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Research Paper

Blueprints of Rest: Examining the Relation between Psychological Well-being and Sleep Quality of Architecture Students

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ABSTRACT

Students frequently struggle with extended periods of stress, erratic schedules, and the need to achieve design deadlines as the demands of architecture school increase. The complex relationship between architectural students' psychological well-being and sleep quality is examined in this study. The psychological well-being construct is built around the affective and cognitive evaluations of one's life. Sleep quality is defined as one's satisfaction with the sleep experience, which integrates aspects of sleep quantity, sleep initiation, sleep maintenance and awakening refreshment. The sample consisted of architecture students from various universities (N= 100) from urban areas and the data was collected using Ryff Psychological Well- Being Scale and Sleep Quality Scale. The sampling was based on convenience and snowball sampling method. The results showed that there is a significant relationship between pwb and sleep quality and its dimensions. This research adds to the increasing amount of information highlighting the significance of sleep as a vital component in maintaining psychological health. Educators and administrators can improve the mental health and academic performance of architecture students by implementing tailored interventions based on the identification of modifiable factors that influence sleep quality.

Keywords: Psychological Well-Being, Sleep quality, Architectural students, Restoration After sleep, daytime dysfunction, sleep quality scale

The beginning of college, which typically signifies the shift from childhood to adulthood, can be an especially stressful period. Stressors that college and university students face can lead to a variety of issues, from worry, exhaustion, and difficulties concentrating to other mental health conditions (Becker, 2002). The process that a person enters adulthood has an impact on their psychological health, as do events that negatively impact it, supportive factors, and personality traits. For example, young people who are outgoing, have set personal goals, are open to viewing adulthood as a time of expansion, and maintain positive relationships with their surroundings are more likely to succeed in navigating this stage of life (Kaya et. al., 2019).

Psychological well-being is a multifaceted and dynamic construct composed of a framework of dimensions where meeting basic needs and enjoying positive experiences are considered essential. PWB is a state of mind, with an absence of a metal disorder from the perspective

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of positive psychology and desirable for everyone. Some of the characteristics associated with PWB are understanding, optimism, positive work attitudes, maintaining good health, reaching out to people, ability to sustain relationships, able to handle crisis effectively, creating a balance between life activities and efforts to achieve psychological resilience (Ryff, 2018).

PWB has been inspected from numerous perspectives, and different academic fields have taken an interest in the construct due to its influence on other dimensions, such as characteristics of interpersonal interactions, individual performance or the satisfaction levels. PWB involves subjective, social, health-related behaviors and psychological dimensions, and practices that add meaning to an individual life and authorize them to obtain their maximum potential. PWB is understood as a set of factors that motivate people to pursue the satisfaction of their expectations (Sulimani-Aidan, 2016). The feelings of happiness and satisfaction with life are universal, although the sources of happiness and satisfaction can differ between societies and cultures (Soenens et al. 2017). The psychological well-being construct is built around the affective and cognitive appraisals of one's life. Research on the psychological well-being of students has focused on either contrast between students and the general population or comparisons within a student sample. Comparisons between students and the general population have appeared, in general, that students fare worse than the general population on measures of psychological well-being (Roberts et al. 2002). Ryff presented a theoretical model of PWB involve six different aspects of positive functioning: autonomy, personal growth, environmental mastery, purpose in life, self-acceptance and positive relationships with others. Rvff's sixfactor PWB model provides a comprehensive theoretical framework to examine positive performance in youthful people. Pupils who are psychologically well-adjusted have sound mental health and positive interpersonal relationships. They have an optimistic outlook on life and are naturally productive.

The available evidence suggests that undergraduate students are often experiencing excessive worry about their bodies; the quality of their sleep; their academic performance; relationship difficulties; managing the transition to university; stigmas associated with drugs, alcohol, and sex; financial stability; and postgraduation plans (Erica L.et al.,1998). However, while higher education is expanding, there is concern that the structures currently in place to support students are not developing at an equivalent pace. Sleep can be defined as a recurrent, regular, easily reversible state of the organism that is characterized by relative quiescence and by a large increase in the threshold of response to external stimuli relative to the waking state (Kaplan et al. 1988).

