

Impact of Affect and Rumination on Quality of Sleep in Youth

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ABSTRACT

Rumination is characterized as steady, recycling, depressive thinking that is a general reaction to a negative state of mind and it is the inclination to have tedious, preserving wild, and meddling thoughts. Evidence has been found on the relation between rumination and negative affect and how they can further lead to more psychological problems in an individual's life. Rumination and affect (emotions) are a part of an individual's day-to-day life, especially among youth. Concerning this the objective of the current research is to study the relationship between Rumination and Quality of Sleep; to study the relationship between Affect and Quality of Sleep; and to study gender differences in rumination, affect, and Quality of sleep. This research used the Rumination Response Scale, PANAS, and Pittsburgh Sleep Quality Index. A sample of 200 people was taken, 100 females and 100 males. The age range of the participants was between 18 to 25 years. The results suggested a significant relationship between Rumination and Quality of Sleep significant relationship between negative Affect and Quality of sleep. However, there was no gender difference among variables Affect, Rumination, and Quality of sleep.

Keywords: *Rumination, Affect, Quality of Sleep and youth*

Affect means positive or negative reactions or feelings that an individual experiences. Affect is generally used as an umbrella term to refer to feelings, mindsets, and assessments. They refer to the emotions we experience as a major aspect of our regular day. Rumination is characterized as steady, recycling, depressive thinking that is a general reaction to a negative state of mind and it is the inclination to have tedious, preserving, wild, and meddling thoughts (Brinker and Dozois, 2009; Rippere, 1977). Quality of sleep can influence your psychological capacities and emotional state.

Many researches have been conducted on rumination, affect, and their relationship with sleep individually but there are not many researches that talk about all of their relationship together with the quality of sleep.

The current study talks about the affect and rumination impact on the quality of sleep in youth. The objective of this research is to study the relationship between rumination and

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Impact of Affect and Rumination on Quality of Sleep in Youth

quality of sleep, negative affect and quality of sleep; and also, to study the gender difference on affect, rumination, and quality of sleep.

RESEARCH METHODOLOGY

This chapter outlines the methodology employed to investigate the impact of affect and rumination on the quality of sleep in youth. A design will be employed to assess the impact of affect and rumination on the quality of sleep in youth aged 18-25 years.

Aim:

The aim of this study is to examine the impact of affect and rumination on the quality of sleep among youth.

Objectives:

- To study the gender difference in the level of affect, rumination, and quality of sleep among youth
- To study the relationship between affect and quality of sleep among youth
- To study the relationship between rumination and quality of sleep among youth
- To study the affect as a predictor of quality of sleep among youth
- To study rumination as a predictor of quality of sleep among youth

Hypotheses:

- (H1): There will be no significant gender difference in the level of affect, rumination, and quality of sleep among youth
- (H2): There will be no significant relationship between affect and quality of sleep among youth
- (H3): There will be no significant relationship between rumination and quality of sleep among youth
- (H4): Affect will predict the quality of sleep among youth
- (H5): Rumination will predict the quality of sleep among youth

Locale of Study:

Data were collected from youth in the Delhi NCR region

Sample:

Data were collected from 200 participants 100 were males and 100 females.

Inclusion criteria:

- Youth of 18-25 years of age.
- Well educated.

Exclusion criteria:

- Not well educated
- Past psychiatric history

Tools for Measurement:

- **Rumination Response scales-** It consists of 22 items. It is a 4-point Likert scale. The scale sums the scores; a higher score implies progressively extreme ruminative inclination. The inward consistency of the RRS is ($\alpha = .89$). Nolen-Hoeksema and Morrow (1991)

Impact of Affect and Rumination on Quality of Sleep in Youth

- **PANAS (Positive and negative affect schedule)** – It measures both positive and negative affect. It consists of 20 items. There are 10 items each for both the subscales. It is a 5-point Likert scale. It measures both positive and negative feelings. The PANAS displays a reliability that is consistent with scores ranging from 0.86 to 0.90 for Positive affect and 0.84 to 0.87 for negative affect. (David Watson et al, 1988)
- **Pittsburgh Sleep Quality Index (PSQI)** – It consists of 19 items. It is used to measure quality and patterns of rest. A global PSQI score of 5 or more prominent shows poor rest. The PSQI has an inner consistency and reliability coefficient (Cronbach's alpha) of 0.83 for its seven segments. (Dr. Daniel J. Buysse)

Data Collection Procedure:

Questionnaires were distributed, in which there was the consent form in which participants had the right to withdraw from the study whenever they felt like and it was ensured that the information provided by them and the results would be kept confidential. There were 3 questionnaires inside that form which were to be filled out by 18-25 years olds and the questions were asked in a semi-structured way. Mostly there were MCQ-based questions but for some questions, you had to write short answers (2-3 words). That's how the data for this study was collected. The members were thanked for their efforts to fill in the form.

