

Sleep Deprivation, Clinical Exposure Anxiety, and Psycho-Emotional State of Nursing Students



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ABSTRACT: Nursing students face various concerns as they pursue a profession related to healthcare. This study determined the levels of sleep deprivation, clinical exposure anxiety, and psycho-emotional state of nursing students in one of the private institutions offering the Bachelor of Science in Nursing in the Islamic City of Marawi. The descriptive-correlational research design was used in the study. There were 120 nursing students who served as the respondents, and they were identified through stratified random sampling. Researcher-made questionnaires were utilized in gathering data. Mean, Standard Deviation, and Pearson Product-Moment Correlation Coefficient were the statistical tools used in analyzing the data gathered. Results showed a high level of sleep deprivation among the respondents with the number of academic and related learning experiences they had to comply with. Also, the respondents claimed having severe anxiety during clinical exposure, being apprehensive of the outcomes of their close contacts with patients who could have serious illnesses or other healthcare workers who might have contracted contagious diseases. Nevertheless, the nursing students' psycho-emotional state was high. They sustained a desirable level of well-being to enable them to withstand the rigors of the nursing profession. The study further disclosed that the level of the nursing students' sleep deprivation was influential to their clinical exposure anxiety and psycho-emotional state. Without adequate sleep, the respondents became prone to anxiety in clinical settings but still developed a sound psychological and emotional conditions. The study concludes that while nursing students can be experiencing difficulties being deprived of quality sleep and experiencing anxiety, they have been resilient in pushing themselves toward the nursing profession.

KEYWORDS: anxiety, emotional stress, mental- wellness, psycho- emotional state, sleep Deprivation

INTRODUCTION

Health is the holistic condition of being well and not just having no illness. It involves total physical, mental, and social well-being (WHO, 2020). Therefore, it is a condition that needs to be prioritized by people. With good health, they can live and function accordingly with the varied activities they can perform (McCartney, 2019).

The ideal sleep for adults and adolescents is seven to eight hours and nine hours (Hanson & Huercker, 2019). Sleep quality is needed to maintain normal thermoregulation, boost the immune system, and help brain development. Regular sleep increases the ability to reason and, likewise, the ability to make decisions and learn new information (İsmailoğlu & Ozdemir, 2020).

When sleep is taken for granted, there can be consequences that can negatively affect a person's everyday living, especially among adults who may not know how to deal with them (Dinis & Braganca, 2018). Also, not sleeping well may affect a person's emotional balance (Tomaso et al., 2021). Chronic sleep deprivation adversely affects health and overall quality of life (Hanson & Huercker, 2019). Many people are deprived of sleep (Smith, 2022), and it has affected their physical and mental health, affecting their performance in work, committing errors in work, or meeting accidents (Cheung et al., 2019).

In this vein, the importance of sleep hygiene, good sleep quality, and health benefits may assist nursing students in achieving optimal daytime functioning (Kinman et al., 2020). Student nurses need to understand how sleep can contribute to oneself and the patients in need of care (Blome et al., 2021). A study conducted among student nurses in Brazil disclosed the adverse effects of sleep deprivation resulting in nervousness, anxiety, self-dissatisfaction, depression, fatigue, and fear (Carneiro et al., 2022).

Aside from fatigue and profound sleepiness, sleep deprivation can lead to mental health issues and even untimely demise (Garbarino et al., 2021). Poor sleep may increase the risk of stress, mood disorders, and anxiety disorders in all participating sleep-deprived nursing students (Kinman et al., 2020). Not having enough sleep negatively affects their memory and concentration, eventually

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resulting in anxiety disorder (Reverte-Villaroya et al., 2021). Thus, mental health concerns are considered a burden wherein depression and anxiety can occur (Hassan et al., 2018).

In relation to the nursing profession, related learning experiences are a unique component of the nursing discipline compared to any other health-related profession (Martin, 2022). Clinical learning experiences are essential in nursing education but are also anxiety provoking for student nurses (Villanueva et al., 2018). Experiential learning requires some degree of challenge and anxiety (Al-Ghareeb et al., 2019). Thus, irrespective of the COVID-19 pandemic, universities and institutions must have a system that considers the mental state of their students. Especially because a positive and healthy mental status invariably results in academic success (Abdullateef, 2022).

