

ASSOCIATION BETWEEN NURSE BURNOUT AND PATIENT SAFETY INCIDENTS IN HOSPITALS

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Abstract. Nurses are the biggest resource and a cornerstone of health services in hospitals, where nurses experience many problems, one of which is burnout. Burnout is a chronic stress condition in which nurses feel physically, mentally, and emotionally exhausted because of the work they are facing. Many studies conducted in various countries show that the level of nurse burnout is still high, one of which is Indonesia. From the research, it was also found that one of the consequences of nurse burnout was a decrease in patient safety in the hospital. The purpose of this study was to determine the relationship between nurse burnout and patient safety incidents at the hospital. This study uses a type of correlational quantitative research with a cross-sectional design. The independent variable in this study was nurse burnout, the dependent variable in this study was patient safety incidents. Data collection uses digital instruments with the Google Form platform which is distributed via the Google Form link on the WhatsApp application. The burnout instrument in this study was the MBI. The univariate analysis used is the frequency distribution. Bivariate analysis in this study used the Spearman Rank test. The results showed that there was a relationship between nurse burnout and patient safety incidents with a p-value of 0.004.

Keywords: Burnout, Patient Safety Incidents, Nurses.

INTRODUCTION

Nursing services are a form of professional services that are an integral part of medical services based on nursing knowledge and tips. Nursing services are comprehensive biopsychosocial and spiritual services covering all processes of human life, targeting both sick and healthy individuals, families, and communities (Hidayat, 2012). Nurses are the most important human resources in hospitals because apart from their large number, nurses are also a profession that provides 24-hour service to patients (Simamora et al., 2017). The observation results show that the average workload of nurses per person is 86.59% of all working hours. This shows that the nurse's working time exceeds the productive time, namely 80%. Excessive workload can result in physical and mental fatigue, hereinafter referred to as burnout (Tri M and Yulia P., 2020).

Burnout is defined as a chronic stress condition where nurses feel physically, mentally, and emotionally exhausted because of their work. Burnout is characterized by three symptoms, namely first, physical fatigue. Nurses who experience burnout will always feel tired all the time, decreased immunity, and decreased appetite. Second, it is characterized by emotional symptoms such as feelings of failure, feelings of helplessness, lack of enthusiasm, loss of motivation, and decreased job satisfaction. Third, behavioral symptoms, namely nurses who experience burnout will be frustrated and irresponsible (Smith Gill and Segal, 2011).

Burnout is a global problem. According to one Maria et al, study conducted in Spain, Portugal, and Brazil in 2016-2017, the incidence of burnout among Spanish nurses was 11.9% for severe burnout, 31.2% for moderate burnout, and 56% without burnout. In Portugal, nurses experienced high burnout of 9.5%, moderate burnout of 32.7%, and no burnout of 57.8%. In Brazil, nurses with high burnout are 11.9%, moderate burnout is 29.8%, and no burnout is 58.3% (Borges et al., 2021). Another study conducted by Klopper et al (2012) stated that they had compared three dimensions of burnout among nurses from 8 different countries, namely the US, Canada, UK, Germany, New Zealand, Japan, Russia, and Armenia) and African nurses. The South experienced higher burnout than nurses working in other countries (Klopper, Hester C., Siedine K. Coetzee, 2012). In research conducted by Sermeus et al and Galindo et al in Europe in 2011, namely, 30% of nurses reported experiencing fatigue at work, 42% of British nurses suffered from burnout and 44% of Greek nurses reported discomfort at work (Ribeiro,

2014). This shows that many nurses experience burnout in various countries.

