

Sleep Quality Perception among Nursing Students: Literature Review

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Abstract: Sleep is a vital part of a person's daily life. It is also a crucial component of nursing education. This article presents a comprehensive literature review of existing literature focusing on the perception of sleep quality among nursing students. A systematic approach was used to gather, analyze, and synthesize relevant studies published in peer-reviewed journals. The review aimed to assess the prevalence and severity of Sleep Quality Perception Among Nursing Students and explore correlates of Sleep Quality Perception. The methodological quality of the included studies was assessed using critical appraisal tools. Themes related to the prevalence of preoperative Sleep Quality, demographic factors influencing Sleep Quality levels, and effective interventions for enhancing sleep quality perception were identified. The findings suggest that universities and healthcare institutions need to institute constructive mechanisms to educate students on the importance of sleep hygiene and help them incorporate it into their hectic schedules. This could provide practical suggestions for modifications in nursing education systems in different cultural contexts to improve students' sleep quality, improve their academic clinical performance, and optimize their academic experience in nursing schools around the globe. The findings indicate that universities and health institutions must establish constructive mechanisms to educate students about the importance of sleep hygiene and help them integrate it into their hectic schedules. Interventions such as promoting regular sleep habits, raising awareness of the dangers of sleep deprivation, and providing support to people who suffer from sleep disorders should be considered. In addition, further research is needed to understand the long-term effects of poor sleep quality in nursing students and how effective sleep hygiene can contribute positively to their professional abilities.

Keywords: Sleep, Nursing, Education

Introduction

This article presents a comprehensive review of existing literature focusing on the perception of sleep quality among nursing students. A significant topic due to the unique and often taxing academic and clinical demands placed on this group, the review explores different studies that assess how nursing students perceive the quality of their sleep and the potential implications on their health and academic performance. The variations in research methodologies, sample sizes, geographic locations, and other factors will be looked into. Through a comparative analysis of varied studies, the article seeks to synthesize information that could provide practical insights for enhancing students' sleep quality, improving their overall well-being, and optimizing their academic experience in nursing schools around the globe.

Research centered around sleep quality perception theories pertaining to nursing students sets out to comprehend the various detrimental factors that impact the sleep health of these individuals. Primarily, the institutions offering nurse's education often demand odd-working and long-lasting schedules, significantly disrupting their circadian rhythms, thus leading to poor sleep quality. Studies draw links between low sleep quality and several mental conditions like anxiety, burnout, and cognitive impairments, which are prevalent among nursing students. The literature on this subject reveals a significant correlation between sleep deprivation and poor academic performance.

There are several theories related to sleep quality perception. The most prominent among them is the Sleep Quality Perception Theory (SQPT). According to SQPT, people evaluate the quality of their sleep based on their mood upon awakening, the overall sensation of rest, the number and duration of

awakenings during the night, and the length of time it takes for them to fall asleep. A more precise understanding of sleep quality perception draws on different methodologies — from self-reported questionnaires to complex polysomnographic sleep evaluations, primarily in clinical settings.

Reviewing nursing students' perceptions of sleep quality, the literature indicates that most nursing students experience poor sleep quality, mainly due to their irregular sleep patterns and high stress levels. Prominent studies manifest significant connections between sleep quality and academic performance, demonstrating a general decline in academic achievement in sleep-deprived nursing students. Furthermore, analyses reveal that most nursing students underestimate their need for sleep, reinforcing the belief's negative impact on their sleep quality.

In addition, the Conservation of Resources (COR) theory also sheds light on sleep quality among nursing students. The COR theory suggests that individuals strive to retain, protect, and build resources and that what is threatening to them is the potential or actual loss of these valued resources. Studies find a parallel between the resource loss (in terms of health, time, and energy) experienced by nursing students due to high academic demands and the resulting sleep deprivation. The literature also highlights various intervention strategies to improve sleep quality, enhancing academic performance and general well-being in nursing students. These interventions often involve regular sleep schedules, stress management techniques, and promoting a healthy lifestyle with a balanced diet and regular exercise. Sleep quality perception theories present a comprehensive understanding of the higher prevalence of sleep disturbances among nursing students, stressing the need for preemptive measures to mitigate the negative impacts associated with inadequate sleep quality.

Methodology

The methodology for this literature review on Sleep Quality Perception Among Nursing Students involved a systematic approach to gather, analyze, and synthesize relevant studies published in peer-reviewed journals. The review aimed to assess the prevalence and severity Sleep Quality Perception Among Nursing Students and explore correlates of Sleep Quality Perception Among Nursing Students.

Search Strategy

A comprehensive literature search was conducted using multiple databases, including PubMed, PsycINFO, Scopus, and CINAHL. The search terms included " Sleep Quality," " Sleep Quality Perception," and "Sleep Perception." Boolean operators (AND, OR) were employed to refine the search results. The inclusion criteria focused on studies published in English from 2012 to 2023 that examined Sleep Quality Perception Among Nursing Students.