In one of the higher education institutions offering a nursing program in Marawi City, Philippines, the researcher observed the prevalence of nursing students' concern about sleep deprivation and anxiety in clinical exposure. While there could be students who were able to cope well with academic demands, others manifested difficulties. Though there were studies related to various factors and effects of sleep deprivation and anxiety felt by nursing students, only a few were conducted on sleep deprivation, clinical exposure anxiety, and the psycho-emotional state of nursing students. Hence, this study was conducted to address this research gap. The study intended to show how resilient nursing students could be in the face of various challenges encountered in the pursuit of their desired future profession.

MATERIAL, METHODOLOGY, AND RELATED LITERATURE

Material of the Study

This study employed the descriptive-correlational design. The research was conducted in one of the Higher Educational Institutions offering Bachelor of Science in Nursing in the Islamic City of Marawi. The respondents were 120 nursing students in their second to fourth year level, enrolled during the First Semester of the Academic Year 2022-2023. They were identified through the stratified random sampling. The following researcher-made instruments were used in gathering the data: Student Nurse' Sleep Deprivation Questionnaire with the three constructs such as academic requirements, return demonstrations, and clinical exposure requirements; Student Nurse' Clinical Exposure Anxiety Questionnaire with three constructs such as first clinical exposure, clinical rotations/areas, and the relationship between nursing staff and other healthcare providers; and Student Nurses' Psycho-Emotional State Questionnaire with three constructs such as emotional stress, social adjustment, and adaptation. All the three instruments underwent a validation process. The pilot test conducted yielded the Cronbach's Alpha of at least .70 for each instrument used, making the instruments reliable for use by the target respondents.

Methodology

Permission by pertinent academic authorities was sought first by the researcher before the conduct of the study, including the approval from the Research Ethics Board of the school where the study was conceptualized. As part of the ethical considerations, the respondents were informed of the nature of the study and were assured of confidentiality of their responses, as well as the anonymity of their identities. The respondents affirmed their voluntary participation with the assurance that they could withdraw at any point of the study. The questionnaires were personally administered to and retrieved from the respondents by the researcher. The research data were tallied using the Microsoft Excel and computed using the Minitab Software. *Mean, Standard Deviation, and Pearson- Product Moment Correlation Coefficient* were the statistical tools used in analyzing the data gathered.

Related Literature

Nursing is very stressful, with the possibility of emotional involvement with patients and the healthcare professionals responsible for human life (Bodys-Cupak et al., 2018). Nursing students experience stress in their pursuit of education and need various mechanisms to cope with difficult situations (Karaka et al., 2019). Sleep-deprived individuals are advised not to undertake procedures that may be prone to errors that can have profound consequences (Stephan et al., 2019). Nurses and nursing students must work beyond regular (e.g., COVID-19) hours, and mental distress can negatively affect their clinical practice (Kotera et al., 2021).

With the pandemic, nursing students were brought into online activities related to clinical requirements (Liesveld et al., 2022). Working during the pandemic leads to experiences of stress, insomnia, nightmares, and anxiety (Velarde-García et al., 2022). Anxiety and stress among nursing students are challenges for academic education, and a need exists to explore the factors contributing to such phenomena among Arab cultures (Wang et al., 2019). The students experienced the second wave with psycho-emotional reactions and various coping strategies, mainly related to affective support from family and friends and professional support (Carneiro et al., 2022).

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RESULTS AND DISCUSSION

Level of Sleep Deprivation among Nursing Students

Table 1 shows the high overall sleep deprivation of the nursing students ($M=3.94$; $SD=0.71$). This finding implies that the respondents could not sleep according to the prescribed hours. As a result, the students could not take the rest of the many things they needed to attend as nursing students with varied requirements for theoretical subjects and related learning experiences involving hospital duties.

The students faced the challenge of complying with the various requirements for their studies. They needed to ensure that they attended to academic activities like class reports, assignments, performance tasks, return demonstrations, and periodical examinations. Since nursing is a health degree program, schools implement standards in the students' performance. Thus, the students had to meet the retention grades to proceed to the next year level. Hence, those who want to stay in the nursing program must sacrifice their time for sleep regardless of the physiological concerns that might arise later.

