

THE RELATIONSHIP BETWEEN ANXIETY LEVEL AND SLEEP QUALITY IN STIKES PANTI RAPIH YOGYAKARTA

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ABSTRACT

Background: Coping mechanisms can affect anxiety levels in college students. High levels of anxiety when dealing with stressors can have an impact on sleep quality student. The results of the preliminary study obtained data that 72% of STIKES Panti Rapih students experienced anxiety and subjectively, 53.5% of college students rated their sleep quality as poor. Therefore, this is important to research, besides that similar research has never been studied at STIKes Panti Rapih Yogyakarta. Objective: this study aims to determine the relationship between anxiety levels and sleep quality in STIKes Panti Rapih Yogyakarta students. This research method uses descriptive analytics with cross-sectional analytical approach. Sampling techniques used is a random sampling cluster, with a sample of 272 students. Data collection methods conducted using ZSAS anxiety questionnaires and PSQI sleep quality. Result: The characteristics of respondents are female (85.3%) and male (14.7%), respondents aged 17-25 years (88.6%), 26-35 years (7.7%), 36-45 years (2.9%), 45-55 years old (0.4%), 56-65 years old (0.4%), and respondents from the S1 Nursing study program (38.2%), D3 Nursing (15.4%), S1 Nutrition (19.1%), Nursing Profession (19.1%), RPL Program (7.4%), and program Transfer (0.7%). The picture of the level of anxiety in students is not anxious, namely (46.7%), students with mild anxiety (38.2%), students with moderate anxiety 11.4%, and Students with severe anxiety (3.7%), then for an overview of sleep quality on Students with poor sleep quality (63.6%) and good sleep quality (36.4%). There was a significant relationship between anxiety levels and the quality of student sleep STIKes Panti Rapih Yogyakarta with p value 0.000. Conclusion: Based on the results of the data analysis that has been carried out, it is concluded that the description of the characteristics of most of the respondents is female, aged 18-25 years and from the Bachelor of Nursing study program.

Keywords: Anxiety, Sleep Quality, College Student

Introduction

Anxiety is an emotional reaction when individuals face stressors. Anxiety arises because of threats, signs and symptoms that can appear, namely feelings of uncertainty, restlessness, doubt, worry and are often accompanied by physical complaints (Azizah, Zainuri and Akbar, 2016). Excessive anxiety can hinder a person's function in living his life, so that productivity will decrease and can have a negative impact on psychological problems such as depression (Puspitosari, 2021). Prevalence data in the Special Region of Yogyakarta shows 10.1% of anxiety disorders (Rikesdas, 2018). This anxiety is more easily experienced by younger individuals than older individuals. This is caused by the level of knowledge which influences the way of thinking (Puspitosari, 2021). Ratnaningtyas and Fitriani

(2020) said that individuals in early adulthood are individuals who are currently studying and are usually called students. Mu'min (2021) said that students certainly experience changes in their lives so that students must be able to adapt and overcome existing stressors, but there are still many students who cannot overcome this and cause students to be vulnerable to experiencing anxiety. Anxiety in students can have a negative impact on the quality of their sleep (Laia, 2019).

Reza et al. (2019) stated that norepinephrine levels in the blood increase through stimulation of the sympathetic nervous system during anxiety, leading to changes in sleep patterns and resulting in poor sleep quality. Laia (2019) supported this by explaining that anxiety triggers the release of epinephrine starting from sensory organs, passing through the cerebral cortex, limbic system, reticular activating system, and affecting the hypothalamus and pituitary adrenal glands, thereby reducing autonomic nervous system stimulation and impacting sleep quality. Sleep quality refers to the satisfaction or lack thereof that a person feels upon waking up.

According to Akasian, Rumiaty, & William (2020), the psychological impacts of poor sleep quality include decreased self-confidence, lack of caution, and poor emotional control. Moreover, cognitively, poor sleep quality leads to reduced focus, memory impairment, and delays in thinking and decision-making, which subsequently affect student learning achievement.

Laia's (2019) study on undergraduate nursing students at STIKes Wijaya Husada Bogor found a significant relationship ($p = 0.038$) between anxiety levels, measured using the Hamilton Rating Scale Anxiety (HRS-A), and sleep quality. The study revealed that 25.6% experienced mild anxiety, 43.4% moderate anxiety, and 31% severe anxiety, with 64.9% reporting poor sleep quality and 35.1% good sleep quality. Similarly, Hidayati, Priyono, and Anggraini (2019) explored anxiety levels among nursing students working on their thesis, using the HRSA questionnaire. Their findings ($p = 0.036$) indicated 83.7% with low anxiety levels and 16.3% with severe anxiety, alongside 19.4% reporting good sleep quality and 80.6% poor sleep quality using the PSQI questionnaire.

