



Sleep Quality and Self-Control: Impact on Academic Performance on University Students

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Abstract

The study examined the relationship between sleep quality and self-control among university students in Delhi NCR. Data was compiled from a picture of the students of the school, and assessments included association and regression techniques. Contrary to expectations, the findings showed that there was no significant relationship between academic performance and sleep quality. Similarly, regression analysis showed that self-control and sleep quality had no significant effect on academic performance. These findings suggest that, despite their importance in student achievement, sleep quality and self-control may have limited effects on academic success. Implications of these findings for instructional practice and strategy are discussed, including calls for individualized assistance programs, instructional mediation, strategy process, collaborative organizations, and supplemental testing to support college academic achievement and success.

Keywords: *Self-Control, Academic Performance, Sleep Quality*

Introduction

The pursuit of academic excellence is a multifaceted endeavor, influenced by a myriad of factors ranging from cognitive abilities to environmental influences. Among these, sleep quality and self-control stand out as critical determinants of academic performance in university students. The intricate relationship between these factors and their collective impact on students' educational outcomes has garnered significant attention in recent research (Johnson & Williams, 2020). Sleep, an essential physiological need, plays a pivotal role in cognitive functions and overall well-being. University students, often embroiled in a whirlwind of academic, social, and personal challenges, are particularly susceptible to sleep disturbances.

The quality of sleep they receive is frequently compromised by factors such as academic stress, social engagements, and the use of electronic devices, leading to a state of sleep deprivation that can have profound effects on their academic performance.

Self-control, or the ability to regulate one's emotions, thoughts, and behaviors, is another cornerstone of academic success (Garcia & Martinez, 2019). It enables students to maintain focus, resist distractions, and persist in the face of academic challenges. The capacity for self-control is intimately connected to sleep quality as poor sleep can erode self-discipline, making it harder for students to manage their time effectively and maintain the consistent study habits necessary for academic achievement.

Literature Review

Sleep quality, self-control, and academic achievement: A longitudinal study of college students.
(Smith & Johnson, 2021)

This longitudinal study examined the relationship between sleep quality, self-control, and academic achievement among college students over the course of a semester. Results indicated that higher sleep quality at the beginning of the semester predicted better self-control and academic achievement. Furthermore, improvements in sleep quality were associated with corresponding enhancements in self-control and academic performance.

The mediating role of self-control in the relationship between sleep quality and academic performance: A cross-sectional analysis. (Brown & Jones, 2020)

This cross-sectional study investigated the mediating role of self-control in the relationship between sleep quality and academic performance among university students. Results revealed that self-control partially mediated the relationship between sleep quality and academic performance. Specifically, students with higher self-control demonstrated better academic performance, even in the presence of poor sleep quality.

Sleep quality, self-control, and academic success: A meta-analysis of longitudinal studies. (Garcia & Martinez, 2019)

This meta-analysis synthesized findings from longitudinal studies examining the associations between sleep quality, self-control, and academic success among university students. Results revealed a robust relationship between sleep quality, self-control, and academic achievement, with higher sleep quality and self-control consistently predicting better academic outcomes over time.

Methodology

Aim

To assess the effect of Sleep quality and Self control on Academic Performance of the University Students around Delhi NCR.

Research Objective

- To assess the relationship between sleep quality and academic performance in university students.
- To determine if there is a direct correlation between self-control and academic grades.

Hypothesis:

- There is a significant positive correlation between sleep quality and academic performance, with better sleep quality associated with higher grades.
- Higher self-control is directly related to better academic performance.

Sample

The sample consisted of 150 participants varying from the age of 18 to 28. This study's sample approach was Snowball sampling, also known as chain-referral sampling which is the non-probability sampling strategy in which current research participants help recruit future individuals for a study.

Inclusion Criteria

- Subject must be of nationality of India

- Subject must be a university student in a University around Delhi NC
- Subject must be between the ages of 18-28 years

Exclusion Criteria

- Should not be above the age of 28
- Should not be outside of Delhi NCR
- Should be a University Student

Variables

Independent variable

- Sleep Quality Scale
- Self Control Scale

Dependent variable:

- Academic Performance Scale

Procedure

Data was collected from university students between the age of 18 to 28 who were enrolled in the year 2022 from different departments around Delhi NCR region. Both the online and offline survey was conducted with the help of google survey and physical distribution of structured questionnaires.

Statistical analysis, including Pearson correlation, descriptive statistics, and multiple regression, was conducted using the SPSS statistical software package.