Sleep is one of the lifestyle habits that young people usually change when they go off to college. Many college students prefer to have irregular sleep patterns, maybe as a result of social and academic responsibilities. Sleep quality is defined as one's satisfaction with the sleep experience, which integrates aspects of sleep quantity, sleep initiation, sleep maintenance and awakening refreshment. Sleep quality is an important and complex construct composed of both subjective and objective aspects. Not only the consolidation of memories, also the encoding itself is unfavourably influenced by sleep deprivation (Werf et al., 2011). A composite score encompassing sleep quantity, time to fall asleep, number of awakenings during the night, time to go back asleep after awakening, experience of tiredness or restfulness upon awakening, and overall satisfaction with sleep can be used to determine the quality of one's sleep.

One indication of poor sleep quality is trouble falling and staying asleep. Numerous studies have demonstrated that the importance of sleep quality for public health is growing, and that getting inadequate sleep increases the risk of mental health issues like anxiety and depression. The biological sleep cycles of university students are disturbed because they are under increased stress about their jobs and futures, or they stay up late working on computers (Voelker 2017).

Many studies strongly propose that timing of sleep as well as its quality and quantity are associated with students learning abilities and academic achievement and that students are often chronically sleep deprived (Curcio et al., 2006). In an attempt to improve their academic performance, most students frequently stay up late studying. However, this unfortunately results in even fewer hours of sleep, which increases daytime sleepiness and the symptoms of despair, worry, tension, and psychological discomfort. It has been proven that daytime sleepiness affects neurochemicals such as norepinephrine and serotonin, which enhance negative emotions and raise the risk of psychopathology.

Recent research provides an extensive amount of evidence supporting the need of sleep for memory consolidation. Sleep appears to improve and stabilize a wide range of memory contents. Lack of sleep has an adverse effect on both the encoding and the consolidation of memories. Moreover, sleep promotes understanding of invisible rules and simplifies the application of knowledge. This paper contributes to bridge two gaps. First, this paper initially explores the role of sleep quality in PWB, targeting university students studying architecture courses. Facing the fact that a large proportion of architectural students are suffering from poor sleep quality and mental health problems, this paper is timely and necessary. Another gap that would be filled is to provide overall analysis of PWB of architectural students.

METHODOLOGY

Aim:

To determine how sleep quality influences psychological well-being of architecture students.

Objective:

To assess the sleep quality and their effect on the psychological well-being.

Hypothesis

- H_{1-} There would be a positive relationship between psychological well-being and sleep quality.
- H_2 There would be a negative relationship between psychological well-being and sleep quality.

Design

The study employs correlational design.

Sample

The sample consisted of Individuals (N=100) from urban area. The participants were between the ranges of 17-24 years and were. The sampling was based on convenience and snowball sampling method.

Inclusion Criteria

- Students pursuing architecture course.
- Undergraduate students from private universities.
- Students aged between 17-24 years of age.

Exclusion Criteria

- Students not pursuing architecture course.
- Students from government universities.
- Students aged below 17 and above 24 years of age.
- Masters/ Doctorate students

Tools Used

- 1. Ryff Psychological Well-Being Scale (Ryff): This 18- item self-report questionnaire is developed by Carl Ryff. This questionnaire assess six domains of psychological well- being: autonomy, self- acceptance, personal growth, environmental mastery, positive relations and purpose in life. Items are rated on a 7-point Likert scale ranging from 1 to 7. Higher scores indicate more positive psychological well-being and vice versa. The reliability ranged between 0.71- 0.88 and the validity was confirmed to be high.
- 2. Sleep Quality Scale (Yi et. al, 2006): This 28- items questionnaire is developed by Yi et al. The SQS evaluates six domains of sleep quality: sleep satisfaction, problems initiating and maintaining sleep, restoration after sleep, difficulty waking, and daytime symptoms. Scoring is done by using a four-point, Likert-type scale, respondents indicate how frequently they exhibit certain sleep behaviour's (0 = "few," 1= "some- times," 2 = "often," and 3 = "almost always"). Scores on items belong to factors 2 and 5 are reversed before being tallied. Total scores can range from 0 to 84, with higher scores denoting more acute sleep problems. The SQS homogeneity was high with a Cronbach's alpha coefficient of 0.92, and the validity of SQS as an instrument to measure sleep quality was confirmed to be high.

Procedure

Using convenient sampling, the researcher approached the participants who were eligible to participate in the study. Written informed consent was taken from the participants to ensure that they were willing to take part in the study. The participants were briefed about the study and their queries were addressed to their satisfaction. They were also asked to fill the socio demographic details. Participants were informed that the data collected will be kept confidential and will be used for research purposes only.

Statistical Analysis

The acquired were analysed using a computer software application SPSS. The analysis was carried out in three phases.