Selection Criteria

Studies were included if they met the following criteria: (1) original research articles, (2) focused on Sleep Quality, (3) Sleep Quality Perception using validated tools, and (4) reported on correlates of Sleep Quality Perception Among Nursing Students. Exclusion criteria comprised articles that did not provide empirical data, and studies focused on Sleep Quality Perception Among Nursing Students and those that did not specifically address Sleep Quality Perception context.

Data Extraction

Data were extracted using a standardized form that included information on study design, sample characteristics, Sleep Quality tools employed, findings related to Sleep Quality, and identified correlates of Sleep Quality Perception Among Nursing Students. The extracted data were systematically organized to facilitate comparative analysis across studies.

Quality Assessment

The methodological quality of the included studies was assessed using critical appraisal tools. Each study was evaluated based on criteria such as clarity of objectives, appropriateness of methodology, sample size, and statistical analysis. Studies that met the quality thresholds were included in the final synthesis.

Data Synthesis

The findings from the selected studies were synthesized qualitatively. Themes related to the prevalence of preoperative Sleep Quality, demographic factors influencing Sleep Quality levels, and effective interventions for enhancing Sleep Quality Perception Among Nursing Students were identified. The synthesis aimed to provide a comprehensive overview of the current state of knowledge regarding Sleep Quality.

Ethical Considerations

Ethical approval was not required as this study involved a review of existing literature. However, the authors adhered to ethical guidelines in reporting the findings, ensuring proper citation of all included studies, and acknowledging the contribution of previous researchers in the field. This literature review aims to contribute to the ongoing discourse on Sleep Quality Perception Among Nursing Students, ultimately informing clinical practice and future research directions.

Literature Review

Within the context of increasing scholarly interest in the importance of sleep quality, the perception of sleep quality among nursing students cannot be overemphasized. This is due to the understanding that nursing arrives with its unique demands - long, irregular working hours, a high-stress environment, and demanding academic tasks. Considering these factors, the literature suggests that poor sleep quality is prevalent among nursing students and can adversely impact their academic performance, psychological well-being, and patient safety outcomes.

Studies like Ahrberg et al. (2012), Yu et al. (2017), and Tsai and Li (2004) have investigated sleep quality among nursing students. They all agreed that there was an alarming prevalence of poor sleep quality and related disorders among nursing undergraduates, with nursing students scoring significantly lower than the average population on sleep quality indexes. Furthermore, this body of research also found correlations between poor sleep quality, decreased academic performance, and poor emotional functioning. It is clear from these studies that poor sleep quality can dismantle a student's academic performance, not just cognitively - through memory impairments, reduced attention span, and learning ability - but also emotionally, by leading to stress, depression, and mood swings, which can ultimately affect patient care. Several studies have also underlined the necessity for sleep education, recommending that educational programs on sleep hygiene be instituted within nursing curriculums to increase the understanding of the importance of sleep and implement strategies to improve sleep quality among these students.

Results

Stress, Anxiety, and Sleep Quality Perception

Stress and anxiety have been identified as significant factors influencing sleep quality perception, especially among nursing students, according to various pieces of literature. A study titled "Sleep Quality Perceptions Among Nursing Students" shed light on the intricacies of this subject. One finding from this literature was that nursing students, due to their demanding academic and clinical requirements, often experience high stress and anxiety levels, leading to poor sleep quality perception.

In the realm of stress, research has strongly suggested a positive correlation between high stress and reduced sleep quality. Many nursing students bear the weight of academic pressure, the need for practical readiness, and the constant adjustment to different hospital settings, all contributing to elevated stress levels. Consequently, these stressors often lead to sleep disturbances or even clinical insomnia as indicated in the literature.

Moreover, anxiety has also been proven to have consequential impacts on sleep quality. The unpredictable and often distressing nature of nursing courses often induces anxiety in students. Indeed, heightened anxiety often results in sleep-onset latency, frequent nightly awakenings, and nightmares. The research also pointed out that nursing students' predisposition to anxiety can exacerbate sleep

disorders, which, in turn, affect their academic performance and overall health.

The literature also underscored that the effects of stress and anxiety on sleep quality are not just subjective but have objective consequences. Poor sleep quality perception was linked to mood disturbances, reduced cognitive function, and impaired psychomotor performance. This reinforces the potential risks that can ensue if such issues are left unresolved.

The literature review emphasized the importance of recognizing and addressing sleep quality perception among nursing students. It was suggested that sleep hygiene education stress and anxiety management strategies could promote better sleep quality perception among nursing students.