Incidents of burnout in Indonesia still occur a lot. Research conducted by Yunita Liana (2019) at the Palembang Dangkar Hospital stated that nurses with low burnout were 58.8%, and nurses with moderate burnout were 41.2% (Liana, 2020). A study conducted by Renita Rupang and Imelda Derang (2021) at Santa Elisabeth Hospital in Medan showed that 36% of nurses had high burnout, 48% moderate burnout, and 16% low burnout (Rupang & Derang, 2021). Research conducted by Triyana Putri (2019) at Soeharto Heerdjan Jakarta Hospital stated that the results of nurses experiencing high burnout were as much as 10%, moderate burnout as much as 86.9%, low burnout as much as 3.1% (Putri, 2019). Another study conducted by Aristina Halawa et al (2022) at Wiliam Booth Hospital Surabaya stated that nurses with high burnout were 37.1%, moderate burnout was 28.6%, and low burnout was 34.2% (Halawa et al., 2022).

Continued burnout among nurses can lead to serious problems. Burnout can affect caregivers (nurses) themselves and service organizations. The most visible impact of burnout on nurses is reduced performance and quality of service. Caregivers who suffer from burnout lose purpose in their work because it takes time to cope with emotional, physical, and mental exhaustion. As a result, they are unable to meet the demands of their jobs and eventually choose not to show up, take frequent sick leave, or even quit their jobs. (Tinambunan & Tampubolon, 2018). Fraderos explained that burnout leads to poor quality of life for nurses (Fradelos, E, Mpelegrinos, S. Mparo, Ch Vassilopoulou Ch, Argyrou, P Tsironi, M, Zyga, S, Theofilou, 2014). Bloom and Farraghter stated that burnout can lead to sudden death resulting from excessive work, and can even result in a risk of suicide for nurses (Warner H. R., 2014).

The decline in nurse performance due to burnout has an impact on health institutions, namely a decrease in patient satisfaction and quality of service (Clausen, T., Nielsen, K., Carneiro, L., & Borg, 2012). Studies conducted by Chiara Dall et al (2020) show that burnout affects patient safety and adverse events such as medication errors, infections, and risk of falling (Dall'Ora et al., 2020). A study conducted by Nantsupawat, Nantsupawat, Kunaviktikul, Turale, & Poghosyan, (2015) also found that every increase in burnout on the emotional fatigue side was associated with a 2.63-fold increase in poor service quality. A 30% increase resulted in a decrease in the number of patients, a 47% increase in medication errors, and a 32% increase in infections (Nantsupawat, A., Nantsupawat, R., Kunaviktikul, W., Turale, S., & Poghosyan, 2015).

From the explanation above, there are many problems caused by nurse burnout, so the purpose of this research is to find out the relationship between nurse burnout and patient safety incidents in hospitals.

METHODS

The type of research used is correlational quantitative with a cross-sectional design. The research was conducted at a hospital in Karisidenan Pati in April 2023. Data collection used digital instruments with the Google Form platform which was distributed via the Google Form link on the WhatsApp application. The sampling technique used was total sampling, all nurses who filled out the link were used as respondents, namely as many as 44 nurses. The independent variable in this study is nurse burnout, and the dependent variable is patient safety incidents. The burnout instrument used the Maslach Burnout Inventory (MBI) questionnaire from Maslach 1993 in Sari 2015 (Sari, 2015). The MBI questionnaire consists of three parts, namely emotional exhaustion with 9 statements, depersonalization with 5 statements, and low personal achievement with 8 statements. So that the total questionnaire is 22 statement items. The MBI instrument is a valid and reliable questionnaire for measuring nurse burnout. The patient safety incident instrument was developed by researchers and has been tested for validity and reliability. The statistical analysis in this study is the Spearman Rank test.

RESULTS AND DISCUSSION

Univariate

Univariate analysis in this study, namely demographics (gender, age, education level, and length of work), nurse burnout, and patient safety incidents. The results of the univariate analysis can be seen in the frequency distribution table below.