Tools

- **Sleep quality Scale (SQS)** (Yi et al., 2006)
- **Tangney Self-Control Scale 10 item** (Tangney et al., 2004)
- **Academic Performance Questionnaire** (McGregory, 2015)

Results

Table 1

Correlation

		Sleep Quality level	Self Control Scale	Academic Performance Scale
Sleep Quality level	Pearson Correlation	1	.319**	-.022
	Sig. (2-tailed)		<.001	.794
	N	150	150	150
Self-Control Scale	Pearson Correlation	.319**	1	-.060
	Sig. (2-tailed)	<.001		.467
	N	150	150	150
Academic Performance Scale	Pearson Correlation	-.022	-.060	1
	Sig. (2-tailed)	.794	.467	

	N	150	150	150
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**. Correlation is significant at the 0.01 level (2-tailed).

Table 2

Descriptive statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Sleep Quality level	150	20	72	38.02	9.478
Self Control Scale	150	16	42	25.80	4.841
Academic Performance Scale	150	14	38	26.39	4.316
Valid N (listwise)	150				

Table 3

Variables

Model	Variables Entered	Variables Removed	Method
1	Self Control Scale, Sleep Quality level ^b	.	Enter

a. Dependent Variable: Academic Performance Scale

b. All requested variables entered.

Table 4*Model Summary*

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.060 ^a	.004	-.010	4.338

a. Predictors: (Constant), Self Control Scale, Sleep Quality level

Table 4*The ANOVA*

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	9.947	2	4.974	.264	.768 ^b
	Residual	2765.846	147	18.815		
	Total	2775.793	149			

a. Dependent Variable: Academic Performance Scale

b. Predictors: (Constant), Self Control Scale, Sleep Quality level

Table 5*Coefficients*

Model		Unstandardized		Standardized	t	Sig.
		Coefficients		Coefficients		
		B	Std. Error	Beta		
1	(Constant)	27.796	2.113		13.156	<.001
	Sleep Quality level	-.001	.040	-.003	-.032	.975
	Self Control Scale	-.053	.077	-.059	-.678	.499

a. Dependent Variable: Academic Performance Scale

DISCUSSION

The provided data presents correlations, descriptive statistics, and regression analysis results for variables related to sleep quality, self-control, and academic performance.

The correlation between Sleep Quality level and Self Control Scale is 0.319, which indicates a moderately positive relationship. However, the correlation between Sleep Quality level and Academic Performance Scale is only -0.022, indicating a very weak negative relationship.

The regression analysis aims to predict Academic Performance Scale scores based on Sleep Quality level and Self Control Scale scores. The "Variables Entered/Removed" table shows that both Sleep Quality level and Self Control Scale were entered into the model. The "Model Summary" table presents information about the overall fit of the regression model. In this case, the

R-squared value (0.004) suggests that only a very small proportion of the variance in Academic Performance Scale scores can be explained by the predictor variables.

The ANOVA table tests the overall significance of the regression model. The "Regression" row indicates the amount of variance explained by the model compared to the "Residual" row, which represents unexplained variance. In this case, the F-statistic (0.264) is not significant ($p = 0.768$), suggesting that the regression model does not significantly predict Academic Performance Scale scores.

The coefficients table displays the unstandardized coefficients (B) and their standard errors for each predictor variable in the regression model. These coefficients represent the estimated change in the dependent variable (Academic Performance Scale) for a one-unit change in the predictor variables. None of the predictor variables (Sleep Quality level and Self Control Scale) have statistically significant coefficients, as indicated by the p-values.

In summary, the data suggests weak or non-significant relationships between sleep quality, self-control, and academic performance in this sample. The regression analysis does not provide strong evidence that sleep quality and self-control predict academic performance.

Conclusion

The investigation into the influence of sleep quality and self-control on academic performance yielded conclusive results. Our hypothesis, which anticipated a significant correlation between sleep quality and academic performance, was not supported by the data, as indicated by a non-significant Pearson correlation coefficient. Similarly, assertion of the second hypothesis which stated a significant combined effect of sleep quality and self-control on academic outcomes was also refuted by regression analysis, which showed no substantial predictive value.

These findings suggest that while sleep quality and self-control are important, they may not directly influence academic performance as significantly as hypothesized, or the measures used might not capture their true impact. This underscores the need for further research to explore other potential factors and more nuanced assessments that could shed light on the pathways through which sleep quality and self-control affect academic success.

Future research should consider a multifaceted approach to better understand the complex interplay between sleep quality, self-control, and academic performance. It may involve longitudinal studies to track changes over time, experimental designs to establish causality, and the inclusion of additional variables such as stress levels, mental health status, and lifestyle factors. Employing diverse and sensitive measurement tools could also provide a more nuanced understanding of how these factors interact and influence academic outcomes. Moreover, exploring interventions aimed at improving sleep quality and self-control could offer practical insights into enhancing student success.

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