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Relationship between Sleep Quality and Nurse Performance

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ABSTRACT

Nursing is one of the jobs with shift work rhythm. Shift work is one of the factors that affect sleep quality. Poor sleep quality is thought to have an impact on decreasing nurse performance, while one of the main factors that determines patient safety is nurse performance. The purpose of this study was to identify the relationship between sleep quality and nurse performance, especially in the inpatient room. The research method used correlation analysis with a cross-sectional approach with a sample of 35 nurses who were all inpatient ward nurses. Data collection was carried out by filling out the PSQI questionnaire and the nurse performance questionnaire. The analysis test used the Chi Square test. The results of this study showed that 30 respondents (85.7%) had poor sleep quality and 19 respondents (54.3%) had poor performance. The results of the analysis showed that there was a relationship between nurse sleep quality (p value = 0.008 < 0.05). It can be concluded that poor sleep quality has the potential to reduce nurse performance. Therefore, interventions are needed to improve nurse sleep quality in order to improve their performance in providing health services.

Keywords: sleep quality, nurse performance, inpatient room

Background

Nurses are health workers who play an important role in providing health services, especially in hospitals that operate 24 hours (1). The demands of the shift work system, especially night shifts, often affect nurses' sleep patterns and disrupt the quality of their sleep. Based on data from the Health Human Resources Development and Management agency nurses are the largest health workforce in Indonesia, with a number reaching 1,440,130 people or 71.3% of the total health workforce in 2022 (2). This shows the large role nurses in the national health service system. Previous research shows that nurses' sleep quality is still a significant problem in various hospitals in Indonesia. Poor sleep quality not only affects the physical and mental health of nurses, but can also affect their performance (3). A study conducted on 30 emergency room nurses found a relationship between nurses' work stress levels and nurses' sleep quality (4). Other studies show that there is a relationship between nurses' sleep quality and nurses' performance in documenting nursing care (5). Nurses' sleep quality can increase work fatigue, which will affect nursing care services for patients or nurse performance (6).

Based on an evaluation of the performance of nurses at the hospital, it was found that there was a decline in the quality of service which was thought to be caused by nurses' sleep problems. This problem can have a negative impact on patient safety and the productivity of nurses themselves. Therefore, this study aims to analyze the relationship between sleep quality

and nurse performance in the inpatient room. It is hoped that the results of this research can be used as an evaluation in improving the quality of nurses and improving the quality of hospital services.

Methods

The research design used in this research is correlational analytical research with a "cross-sectional" approach. The sample in this study was all 35 inpatient nurses. The research was conducted in August 2024. The sample collection technique uses the total sampling method. This study used the Pittsburgh Sleep Quality Index (PSQI) questionnaire to determine the sleep quality of nurses, and a questionnaire based on nurse performance assessment standards to determine the level of performance of nurses. The data analysis technique uses the Chi-Square test.

Results

Respondent Characteristics

Table 1 Characteristics of Research Respondents

Characteristics Respondent	Frequency	Percentage (%)
Age		
21-25 years old	9	25,7
26-29 years old	8	22,9
30-34 years old	7	20,0
35-39 years old	4	11,4
≥40 years	7	20
21-25 years old	9	25,7
Education		
Diploma in nursing	26	74,3
Bachelor of nursing	9	25,7
Nurse Employees		
Still	14	40,0
Contract	21	60,0
Consumption drug		
Never	15	42,9
1x a week	8	22,9
2x a week	10	28,6
≥3x a week	2	5,7

Based on table 1, a small portion of the respondents fell into the 21-25 year age group, namely 9 respondents (25.7%), almost all of the respondents had D3 education, 26 respondents (74.3%). The majority of respondents have contract employee status, 21 respondents (60.0%). almost half of the respondents have never consumed sleeping pills, 15 respondents (42.9%).

Specific Data

Table 2 Nurses' Sleep Quality in the Inpatient Room

sleep quality	Frequency	Presentation (%)
Good sleep quality	5	14,3
Poor sleep quality	30	85,7
Total	35	100

Based on table 2, almost all of the respondents had poor sleep quality, 30 respondents (85.7%).