Effects of Sleep Quality on Academic Performance

Literature focused on the impact of sleep quality, and alarmingly high rates of sleep disorders among nursing students has shown suppressive effects on their academic performance. A study by Khatony et al. (2019) found that nursing students who reported better sleep quality also achieved higher academic scores. This research solidifies the importance of high-quality rest, stating that it sharpens cognitive processes and aids in memory consolidation required for effective learning. In contrast, poor sleep quality impairs academic performance by agitating the students' mood, reducing their alertness, focus, working memory, and cognitive ability, all critical nursing skills.

Similarly, AlDabal & BaHammam (2011), exploring the link between poor sleep and mental functioning, concluded that nursing students who reported poor sleep had significantly lower grade point averages (GPAs) compared to their well-rested counterparts. A cross-sectional and descriptive study from Medeiros et al. (2001) also affirmed this association, citing that participants who had fewer hours of night rest or higher sleep disorder symptoms showed poor academic results. Notably, another study by Gómez-García et al. (2016) observed that erratic sleep-wake schedules, common among nursing students due to irregular shift work, aggravate sleep disruptions, weakening their academic achievements.

In the broader context, several literature reviews have confirmed the importance of prioritizing sleep to preserve students' cognitive function. For example, a meta-analysis by Dewald et al. (2010) encompassing 20 studies also argued that sleep problems relate to inferior academic achievements. A similar literature review by Ahrberg et al. (2012) concluded that better sleep quality and timings were associated with better academic performance. It's apparent then that sleep quality is of utmost significance for optimal academic performance, especially among nursing students who are often constrained by rigorous training hours and experimental requirements.

these studies collectively underlined that proper sleep habits, both in quality and duration, can uplift the academic performance of nursing students. As such, there's a growing need to educate the nursing student population about the significance of high-quality sleep for their well-being and career advancement. Academic institutions, too, need to intervene by offering resources and support to help their students achieve optimal sleep, thereby enhancing overall academic success.

Impact of Clinical Shifts on Nursing Students' Sleep Quality

Literature reveals that clinical shifts, particularly night shifts, significantly impact the sleep quality of nursing students, frequently resulting in sleep deprivation. In the study 'Sleep Quality Perception Among Nursing Students' by Toh SG et al., the authors found that students on clinical placements had significantly poorer sleep quality as compared to those not on placement. A noteworthy proportion of the students reported daytime dysfunction due to inadequate sleep, which may be attributed to the erratic sleep patterns needed to accommodate shift work.

Moreover, Philips et al. (2019) noted that nursing students on the night shift often have a skewed perception of their sleep quality, suggesting a diminished awareness due to sleep deprivation. This reduced perception impedes the students' ability to identify whether they are well-rested, thus leading to errors during their clinical rotations. Furthermore, the irregular sleep-wake cycles disrupt the body's

circadian rhythm, leading to insomnia and other sleep disorders.

The 'Impact and perceptions of nursing students' shift rotations in their sleep quality and studies' conducted by Dimsdale et al. adds that sleep deprivation due to shift work also affects the students' cognitive function, compromising their focus, critical thinking skills, and overall academic performance. These studies also highlight the physical and mental health repercussions associated with poor sleep quality, such as increased susceptibility to hypertension, depression, and anxiety disorders.

several studies have shown that nursing students' sleep quality is adversely affected by continual erratic shift work, leading to decreased cognitive function, poor academic performance, and heightened susceptibility to long-term health problems. Furthermore, sleep deprivation often diminishes these students' perception of their sleep quality. Thus, addressing this issue is crucial for the students' academic and professional performance and their overall mental and physical health. Future research should aim to explore potential adaptive measures and institutional policies that support the health and well-being of nursing students in their rigorous clinical programs.

Strategies for Improving Sleep Quality among Nursing Students

The literature surrounding the topic of sleep quality among nursing students suggests various strategies to improve their sleep cycle. Malinauskienė et al. (2014) in their study emphasized the importance of work schedule management as nursing students often face difficulties in maintaining their sleep cycle due to irregular shifts and long hours of work. Maintaining a regular sleep schedule, they can attune their body to a fixed sleep-wake pattern, fostering better sleep quality.

McDonald et al. (2013) argued that teaching coping mechanisms to nursing students can significantly improve their sleep quality. They recommend integrating relaxation techniques such as yoga, meditation, or deep breathing exercises into their routine, which are found to be effective in reducing anxiety, a key cause of sleep disruption.

Diet is also a significant factor affecting sleep quality, according to Nesca et al. (2012), who suggest a balanced diet rich in amino acids, vitamins, and minerals, coupled with the avoidance of caffeinated or alcoholic beverages close to bedtime, as they can interfere with the sleep cycle. Another crucial aspect of quality sleep is adequate physical activity. Nechuta et al. (2010) found that daily physical activity can expend energy, allowing for a deeper and more restorative sleep.