- **1. Descriptive Statistics:** The description of the data collected was calculated using mean and standard deviation of the sample.
- **2.** Normality Test: The data normality was assessed using Shapiro-Wilk Test of Normality as it is reliable test.
- **3. Inferential Statistics:** The Inferential Statistics used in the current study is regression.

RESULTS

The study seeks to investigate the effect of Sleep Quality on Psychological Well-Being. The dependent variable (psychological well-being) was regressed on predictive variable of Sleep Quality and its sub dimensions namely- Daytime dysfunction, Restoration after sleep, Difficulty in falling asleep, Difficulty in getting up, Satisfaction with sleep and Wakening during sleep. From table no.1 significant negative correlations with daytime dysfunction after sleep (-0.207) and restoration after sleep (0.294) show that higher levels of daytime dysfunction and lower perceived restoration after sleep are linked with lower psychological well-being. Table 2 showcases model summary. Model 1 r- squared (0.087), F (9.301) indicates that 8.7% of the variance in psychological well-being is explained by restoration after sleep. Model 2 r- square (0.127) F (7.057) p= 0.001 remains statistically significant indicating that both restoration after sleep and daytime dysfunction significantly predict psychological well-being. Compared to men, women generally reported somewhat greater levels of psychological well-being. The standard deviations of the two groups are comparable, and the mean differences are negligible, suggesting that there is variation in the reported levels of well-being among the genders. With a somewhat higher mean score and a marginally lower standard deviation, women reported slightly higher levels of daytime dysfunction than men. Females reported significantly higher levels of satisfaction with sleep compared to males, with a notably higher mean score. The standard deviation for females is also slightly lower compared to males. According to the information given, it appears that the results confirm the hypothesis that there would be a positive relationship between psychological wellbeing and sleep quality (H_1) .

Variable	Mean	Standard	Daytime dysfunction	Restoration	Difficulty in falling	Difficulty in getting	Satisfaction with sleep	Wakening
		ueviation	uysiuncuon	atter sieep	asleep	up	with steep	sleep
Psychological well-being	90.2200	13.95779	-0.27	0.294	0.191	0.053	-0.143	-2.07
Daytime dysfunction	16.6100	7.72886	1.000	0.023	0.262	0.174	0.099	0.203
Restoration after sleep	6.1900	2.51739		1.000	0.343	0.157	0.292	0.130
Difficulty in falling asleep	4.4500	2.92110			1.000	0.163	0.227	0.553
Difficulty in getting up	4.1100	1.74017				1.000	0.137	0.188
Satisfaction with sleep	4.8700	2.26370					1.000	0.222
Wakening during sleep	1.7500	1.56589						1.000

Table 1: correlational analysis

	Tai	ble	2:	Model	Summary
Г			2		

Model Summary ^e									
Model	R	R	Adjusted	Std.	Change Statistics				
		Square	R	Error of	R F df1 df2		Sig. F		
			Square	the	Square	Change			Change
				Estimate	Change	_			_
1	.294ª	.087	.077	13.40699	.087	9.301	1	98	.003
2	.356 ^b	.127	.109	13.17493	.040	4.483	1	97	.037
a. Predictors: (Constant), restoration_after_sleep									
b. Predictors: (Constant), restoration_after_sleep, daytime_dysfunction									
c. Dependent Variable: PWB									

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1671.918	1	1671.918	9.301	.003 ^b
	Residual	17615.242	98	179.747		
	Total	19287.160	99			
2	Regression	2450.007	2	1225.004	7.057	.001°
	Residual	16837.153	97	173.579		
	Total	19287.160	99			
a. Deper	ndent Variable: I	PWB				
b. Predic	ctors: (Constant)	, restoration_after	r_sleep			
c. Predic	ctors: (Constant)	, restoration after	r sleep, dayt	ime dysfunction		

Table 3: Anova Analysis

Table 4: t- test

Group Statistics								
	Gender	Ν	Mean	Std. Deviation	Std. Error			
					Mean			
Psychological Well	Male	50	89.9200	14.53896	2.05612			
Being	Female	50	90.5200	13.49261	1.90814			
Daytime	Male	50	15.8200	8.11572	1.14774			
Dysfunction	Female	50	17.4000	7.31786	1.03490			
Restoration After	Male	50	6.2000	2.76273	.39071			
Sleep	Female	50	6.1800	2.27399	.32159			
Difficulty In Falling	Male	50	4.7800	2.97808	.42116			
Asleep	Female	50	4.1200	2.85457	.40370			
Difficulty During Get	Male	50	4.2600	1.65134	.23354			
Up	Female	50	3.9600	1.82902	.25866			
Satisfaction With	Male	50	4.0800	2.24826	.31795			
Sleep	Female	50	5.6600	2.00621	.28372			
Awaking During	Male	50	1.7400	1.72390	.24380			
Sleep	Female	50	1.7600	1.40785	.19910			