Table 3 Nurse Performance in Inpatient Rooms

Performance	Frequency	Presentation (%)
Good Nurse Performance	16	45,7
Poor Nurse Performance	19	54,3
Total	35	100

Based on table 3, the majority of respondents had poor nursing performance, 19 respondents (54.3%).

The results of bivariate analysis using the chi-square analysis test obtained a p value = 0.008, where the p value < α (< 0.05) which means there is a relationship between sleep quality and nurse performance in the inpatient room.

Discussion

The results of this study showed that the majority of nurses (85.7%) experienced poor sleep quality, with only 14.3% having good sleep quality. These findings are in line with previous research showing the prevalence of poor sleep quality among health workers, which is often caused by various factors, including irregular work patterns and job stress. Good sleep quality is an important factor in supporting the physical, mental and emotional well-being of nurses(7). Poor sleep quality can contribute to fatigue and decreased work effectiveness, which ultimately has a negative impact on the health services provided to patients (8).

Based on the data, the age of the respondents shows that younger nurses (21-25 years) also experience poor sleep quality, although the percentage of older nurses (≥ 40 years) shows the same proportion. This suggests that although it is thought that older nurses may experience more sleep problems due to physiological changes with age, other factors such as job stress and job demands may also contribute to poor sleep quality among younger nurses. One of the things that affects sleep quality is the intense use of social media and the habit of bringing smartphones to bed, which makes the duration of social media use longer, thus disrupting the regulation of the melatonin hormone and causing longer sleep hours and affecting the individual's sleep quality (9). This is supported by interview results which show that all respondents have and use smartphones.

The study also found that the use of sleeping pills, noted by some respondents, can significantly affect sleep quality. Although sleeping pills can help in the short term, their use carries the risk of causing dependence and tolerance, which can worsen sleep quality in the long term(10). Continuous consumption of sleeping pills will result in dependency, it is best to communicate the use of sleeping pills with a doctor (11). Researchers argue that efforts to improve nurses' sleep quality should not only rely on medication use, but also include changes in work patterns and work environments. Some efforts to improve sleep quality include regular exercise which can improve sleep quality(12), with spiritual freedom emotional therapy(13), foot massage(14) and giving aromatherapy such as lavender(15).

Furthermore, the results showed that shift work, which is a common practice in hospitals, greatly affects nurses' sleep quality. Also highlights the significant relationship between shift work and fatigue, which causes sleep disorders. In this context, it is important for hospital management to consider implementing more flexible work systems or better scheduling to minimize the negative impact of shift work on sleep quality(16).

Statistical analysis using the chi-square test showed that there was a significant relationship between sleep quality and nurse performance ($p = 0.008$). This finding is in line with previous research which states that poor sleep quality has a negative impact on the performance of health worker(17). Good quality sleep contributes to the cell regeneration

process and increases work effectiveness and body immunity, which is important for maintaining the health of nurses and patient safety(18).

Nurses' education also plays an important role in their performance. The findings show that nurses with a bachelor's degree tend to have better performance than those with a diploma education(19). Higher knowledge and skills are directly related to the quality of services provided. This research emphasizes the importance of continuing education and training for nurses to improve their performance.

Based on the results of this research, hospital management is expected to pay more attention to the sleep quality of nurses by conducting regular evaluations of their working conditions and health. Better policies regarding work scheduling, supportive work environments, and health and wellness programs can help improve nurses' sleep, which in turn will have a positive impact on their performance and patient safety. Further research is also needed to explore effective interventions in improving sleep quality among nurses and other healthcare workers.

Conclusions and Recommendations

Based on the results of the sleep quality research, almost all of the inpatient rooms had poor sleep quality, 30 respondents (85.7%), and the performance of nurses in inpatient rooms mostly had poor performance, amounting to 19 respondents (54.3%). The results of statistical tests show that there is a relationship between sleep quality and the performance of nurses in hospital inpatient rooms. Therefore, interventions are needed to improve nurse sleep quality in order to improve their performance in providing health services.

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