A preliminary study in February among STIKes Panti Rapih Yogyakarta students using the Hamilton Rating Scale Anxiety questionnaire found 27.9% with no anxiety, 24% mild anxiety, 29.4% moderate anxiety, and 18.6% severe anxiety. Interviews with 10 students revealed factors contributing to anxiety: 5 cited heavy workload and busy lecture schedules, 3 cited personal and family problems, and 2 cited poor time management and fatigue. A subjective assessment of sleep quality in February showed 53.5% rating their sleep as poor and 46.5% as good. Students reporting poor sleep quality mentioned being lethargic, lacking enthusiasm, and feeling sleepy during class.

This research underscores the importance of further investigating anxiety levels and sleep quality among students at STIKes Panti Rapih Yogyakarta, as similar studies have not been previously conducted there.

Method

This research method uses descriptive analysis with an analytical-cross sectional approach. This research was conducted on March 24 - August 16, 2023, at the College of Health Sciences Panti Rapih Yogyakarta. The sampling technique used was cluster random sampling, with a population of 852 students and the number of samples obtained was 272 students. The data collection method was carried out using the ZSAS anxiety questionnaire and PSQI sleep quality. The researcher used the correlation test of Spearman's rho and the feasibility of this study with No. 16/SKEPK-KKE/IV

Results

Table 1
Distribution of student proportions by gender

Gender	Frequency (n)	Percentage (%)
Man	40	14.7
Woman	232	85.3
Total	272	100

Based on table 1, most (85.3%) of the respondents in this study are female. This is in line with research conducted by Rahmawati, Sukmaningtyas, and Muti, (2022) at Harapan Bangsa University which shows that most students in the faculty of health are female (75.7%), And in his research, it was also stated that nurses are mostly identical to the female gender, so the majority of nursing students are women. In addition, according to Bidayaturrohman, (2023) nurses are more female than male because women have maternal nature, are smart at caring for and caring for others gently. Based on this, the researcher argues that the respondents are mostly female because women are more interested in jobs related to women's roles, one of which is in the health sector. In addition, the attitude and traits that women have are also supporting factors such as being more patient, diligent and responsive when caring for and caring for others.

Table 2
Distribution of student proportions based on age

Age	Frequency (n)	Percentage (%)
17-25 (late teens)	241	88.6
26-35 (early adult)	21	7.7
36-45 (late adult)	8	2.9
46-55 (early elderly)	1	.4
56-65 (late elderly)	1	.4
Total	272	100

Based on table 2, most (88.6%) of respondents are aged 17-25 years. This is in accordance with the statement of Nengah, et al. (2020) which stated that students have an age range of 18-24 years. Based on this, researchers argue that at that age a person has entered a mature age so that he can be called a student who is educated in higher education.

Table 3
Distribution of student proportions based on study programs

Courses	Frequency (n)	Percentage (%)
D3 Nursing	42	15.4
Nurse Profession	52	19.1
RPL Program	20	7.4
Transfer program	2	.7
Bachelor of Nutrition	52	19.1
Bachelor of Nursing	104	38.2
Total	272	100

Based on table 3, most (38.2%) respondents from the Bachelor of Nursing study program and a small part (0.7%) of respondents from the transfer program. Based on this, the researcher assumes that the Bachelor of Nursing study program is better known among the public than other study programs, so that students at STIKes Panti Rapih are dominated by undergraduate nursing students. This is supported by the history of STIKes Panti Rapih Yogyakarta whose educational institution began with the School of Health Nurses (SPK) which was established in 1939. In 1993, it was renamed the Panti Rapih Nursing Academy. This institution's steps began to enter health education when it began to implement health education in the form of the Panti Rapih Nursing Academy. Akper Panti Rapih then on August 16, 2017 changed to the College of Health Sciences Panti Rapih Yogyakarta (STIKes Panti Rapih Yogyakarta) (STIKes Panti Rapih Education Guidebook, 2019).

Table 4
Distribution of student proportions based on anxiety level

Student Anxiety Levels	Frequency (n)	Percentage (%)
No anxiety	127	46.7
Mild anxiety	104	38.2

Moderate anxiety	31	11.4
Severe anxiety	10	.7
Total	272	00

Based on table 4, there are students who do not experience anxiety as many as 46.7%, students with mild anxiety as many as 38.2%, students with moderate anxiety as many as 11.4% and students with severe anxiety as much as 3.7%. The data shows that STIKes Panti Rapih Yogyakarta students experience mild to severe anxiety. Researchers argue that the anxiety is caused by coping response factors that are not yet adaptive. The results of this study are in line with the research of Murwani and Utari, (2021) on STIKes Surya Global Yogyakarta students who showed that there were students with no anxiety as much as 27.2%, mild anxiety 18.2%, moderate anxiety 9.1% and severe anxiety as much as 45.4%. Factors that affect anxiety in students are the workload and environmental factors. Based on this, researchers assume that students tend to experience anxiety due to various factors such as many assignments, tight lecture schedules, personal problems, and poor time management. In this study, there was also a small percentage of students experiencing severe anxiety as much as 3.7%. This is in accordance with Rahayu's (2022) research on UIN Syarif Hidayatullah Jakarta students which showed that there were 4% of students who experienced severe anxiety, he said that this was due to the inability of the students to adjust to cultural changes and new conditions or called culture shock and poor time management.