Statistical tools:

This section elaborates on the proper statistical models that were being used to forward the study from data towards inferences. The detail of the methodology is given as follows.

Descriptive Statistics: Before conducting t-tests, descriptive statistics such as means, and standard deviations, will be calculated which provides a summary of the data distribution among variables.

Independent Sample T-test: The primary statistical analysis will involve performing independent sample t-tests to compare scores on affect, rumination, and quality of sleep among different genders (male and female) in the participants

Linear Regression: Analysis will be used to predict the value of a variable based on the value of another variable.

Interpretation of Results: The results of the t-tests will indicate whether there are statistically significant differences between both gender's scores on affect, rumination, and quality of sleep. A significant p-value (typically < 0.05) suggests that there is a significant effect on the variable, indicating a significant relationship between variables.

Software: Statistical analysis will be conducted using the Statistical Package for the Social Sciences (SPSS) software. SPSS provides a user-friendly interface for performing t-tests and other statistical analyses, allowing researchers to analyze data and generate results efficiently.

RESULTS AND DISCUSSION

Results:

Results of Independent Sample T-test

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means			Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
		F	Sig.	t	df	Two-Sided p			Lower	Upper
negative affect	Equal variances assumed	.015	.904	-.025	198	.980	-.040	1.626	-3.247	3.167
	Equal variances not assumed			-.025	197.948	.980	-.040	1.626	-3.247	3.167
Rumination Scale	Equal variances assumed	.025	.873	.466	198	.642	.930	1.998	-3.009	4.869
	Equal variances not assumed			.466	197.898	.642	.930	1.998	-3.009	4.869
PSQI	Equal variances assumed	.281	.596	.606	198	.545	.490	.809	-1.106	2.086
	Equal variances not assumed			.606	197.666	.545	.490	.809	-1.106	2.086

Table 3.1: Independent T-test statistics

This result supported the study since the p-value for all variables is higher than 0.05 suggesting there is no difference among variables in both genders.

Results of Linear Regression

Regression for scores on PANAS (negative affect) and PSQI for all participants (N=200)

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients Beta	t	Sig.
		B	Std. Error			
1	(Constant)	-3.854	.420		-9.185	<.001
	negative affect	.455	.014	.915	31.812	<.001

a. Dependent Variable: Quality of Sleep

Table 3.2.1: Linear Regression statistics

The result indicated a p-value lower than 0.05 indicating a significant relationship between negative affect and Quality of sleep

Regression for scores on the Rumination response scale and PSQI for all participants (N=200)

Impact of Affect and Rumination on Quality of Sleep in Youth

Coefficients		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	-9.686	.351		-27.633	<.001
	Rumination Scale	.392	.007	.968	54.037	<.001

Dependent Variable: Quality of Sleep

Table 3.2.2: Linear Regression statistics

The result indicated the p-value is lower than 0.05 suggesting a significant relationship between Rumination and Quality of sleep.

DISCUSSION

Hypothesis 1: There will be no significant gender difference in the level of affect

As shown in table 3.1. There was no difference in variables among male and female demographics. Thus, the Hypothesis is accepted.

Hypothesis 2: There will be no significant relationship between affect and quality of sleep among youth

Results indicate a significant relationship between affect and quality of sleep (Table 3.2.1). Thus, the hypothesis is rejected.

Hypothesis 3: There will be no significant relationship between rumination and quality of sleep among youth

Results indicate a significant relationship between rumination and quality of sleep (Table 3.2.2). Thus, the hypothesis is rejected.

Hypothesis 4: Affect will predict the quality of sleep among youth

Affect predicted a significant relationship between Affect and quality of sleep. Thus, the hypothesis is accepted.

Hypothesis 5: Rumination will predict the quality of sleep among youth

Rumination predicted a significant relationship between Affect and quality of sleep. Thus, the hypothesis is accepted.

Interpretation of Findings

The findings underscore the impact of Affect and Rumination on Quality of sleep among Youth. It suggests how mood and emotions can impact sleep. There was no difference between male and female gender scores in any variables (Affect, Rumination, and Quality of Sleep). Affect had a significant relationship with Quality of sleep and Rumination also had a significant relationship with Quality of sleep.

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Impact of Affect and Rumination on Quality of Sleep in Youth

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Conflict of Interest

The author(s) declared no conflict of interest.

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