overall general health.
- Students reporting poor sleep habits had significantly lower personal development scores.
- Personal development partially mediated the relationships between sleep behaviors and reported overall general health.

4 Conclusions

Evidence from this study suggests:

- Sleep concerns are an issue for a large proportion of students, particularly Black and Asian/Pacific Islander students, and students earlier in their academic careers.
- Participation in particular co-curricular activities may support student health and personal development, which may lead to better long-term outcomes.
- Sleep-related interventions that prioritize particular populations of students could positively impact student personal development and overall general health.
- Personal development has a unique, positive, independent effect on overall general health. College health professionals should consider initiatives to promote student personal development as a strategy to improve student health.

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