The study by Hanson and Huerker (2019) described that a person's quality and quantity of sleep are vital, and nursing students must embrace the importance of sleep hygiene and good sleep quality (Blome et al., 2021). Sleep disorders are very common among college students, especially those in healthcare programs (Belingheri et al., 2020). Sleep health and hygiene must be observed well by nursing students and nurses, especially since they can handle life-threatening situations (Martin, 2018).

Nursing students know the importance of sleep. Being in the healthcare industry, they also know the possible health outcomes of sleep deprivation. However, nursing students may take it not an option to sleep according to the number of healthy hours for their bodies. They have pressing demands that cannot be ignored or postponed considerably. They give utmost priority to what school-related matters demand from them. Hence, they choose to be sleep deprived despite the inner desire to be well-rested.

Table 1. Level of Sleep Deprivation of Nursing Students

(n = 120)			
Constructs	M	SD	Remarks
Academic Requirement	3.79	0.75	High
Return Demonstration	3.94	0.70	High
Clinical Exposure Requirements	4.10	0.68	High
Overall Sleep Deprivation	3.94	0.71	High

Note: Sleep Deprivation Scale: 4.20-5.0 (Very High); 3.20-4.19 (High); 2.61-3.19 (Average); 1.81-2.60 (Less); 1.0-1.80 (Least)

Level of Anxiety of Nursing Students During Clinical Exposure

Table 2 shows the nursing students' severe overall anxiety during their clinical exposure ($M= 3.70$; $SD= 0.88$). This finding implies that the respondents felt anxious about the fact that, as nursing students, they had to be in a hospital setting to deal with patients with health issues. Aside from personal concerns, the students worried about their health and safety, especially since the COVID-19 continued to haunt selected localities, thereby putting more risks to healthcare facilities and workers.

Students of Bachelor of Science in Nursing must comply with more than 2000 hours of related learning experiences as per CHED Memorandum Order (CMO) no. 14 series of 2009 for them to be competent upon graduation. In relation to the study, severe anxiety was a common experience among nursing students during their first clinical exposures. They had to transition the time in exploring the real world of their chosen profession. The felt anxious about committing errors in clinical procedures, but gradually, as the students reached a higher level of their education, they learned to cope and deal with it, especially that they had to undergo related learning experiences in the hospital setting.

When the study was conducted, the global health crisis was ongoing, that despite adhering to the standard health protocols, healthcare personnel and student nurses risked contracting the disease. For this reason, the nursing students felt uncomfortable in the clinical setting, being uncertain of the eventualities, especially with the reported COVID cases among hospital employees. Despite the decrease in number of the health concern, it could not make nursing students to be complacent with the ongoing health threat, making anxious about their clinical exposure.

The anxiety nursing students often experience during clinical rotations can affect their academic performance and interpersonal interactions (Cornine, 2020). Students, therefore, require skills and knowledge to help them cope with the challenges of learning

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professional practice (Walsh, 2020). Academic education and training may help future novice nurses feel more confident about their tasks and responsibilities and improve patient outcomes, resource management, and staff safety (Casafont et al., 2021).

Though nursing students know the nature of the profession, they need adequate time and determination to overcome personal issues and struggles that may hamper their roles and tasks as future healthcare providers. Being unable to focus because of anxiety can be detrimental to the performance and well-being of nursing students. Such anxiety can be a serious problem if not properly managed, reducing physical, cognitive, and clinical performance. Also, the prevalence of anxiety in pursuing the nursing profession may limit the students from appreciating the value of attending to other people's health needs.

Table 2. Level of Anxiety of Nursing Students During Clinical Exposure

(n = 120)

Constructs	M	SD	Remarks
First Clinical Exposure	3.85	0.81	Severe
Clinical Rotations and Areas	3.52	0.99	Severe
Relationships with Nursing Staff and other Healthcare Providers	3.72	0.83	Severe
Overall Clinical Exposure Anxiety	3.70	0.88	Severe

Note: Anxiety Scale : 4.20-5.0 (Very Severe); 3.20-4.19 (Severe); 2.61-3.19 (Moderate); 1.81-2.60 (Mild); 1.0-1.80 (Negligible)

Nursing Students' Psycho-Emotional State

Table 3 shows the high overall nursing students' psycho-emotional state (M= 3.78; SD= 0.61). This finding implies that despite the high level of sleep deprivation and severe anxiety experienced by the nursing students, they were able to maintain their composure and sustain a commendable state or condition, psychologically and emotionally. Amid facing struggles, the nursing students managed to keep themselves afloat and maintained resilience against challenging situations.