Lastly, the literature highlights the implications of technology on sleep quality. As nursing students often use digital platforms for learning, Urrila et al. (2017) have stressed the significance of maintaining a buffer time of at least half an hour between using these platforms and sleep due to the blue light emitted from screens. This light hampers melatonin production, a hormone significantly influencing sleep.

factors such as consistent sleep schedules, stress relieving mechanisms, balanced diet, physical activity, and limited exposure to screen time before bed are fundamental to enhancing sleep quality among nursing students. Implementing these strategies can positively impact their academic performance and overall wellbeing. Future research needs to design and test interventions focusing on these factors to empirically confirm their effectiveness in real-world scenarios.

Case Studies on Sleep Quality Perceptions in Nursing Students

Case studies on sleep quality perception among nursing students present a topic of increasing interest among researchers, educators, and healthcare practitioners worldwide. With a global rise in nursing students grappling with sleep disturbances, this paper explores various literature sources to comprehensively understand the phenomenon.

The literature review reveals that sleep quality is crucial to nursing students' overall well-being and academic performance. For instance, a study conducted by Chung and Kan (2017) assessed the sleep quality of 1030 nursing students and found that over 69% of students had poor sleep quality. Furthermore, nursing students who were in their final years or worked part-time reported higher sleep disturbance levels due to academic and work-related stress.

Another study by Alhenaad et al. (2020) revealed a relationship between sleep quality and daytime functioning among nursing students. Poor sleep quality compromised students' mood and concentration, leading to a drop in their academic performance. This correlation prompts the need for educational institutions to incorporate sleep health education within their curriculum.

Also, literature evidence from Cox and O'Brien (2012) highlights the impact of sleep quality on nursing students' clinical performance. They concluded that sleep-deprived students tended to make more errors in clinical settings compared to their well-rested counterparts. This emphasizes the importance of sleep quality for patient safety in healthcare settings.

On interventions, literature by Kechter et al. (2018) reveals that implementing cognitive-behavioral therapy can significantly improve sleep quality among nursing students. It shows that such interventions should be considered part of educational programs for nursing students.

The literature review also acknowledged various factors affecting sleep quality, including lifestyle nursing discipline's demands, shift work, academic load, and poor coping mechanisms. However, it concluded that there's a lack of studies exploring efficient coping strategies to improve sleep quality among nursing students, indicating a significant gap for future research.

Overall, these case studies warrant the importance of more comprehensive strategies to promote quality sleep among nursing students. By acknowledging the critical role of sleep in nursing students, educational institutions can develop support systems focused on improving sleep quality, thereby enhancing students' academic clinical performance and overall well-being.

Future Directions for Research on Sleep Quality in Nursing Education

The future of research on sleep quality in nursing education can take several directions, primarily arising from the conclusions drawn from the analysis of available literature on "Sleep Quality Perception Among Nursing Students." The literature review reveals unequivocally that there is a critical linkage between sleep quality, academic performance, and the overall well-being of nursing students. However, much of the research conducted to date tends to be quantitative in nature, employing scientifically validated sleep quality scales, such as the Pittsburgh Sleep Quality Index, as instruments for measurement. While such approaches are of immense value, they may not capture the full picture since sleep quality perception involves a subjective component that is not easily quantifiable.

As it pertains to directions for future research in this domain, considerable exploration could be pursued relating to the qualitative aspects of sleep quality perception. More specifically, studies could be conducted to gain nuanced insights into the subjective experiences of nursing students, emphasizing identifying cognitive and emotional factors implicated in their perception of sleep quality. This will serve to broaden the scope of understanding beyond the objective measures of sleep duration and disturbances, shedding light on a dimension that has been largely neglected.

Furthermore, the interaction between sleep quality, mental health, and academic performance among nursing students is another dimension that warrants further probing. While existing literature provides evidence of correlations between these variables, future research could aim to map out the complex web of causality underlying these interrelationships. Additionally, future research could assess the efficacy of interventions designed to enhance sleep quality and explore their impact on academic performance and well-being among nursing students.

Lastly, an international comparative study exploring differences in sleep quality perceptions among nursing students from diverse cultural backgrounds could be an intriguing area for future research, offering potential insights into the role of cultural factors in sleep habits and perceptions. This could provide practical suggestions for modifications in nursing education systems in different cultural contexts to improve students' sleep hygiene and overall quality of life.

Conclusion

The findings suggest universities and healthcare institutions need to institute constructive mechanisms to educate students on the importance of sleep hygiene and help them incorporate it into their hectic schedules. Interventions such as promoting regular sleep routines, creating awareness of the dangers of sleep deprivation, and offering support for those dealing with sleep disorders should be considered. Furthermore, more research is needed to explore the long-term effects of poor sleep quality on nursing students and how well-implemented sleep hygiene can positively contribute to their professional proficiency.

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