Table 1. Frequency and Distribution of Respondents by Gender

Gender	Total	%
Male	12	27, 3
Female	32	72, 7
Total	44	100

Table 1 shows that most of the respondents are female than male. The female sex is 72.7%, and the male sex is 27.3%. The results of this study are by research conducted by Yunita Liana where the most respondents were female, 61.8%, male 38.2% (Liana, 2020).

Table 2. Frequency and Distribution of Respondents by Age

Age	Total	%
22 – 31 years old	13	29, 6
32 – 41 years old	28	63, 6
42 – 51 years old	3	6, 8
Total	44	100

Table 2 shows that most respondents are 31-40 years old at 63.6%, and the least are respondents aged 41-50 years at 6.8%. This survey is consistent with a survey conducted by Nuraevina Madong, which shows that the majority of respondents are > 32 years old, which is 55.4% (Nuraevina Madong, 2018).

Table 3. Frequency and Distribution of Respondents by Education

Education	Total	%
D3	18	40, 9
Ners	26	59, 1
Total	44	100

Table 3 shows that most of the respondents have a Nurse education level of 59.1%, and a D3 education level of 40.9%. These results are by a study conducted by Renita Rupang which stated that most of the respondents' education levels, namely Nurses, were 69%, and D3 education levels were 31% (Rupang & Derang, 2021).

Table 4. Frequency and Distribution of Respondents by Length of Work

Length of Work	Total	%
< 4 years	10	22, 7
4 – 7 years	11	25
≥ 8 years	23	52, 3
Total	44	100

Table 4 shows the longest number of respondents working, namely > 8 years, amounting to 52.3%, and at least <4 years, namely 22.7%. This research is in line with research from Nuraevina Madong which results that most respondents with a length of service of > 8 years are 50.5% (Nuraevina Madong, 2018).

Table 5. Frequency and Distribution of Nurse Burnout

Burnout	Total	%
Low	9	20, 5
Moderate	28	63, 6
High	7	15, 9
Total	44	100

Table 5 shows the nurses who experienced the most levels of burnout, namely moderate burnout of 63.6%, and nurses with the fewest levels of burnout high burnout of 15.9%. his study is consistent with the following study by Dyannnda which shows that most nurses experience moderate burnout of 65.1%, and the least severe burnout is 13.9% (Dyannnda Pramana P., 2019).

Table 6. Frequency and Distribution of Patient Safety Incidents

Patient Safety Incidents	Total	%
No incidents	36	81, 8
There's an incident	8	18, 2
Total	44	100

Table 6 shows that there were patient safety incidents at the hospital at 18.2%, and there were no patient safety incidents at the hospital at 81.8%. This study agrees with research conducted by Chiara Dall et al which stated that there was a decrease in patient safety and adverse events including medication errors, infections, and the risk of falling (Dall'Ora et al., 2020).

Bivariate

The results of the bivariate analysis in this study, there is a relationship between nurse burnout and patient safety incidents at the hospital as follows:

Table 7. Relationship between Nurse Burnout and Patient Safety Incidents in Hospitals

		Patient Safety Incidents				Total		p-value
		No incidents		There's an incident				
		Total	%	Total	%	Total	%	
Burnout	Low	9	20, 5	0	0	9	20, 5	0.004
	Moderate	24	54, 5	4	9, 1	28	63, 6	
	High	3	6, 8	4	9, 1	7	15, 9	
Total		36	81, 8	8	18, 2	44	100	
Spearman		0.424						

Table 7 shows that most of the nurses experiencing moderate burnout experienced no patient safety issues (54.5%), whereas patients experiencing high burnout of nurses had no safety issues (6.8%). Table 7 also shows that there are nurses with moderate burnout levels and patient safety incidents of 9.1%, nurses with high burnout levels and patient safety incidents of 9.1%, and nurses with low burnout levels and patient safety incidents of 0. %. Results based on the SPSS statistical test showed a p-value of 0.004 <0.005, indicating a significant association between nurse burnout and patient safety incidents within the hospital. The Spearman test result is 0.424 which indicates that the correlation between nurse burnout and patient safety incidents in hospitals is quite strong.