Nursing is a calling known to be a stressful and risky profession as it deals with life-and-death situations accompanied by personal, social, and psycho-emotional disturbances. In this vein, the nursing students were exposed to health teaching, especially on mental wellness, that they applied learning to themselves. Though they could be experiencing emotional stress and could affect their psycho-emotional state, the respondents claimed to have a high psycho-emotional state, exemplifying mature and strong personalities that are fit for the nursing profession.

Undergraduate nursing students show high-stress levels which have been linked to adverse physical and psychological health outcomes. Stress also relates to the academic and clinical demands among students (Li & Hasson, 2020). A study revealed that the implementation of active meditation in the daily routine of this group of university students decreased their physical and psycho-emotional indicators of stress (Morrison et al., 2020).

As future registered nurses, the nursing students can serve as members of the workforce of the healthcare system. In this regard, they need to be psychologically and emotionally resilient. Being confronted with the many academic tasks and related learning requirements, it is important for them to develop a mechanism that can shield them from the negative outcomes.

Table 3. Nursing Students' Psycho-Emotional State

(n = 120)

Constructs	M	SD	Remarks
Emotional Stress	3.52	0.68	High
Social Adjustment	3.84	0.66	High
Adaptation	3.97	0.49	High
Overall Psycho-Emotional State	3.78	0.61	High

Note: Psycho-emotional Scale: 4.20-5.0 (Very High); 3.20-4.19 (High); 2.61-3.19 (Moderate); 1.81-2.60 (Low); 1.0-1.80 (Very Low).

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Relationship between the Level of Nursing Students' Sleep Deprivation and Psycho-Emotional State

Table 4 shows the relationship between the level of nursing students' sleep deprivation and their psycho-emotional state. The data revealed that there was a highly significant relationship between sleep deprivation in terms of academic requirements, return demonstrations, and clinical exposure requirements to the nursing students' psycho-emotional state in terms of emotional stress. Thus, the Null Hypothesis (Ho1) was rejected. The sleep deprivation of the nursing students was reflective of their emotional stress or struggles.

As shown in the Table, the respondents' sleep deprivation in terms of academic requirement was highly related to the students' emotional stress ($r= 0.364$; $p= 0.000$). This finding means that when students were confronted with many school-related tasks that demanded prompt attention and compliance, the students were affected emotionally. As adult learners, they wanted to ensure that they could meet their teachers' expectations. It is also shown that sleep deprivation in terms of return demonstration had a highly significant relationship with the respondent's emotional stress ($r= 0.285$; $p= 0.002$). This finding implies that students could be emotionally stressed when they had to demonstrate certain nursing skills. Since the nursing program involves healthcare, the safety and well-being of patients had to be ensured at all times. In this regard, the clinical instructors required the students to demonstrate accurately and cautiously specific nursing.

Moreover, the study disclosed a significant relationship between student return demonstrations and adaptation (r -value= 0.201; p -value = 0.028). This finding means that the requirement for the nursing students to do return demonstration influenced their need to adapt to the various situations and conditions in their academic endeavors. A return demonstration could be difficult for the students that undertaking such could be a reason for the students to be sleep deprived. The study further disclosed that the respondents' sleep deprivation in terms of clinical exposure requirements had a highly significant relationship with the students' psycho-emotional well-being in terms of emotional stress (r -value=0.329; p -value=0.000). This finding implies that when the students were sleep deprived because of the requirements in the clinical setting, they experienced a commensurate level of emotional stress. They felt uneasy or uncomfortable with the area of assignment in the hospital, with the emotional stress they could be going through.