DISCUSSION

The analysis's findings offer a comprehensive viewpoint on the complex relationship between psychological well-being and different dimension of sleep quality measured by sleep quality scale (SQS). Significant correlations between several characteristics of sleep quality and measures of psychological well-being are evident from the results of correlation and regression analyses. Particularly, aspects like restoration after sleep and daytime functioning come to light as important predictors of psychological health. Lets examine the results in more detail. Notably, poorer psychological well-being was linked to higher levels of daytime dysfunction, lower restoration after sleep, and more difficulties falling asleep. According to the Pearson correlation coefficients, psychological well-being and restoration after sleep are negatively connected, indicating that architecture students who report higher levels of psychological well-being are also more likely to have more restoration after sleep. On the other hand, there is a positive correlation between psychological well-being and daytime dysfunction, meaning that poorer psychological well-being is linked to higher levels of daytime dysfunction. These results highlight the significance of taking into account both the amount and quality of sleep when analyzing its effects on psychological health.

Regression analyses also reveal further insights by pinpointing particular predictors of psychological well-being. The stepwise regression model identifies dysfunction during the day and restoration after sleep as important indicators of psychological well-being. These predictors' coefficients show how strongly and in which direction they are related to psychological well-being. The negative coefficients indicate that lower levels of restoration after sleep and larger levels of dysfunction during the day are specifically linked to lower psychological well-being. Furthermore, the regression analyses' coefficients provide important information about the strength of the associations between psychological wellbeing and predictors. The absolute change in psychological well-being correlated with a one-unit change in the predictor variables is shown by the unstandardized coefficients. For example, the coefficients related to restoration after sleep show that psychological wellbeing reduces by a particular amount for each unit decrease in restoration after sleep, as represented by the coefficient value. Furthermore, the regression models' omitted variable coefficients provide information about possible confounding variables that were left out of the final models. The relationship between these variables and psychological well-being is shown by these coefficients, which can be used to find other factors outside of the regression models that may have an impact on psychological well-being. In summary, the data analysis offers insightful information on the intricate relationship between psychological well- being and sleep quality. The results highlight the need of taking into account various aspects of sleep quality while comprehending its influence on mental health. The results have significant implications for public health policy and clinical practice. With this knowledge, medical professionals can create focused interventions that will improve the quality of sleep and lessen dysfunction during the day to promote psychological well-being. These therapies could involve mindfulness-based practices, cognitive-behavioral therapy for insomnia (CBT-I), and instruction on good sleep hygiene. Public health initiatives can increase knowledge of the connection between mental and sleep hygiene. Adolescent and adult education programs can offer evidence-based methods for enhancing overall wellbeing and the quality of sleep. Lawmakers should support measures that facilitate access to mental health resources, flexible work schedules, and work-life balance. Improving the quality of sleep and general health can be achieved by establishing environments that are helpful and prioritize well-being.

Limitations

The features of the sample influence the analysis. It could be difficult to extrapolate the results if the sample is not typical of the entire population. It's critical to take into account elements like the sample's age, gender, and cultural variety. The information appears to be cross-sectional, taking a momentary picture at one particular point in time. This restricts the conclusions we may draw about causality. Correlations, for instance, are useful for identifying relationships but are not sufficient to prove causality. In order to investigate the temporal correlations between variables, longitudinal data would be required. Self-report measures are used to measure the variables, which include psychological well-being, restoration after sleep, and dysfunction during the day. Individual subjectivity and societal desirability biases can affect these measurements. Even though the analysis takes into account a number of variables, some potentially significant aspects affecting psychological well-being might have been overlooked. Participants might not always precisely recall their experiences, which could result in measurement errors. The relationship's complexity may be influenced by unmeasured variables, life events, or environmental factors. Psychological concepts, like well-being, are by nature difficult to understand. It involves personal experiences that differ from person to person. Because of this, any attempt to measure or

model these concepts is merely approximative and might not adequately represent the complex nature of psychological well-being. These elements could be usefully addressed in future study, given the limits of the current analysis. It would be possible to investigate causal correlations over time with longitudinal investigations. A more varied sample and the addition of objective measurements in addition to self-reports could improve the findings' validity and generalizability.

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Conflict of Interest

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