Factors that Predict Levels of Sleepiness of Advanced Practice Nursing Students

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Significance

Graduate students are at increased risk of sleep deprivation. There are many detrimental outcomes associated with sleep deprivation on leaning, health and overall wellbeing. The relationship between academic performance and sleep deprivation is gaining importance nationwide. There is a substantial amount data documenting the need for healthy sleep particularly students to optimize physical and psychological health (Azad et al., 2015). Factors contributing to sleep deprivation include the demands of graduate programs, stress, challenges managing family and personal life amongst others.

Purpose

The purpose of this study was to examine the relationship of APN students' grade-point average (GPA), gender, and employment status with predicted levels of daytime sleepiness.

Research Question

Are levels of daytime sleepiness predicted by APN students' GPA, gender, and employment status?

Methods

This study is a quantitative, correlation study, to determine the predictors of APN students' levels sleep deprivation and its effects on academic performance (GPA). Using a nonprobability convenience sampling method, participants recruited were graduate students from a public university. The Epworth Sleepiness Scale a commonly used instrument in research measures sleepiness and a demographic questionnaire were used to collect the data.

Results

Sample: A total of 123 participants completed the study. Results indicated the ESS and GPA were negatively correlated and statistically significant ($r = -.24$, $p < .05$) indicating that as sleepiness increased, GPAs decreased.

Table 1

Means, Standard Deviations, and Intercorrelations for Daytime Sleepiness and Predictor Variables (N = 123)

Variable	M	SD	1	2	3
ESS	10.49	5.28	-.24*	-.07	.14
Predictor variables					
1. GPA	3.71	.26	—	-.18*	-.11
2. Gender	.34	.48		—	.07
3.Employment	.80	.40			—

Note. ESS = Epworth Sleepiness Scale, GPA = grade-point average, *p < .05, ESS reliability = .82 (Cronbach's alpha).

Table 2

Sequential Regression Analysis Summary for GPA, Gender, and Employment for Predicting Daytime Sleepiness (N = 123)

Step	Predictor variable	R	R^2	Incremental R^2	β
1	GPA	.24*	.06*		-.24*
2	Gender	.26*	.07*	.01	-.12
3	Employment	.29*	.08*	.01	.12

Note. GPA = grade-point average, *p < .05.

Nursing Implications

The interrelationship between sleepiness and academic performance warrants further investigation. An area of particular interest includes the relationship of daytime sleepiness to learning. This study considered GPA as a measure of academic performance; however, future researchers may seek to include learning or memory recall

APN students and nursing faculty can use the information from this study to inform academicians about changes in APN programs that can be used to promote quality sleep, which may improve motivation and enhance education quality.

Conclusion

Study data provide a better understanding of significant predictors of APN students' levels of sleepiness and academic performance. This data is important to nursing educations when designing curricula. With this understanding, alongside other sleep research, future studies will provide important data to guide APN educators in developing curricula and educational policies to improve student well-being, patient care, and safety.