Nursing students are exposed to several stressors during their studies and training (Ahmed & Mohammed, 2019). A study revealed that the perceived stress-provoking factors included taking care of patients, assignments, and workload, lack of professional knowledge and skills, a field of practice, peers and daily life, and teachers and nursing staff at hospitals (Culha & Acaroglu, 2019). Therefore, nursing students should be evaluated for psychological well-being to prevent psychiatric symptoms such as anxiety and depression (Yüksel & Bahadır-Yilmaz, 2019).

Based on the study's findings, it can be deduced that nursing students are generally deprived of sleep. With the many and varied requirements to accomplish, nursing students cannot avoid experiencing stress. They not only comply with the minimum requirements but also need to meet higher expectations. Moreover, the possibility of not attaining what is desired can result in dismay and low self-esteem, contributing to the unfavorable emotional well-being. Nevertheless, when nursing students develop positive emotional control over different situations with support from family, peers, and friends, they manage stress effectively and ensure a sound psycho-emotional state amid difficulties.

Table 4. Relationship between the Level of Nursing Students' Sleep Deprivation and Psycho-Emotional State

Variables	r value	Relationship Strength	p value	Remarks
Academic Requirement and				
Emotional Stress	0.364**	Weak	0.000	Highly Significant
Social Adjustment	0.074	Very Weak	0.425	Not Significant
Adaptation	0.161	Very Weak	0.078	Not Significant
Return Demonstrations and				
Emotional Stress	0.285	Weak	0.002	Highly Significant
Social Adjustment	0.145	Very Weak	0.114	Not Significant
Adaptation	0.201*	Weak	0.028	Significant
Clinical Exposure Requirements and				
Emotional Stress	0.329**	Weak	0.000	Highly Significant
Social Adjustment	0.043	Very Weak	0.638	Not Significant
Adaptation	0.164	Very Weak	0.074	Not Significant

Note: Relationship Strength Scale: 1.00 (Perfect); 0.80-0.99 (Very Strong); 0.60-0.79 (Strong); 0.40-0.59 (Average); 0.20-0.39 (Weak); 0.01-0.19 (Very Weak); 0.00 (No Relationship)

*Probability Value Scale: ** $p < 0.01$ (Highly Significant); * $p < 0.05$ (Significant); $p > 0.05$ (Not significant)*

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Relationship between the Level of Anxiety of Nursing Students During Clinical Exposure and Psycho-Emotional State

Table 5 shows the relationship between the levels of the nursing students' anxiety during clinical exposure and their psycho-emotional state. As shown in the Table, the constructs of anxiety had a highly significant or significant relationship to the constructs of the psycho-emotional state of the respondents. Hence, the Null Hypothesis (Ho2) was rejected. The anxiety experienced by the students was related to how unstable they were psychologically and emotionally. When the students felt uneasy or dread about something, their mind and emotions were affected.

As shown in the Table, the level of the nursing students' anxiety in terms of first clinical exposure had a highly significant relationship with emotional stress (r -value= 0.440; p -value= 0.000). This finding means that the nursing students felt very anxious during their first exposure to the hospital setting; they could not avoid being emotionally stressed. Also revealed was the significant relationship between anxiety regarding first clinical exposure and psycho-emotional state in terms of social adjustment (r -value = 0.026; p -value= 0.024). During their first clinical setting, the respondents had to adjust themselves to the people they came in contact with. With varied personalities and attitudes the people around them, the nursing students needed to exhibit skills in adjusting socially, especially with their peers, clinical instructors, and even patients. They also needed to learn to ask for assistance and advice, especially when faced with difficult situations.

Furthermore, the study revealed a highly significant relationship between the students' anxiety in terms of clinical rotations and areas and emotional stress (r -value= 0.366; p -value= 0.000). This finding means that the level of the respondents' anxiety caused by clinical rotations and areas determined the level of the students' emotional stress. The nursing students were uncomfortable with their clinical duties, specifically night shifts, that they experienced anxiety. The study also revealed a significant relationship between anxiety in terms of clinical rotations and areas and psycho-emotional state in terms of social adjustment (r -value= 0.223; p -value= 0.014). This finding implies that the rotations or shifts and clinical areas assigned to the nursing students could be reflective of how the students adjusted socially to their environment. Different hospital situations could have caused discomfort to the students. However, in this study, the students proved good at connecting with their classmates or peers for emotional and psychological support.