Table 5
Distribution of student proportions based on sleep quality

Sleep Quality	n	%
Good sleep quality	99	36.4
Poor sleep quality	173	63.6
Total	272	100

Based on the table 4.5, most (63.6%) of students have poor sleep quality. A very strong factor to affect the quality of sleep in students is anxiety, the more severe the anxiety experienced, the less quality of sleep will be. However, there are other factors that affect the poor sleep quality experienced by students. With evidence writing in the questionnaire column other reasons that affect such as 32 students because of the number of assignments, 13 students because of environmental factors, 2 students because of night working hours, 36 students playing mobile phones. This is supported by the theory of Keswara, Syuhada and Wahyudi, (2019) who said that a person's sleep schedule can be disrupted due to the use of gadgets at night, it can occur due to exposure to light from the gadget screen. As a result, the body is easily awake, and the brain becomes alert, reducing the quality of sleep in the individual. Added by Firmansyah, Qorahman and Ningtyas, (2022) related to the theory of factors that cause poor sleep quality such as overthinking, negative thoughts about oneself, thinking too much about something unnecessary and obstacles in completing assignments are often frustrating because students think about assignments rationally. The results of this study are in line with Rahayu's (2022) research from data analysis showing that the sleep quality of respondents with poor sleep quality as much as 93%, in his research the triggers that cause poor sleep quality are anxiety, assignment and waking up to go to the bathroom. Poor sleep quality can have a psychological impact in the form of lack of confidence, carelessness and poor emotional control. Meanwhile, the impact on cognition is lack of focus, memory is reduced and can cause delays in thinking and decision-making. This also has an impact on student achievement which can decrease. Another impact is the risk of obesity and can experience problems with mental health (Aswar and Erviana, 2020).

Discussion

The results of the Spearman's rho correlation test using a significance of 0.05 obtained a p value of 0.000. Because ($p < 0.05$) which shows that there is a meaningful correlation between anxiety levels and sleep quality (Dahlan, 2014). This research is in line with a study conducted by Laia (2019) entitled The Relationship between Anxiety Level and Sleep Quality in Students of the S1 Nursing Study Program STIKes Wijaya Husada Bogor there is a relationship with p value = 0.038. Supported by research by Rahayu (2022) which showed the relationship between anxiety levels and sleep quality of students of the Faculty of Medicine UIN Syarif Hidayatullah Jakarta who compiled a thesis during the COVID-19 pandemic with a significance (p value) of 0.035 or less than 0.05.

There was a significant relationship between anxiety level and sleep quality and a correlation strength value (r) of 0.762 was obtained which showed a strong correlation (0.6-0.8) between anxiety level and sleep quality because a person with a high level of anxiety can cause an increase in norepinephrine hormone. This hormone affects the central nervous system that regulates sleep deprivation in a person (Eka and Djoko, 2019). Supported by Potter and Perri, (2010) cited by Mu'min and Or, (2021) who said that a person who has poor sleep quality is caused by an increase in stimulus so that the hormone catecholamine is secreted so that a person becomes awake. Sleep quality disorders affect the body's physiological processes and cause hormonal changes that can affect the appearance of anxiety symptoms (Sugiarta, et al., 2019).

In this study, the direction of correlation is unidirectional, because r has a positive value. A positive value means that the higher the X variable, the higher the B variable (Dahlan, 2014). A positive score was obtained because from the research data there were most students who experienced high anxiety scores, so the score of sleep quality disorders was also higher. However, in the results of the study, data was also obtained that a small percentage (10.2%) of students did not experience anxiety but had poor sleep quality, this was due to several other reasons listed by the respondents when filling out the questionnaire, namely related to the environment (such as noisy noise and room temperature), poor time management, playing mobile phones and night work hours that caused disturbances in the quality of sleep of the students. Students who experience disturbances in anxiety levels and poor sleep quality can certainly conclude the impact in the form of physiological impacts such as lack of enthusiasm in carrying out activities, decreased immunity and unstable vital signs. Meanwhile, the impact on their cognition is a lack of focus, reduced memory and can cause delays in thinking and decision-making (Hotijah, Dewi & Kurniyawan, 2021).

Conclusions

Based on the results of the data analysis that has been carried out, it is concluded that the description of the characteristics of most of the respondents is female, aged 18-25 years and from the Bachelor of Nursing study program. The description of the level of anxiety in students is that students are not anxious as much as 46.7%, students with mild anxiety 38.2%, students with moderate anxiety 11.4% and students with severe anxiety as much as 3.7%. The results of the analysis showed that there was a significant relationship between the level of anxiety and the quality of sleep of students of the College of Health Sciences of Panti Rapih Yogyakarta with a p value of 0.000.

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