Burnout is a symptom of emotional exhaustion caused by heavy work demands and is often experienced by those who work in situations where the needs of many people must be attended to. Burnout syndrome has the potential for nurses who experience work stress because of the stress experienced by nurses. Work stress is an example of not managing resources in an institution. Burnout is a state of fatigue or frustration that occurs because someone works too hard to achieve expectations without paying attention to their own individual needs (Priyantika, 2018). Meanwhile, according to the National Safety Council in 2009, work saturation is the most common result of work stress and workload (Halawa et al., 2022). According to Maslach in Nursalam (2016), two factors can cause burnout: personal factors and environmental factors. Personal factors include personality, expectations, demographics, focus on control, and level of efficiency. Environmental factors include workload, reward, management, personal responsibility, fairness, and values (Nursalam, 2016). Research conducted by Liana is by the opinions of experts which show the results that there is a relationship between age, years of service, gender, marital status, workload, and work stress with the incidence of nurse burnout (Liana, 2020). Other research that agrees is research from Eliayan which states that workload is the most dominant variable that can cause burnout in nurses (Eliyana, 2016).

If nurses experience burnout it can cause physical problems such as headaches, indigestion, muscle stiffness, hypertension, and sleep disturbances (Yulianti et al, 2017). Maslach argues that burnout has three dimensions: emotional exhaustion, depersonalization, and low personal achievement. Nurses who experience emotional exhaustion will feel out of energy all the time so they are reluctant to carry out work and are reluctant to interact with others. Nurses who experience depersonalization will tend to minimize their involvement in work and even lose their idealism at work. This will result in the indifferent behavior of nurses towards the patients being served. The low performance of nurses due to burnout, namely nurses always negatively evaluate themselves so that a pessimistic attitude towards work appears, feel unable to work properly as a result of decreased performance and the quality of services provided is not optimal (Nursalam, 2016).

The results of this study suggest that nurse burnout may lead to hospital patient safety incidents. The results showed a significant association between nurse burnout and patient safety incidents, with a p-value of 0.004. Researchers assume that if nurses experience burnout, over time the nurses will show symptoms of physical, mental, and emotional fatigue and this will result in patient safety incidents at the hospital. This study is consistent with that of Chiara Dall et al (2020) stated that burnout affects patient safety and adverse events such as medication errors, infections, and risk of falls (Dall'Ora et al., 2020). The results of another study conducted by Nantsupawat, Kunaviktikul, Turale, & Poghosyan, (2015) are also consistent with this study, finding that for each increase in burnout on the emotional fatigue side, service quality decline increased 2.63 times I understand. There was a 30% increase in patient falls, a 47% increase in medication errors, and a 32% increase in infections (Nantsupawat, A., Nantsupawat, R., Kunaviktikul, W., Turale, S., & Poghosyan, 2015). If there is a patient safety incident at the hospital, it is feared that the quality of hospital services will decrease as a result, the public's trust in the hospital will also decrease. This of course will be detrimental to patients, nurses, and also hospitals.

Given the enormous impact of burnout, there are several ways nurses can do to prevent burnout. These methods include increasing self-awareness, expectations that match reality, having social and professional support, positive thinking, practicing relaxation techniques, giving self-respect, using humor and games, being able to adapt to change, and actively participating in ongoing training and education. (Yulianti et al, 2017).

CONCLUSION

Burnout is a chronic stress condition in which nurses feel physically, mentally, and emotionally exhausted because of the work they are facing. This study shows the results that there is a fairly strong and significant association between nurse burnout and patient safety incidents at the hospital with a p-value of 0.004 and a Spearman test of 0.424. The benefit of this research is that it can add to the study of knowledge related to nurse burnout and patient safety incidents. Suggestions for further research are studies related to non-pharmacological measures that can be used to prevent burnout in nurses.

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