It is also shown in Table 5 the high influence of the respondents' relationships with nursing staff and other healthcare providers and the students' emotional stress (r -value=0.509; p -value= 0.000). This finding means that establishing a good relationship with nursing staff and other healthcare personnel in the clinical setting caused anxiety to the nursing students, who at the same time experienced a level of emotional stress. Dealing with other people ahead in the nursing profession could be tough for nursing students, that they could not help being affected in different ways. Moreover, the study also revealed a significant relationship between the level of the respondents' anxiety in terms of relationships with nursing staff and other healthcare providers and the respondents' psycho-emotional state in terms of social adjustment (r -value=0.215; p -value=0.18). This finding implies that nursing students establishing relationships with other people in the clinical setting needed adjustments. As students, the respondents recognized that some people were superior to them in terms of knowledge and skills, making them anxious of social and professional expectations.

The level of anxiety affects physical, cognitive, and clinical performance. Worries and fears are contributors to the burden of disease and disability (Stevens et al., 2021). Thus, self-care and advocacy for one's health are vital (Hassan et al., 2018). There is a need to recognize and address the mental well-being of nurses (Kinman et al., 2020).

Becoming a future nurse may be a challenging experience for nursing students. They need to deal with the anxiety caused by various sources or stimulants. Anxiety affects their psychological and emotional state or condition. The anxiety experienced can be part of the learning process, and they need to deal with the emotional stress. However, nursing students can be firm in face the challenges associated with the healthcare profession.

Table 5. Relationship between the Level of Anxiety of Nursing Students during Clinical Exposure and Psycho-Emotional State

Variables	r value	Relationship Strength	p value	Remarks
First Clinical Exposure and				
Emotional Stress	0.440**	Average	0.000	Highly Significant
Social Adjustment	0.206*	Weak	0.024	Significant
Adaptation	-0.011	Very Weak	0.908	Not Significant
Clinical Rotations and Areas and				
Emotional Stress	0.366**	Weak	0.000	Highly Significant
Social Adjustment	0.223*	Weak	0.014	Significant
Adaptation	-0.029	Very Weak	0.753	Not Significant

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Variables	r value	Relationship Strength	p value	Remarks
Relationships With Nursing Staff and Other Healthcare Providers and Emotional Stress	0.509**	Average	0.000	Highly Significant
Social Adjustment	0.215*	Weak	0.018	Significant
Adaptation	0.041	Very Weak	0.658	Not Significant

Note: Relationship Strength Scale: 1.00 (Perfect); 0.80-0.99 (Very Strong); 0.60-0.79 (Strong); 0.40-0.59 (Average); 0.20-0.39 (Weak); 0.01-0.19 (Very Weak); 0.00 (No Relationship)

Probability Value Scale: ** $p < 0.01$ (Highly Significant); * $p < 0.05$ (Significant); $p > 0.05$ (Not significant)

CONCLUSION AND RECOMMENDATIONS

Nursing students cannot observe quality sleep when they are confronted with various concerns in their studies, either in the theoretical or clinical domain. They experience profound uneasiness or discomfort as they perform their duties in the clinical setting. Nevertheless, the nursing students have developed resilience amid the various demands of the nursing profession. Despite having a high level of sleep deprivation and severe clinical exposure anxiety, they keep desirable psychological and emotional conditions. However, sleep deprivation leads anxiety and emotional stress to nursing students in the pursuit of the nursing profession that they need to adapt to be able to overcome the challenges experienced.

Based on the findings and conclusion of the study, it is recommended for administrators of institutions offering the nursing program to look for mechanism that can lessen the students' academic burden to ease the level of sleep deprivation. Clinical instructors and nursing staff may provide nursing students with a conducive learning space for instruction. Amid the difficulties and pressures, nursing students sustain their high psycho-emotional state to succeed in their pursuit of becoming nurses. In this vein, nursing students may adopt mechanisms like collaborating with classmates to lessen the factors that cause sleep deprivation among them. Also, nursing students develop a support system among themselves, so they may overcome or respond proactively to the demands of the nursing program, dealing with emotional stress, and developing adaptation in the process. It is also recommended for other researchers conduct a qualitative study to explore the firsthand experience of sleep deprivation and anxiety as experienced by nursing students.

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