Research Article

Patient Safety Culture Among Nurses: Comparison Between Public and Private Hospital in Indonesia

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Abstract

Aims: This study aimed to describe the patient safety culture among nurses working in both public and private hospitals in Karawang, Indonesia. By examining the perceptions and practices of nurses regarding patient safety, the research sought to identify strengths and areas for improvement within the healthcare system. The findings are intended to inform strategies for enhancing patient safety practices, thereby contributing to better healthcare outcomes for patients in the region.

Methods: This study employed a cross-sectional methodology to investigate the patient safety culture in the intensive care units of two private and two public hospitals in Karawang, Indonesia. The researchers utilized the Hospital Survey on Patient Safety Culture (HSPSC) to gather data on nurses' perceptions and practices regarding patient safety. To analyze the data and identify any significant differences in patient safety cultural practices between the various hospital groups, both chi-square tests and independent t-tests were conducted. This approach allowed for a comprehensive assessment of the patient safety culture within the selected hospitals, facilitating comparisons between public and private healthcare settings.

Results: The study included a total of 118 nurses, with 52 working in a public hospital and 66 in a private hospital. The average age of nurses in the public hospital was 36.11 years (SD: 4.78), while those in the private hospital had a lower average age of 32.45 years (SD: 3.67). The results indicated a significant difference in the scores related to patient safety culture between the two groups of nurses. Specifically, nurses in the private hospital reported a higher patient safety culture compared to their counterparts in the public hospital, highlighting the disparities in perceptions and practices regarding patient safety in these different healthcare settings.

Conclusion: Nurses employed in private hospitals reported a higher level of patient safety culture compared to those working in public hospitals. This finding underscores the importance of creating a comfortable work environment in healthcare settings, as it is essential for minimizing the risk of patient safety incidents. By fostering a supportive and safe atmosphere, healthcare facilities can enhance the overall quality of care provided to patients and promote better outcomes in both private and public hospitals.

Keywords:
Indonesia, Nurse, Patient safety culture, public hospital, private hospital

INTRODUCTION

Patient safety is recognized as a critical focus for healthcare organizations globally, as highlighted by Ammouri et al (1). It is considered a fundamental aspect of delivering high-quality healthcare, with the World Health Organization (WHO) defining it as "doing no harm to patients" and "preventing errors and harmful effects related to health care" (2). These definitions emphasize the importance of minimizing risks and ensuring that patients receive safe care. In the realm of patient safety, terms such as 'adverse incidents' and 'near misses' are commonly used, with the WHO providing specific definitions for these concepts. Importantly, the WHO notes that only avoidable adverse events can be seen as indicators of inadequate patient care, highlighting the need for proactive measures to enhance safety and reduce the likelihood of such occurrences.

The World Health Organization (WHO) initiated the Patient Safety Friendly Hospital Initiative (PSFHI) to cultivate a culture of patient safety within healthcare institutions. The initiative encompasses five key components: leadership and governance, patient and public involvement, evidence-based clinical services, safe environments, and lifelong learning. Despite significant efforts to improve patient safety over the past 15 years, preventable adverse events in healthcare remain a pressing concern, as noted by Gaffney et al (3). WHO estimates indicate that approximately 400,000 individuals die during or shortly after hospitalization due to these preventable events, which include medication errors, pressure ulcers, near misses, and identity errors. Moreover, data suggests that about 10-15% of hospital patients experience an adverse event—defined as unintended harm during treatment—of which 50% are deemed avoidable. Alarmingly, 14% of these events result in death or disability, underscoring the urgent need for effective interventions to enhance patient safety and reduce these occurrences.

The culture of patient safety has been extensively explored across various studies involving professionals (4), specific units (5), hospitals (6), and even entire countries (7). A significant focus has been placed on the patient safety culture within intensive care units (ICUs), with numerous researchers from different countries contributing to this body of knowledge, as noted by Zhou et al. (2018). For instance, a study by Carlesi et al (8) highlighted that high workloads were prevalent across most units, except for intermediate care units, and identified a correlation between excessive workloads and an increased risk of adverse patient outcomes. This underscores the critical role that staff workload plays in shaping patient safety culture and outcomes within healthcare settings.

Additionally, numerous researchers have evaluated the patient safety culture in various units using diverse assessment methodologies (9,10). In a notable case study conducted in an outpatient setting in China, researchers aimed to evaluate the country's patient safety culture. This study highlighted that strong "unit teamwork," identified as a common area of strength, might contribute to the concealment of errors. In another study, an open randomized controlled trial was performed to investigate the impact of patient safety culture on the quality of care (11).

As a developing nation with a population of approximately 268.6 million people, Indonesia faces significant challenges in the realm of medical and health services. Key among these challenges are enhancing patient safety and improving the overall quality of healthcare. In response, the government has enacted various regulations related to this issue. The most recent regulations mandate that all healthcare facilities, regardless of certification status, implement a patient

safety program that includes an event reporting system (12)

Despite having a patient safety event reporting system in place for over a decade, Indonesia's approach has not fully aligned with the recommendations established by the World Health Organization (WHO). Dhamanti (13) emphasizes the urgent need for the Indonesian government to improve this system by enacting specific legislation and establishing a robust infrastructure at all levels to facilitate incident reporting.

Moreover, a significant number of healthcare workers lack a clear understanding of the concepts and definitions related to patient safety, and there are no established modules or guidelines available in hospitals (14). A previous study in Indonesia revealed that approximately 2.4% of reported adverse events were classified as potentially serious, while 10.3% were deemed potentially significant.

According to Polo et al (15) and (16), nurses play a crucial role in enhancing the quality of care and ensuring patient safety. This is largely due to their commitment to providing continuous care and their interactions with patients' families and other healthcare professionals. A systematic review of 29 studies conducted in Asia and 11 studies in the United States revealed that six out of twelve Hospital Safety Culture (HSOPS) characteristics received a positive score of less than fifty percent, with "nonpunitive response to errors" having the lowest score (17).

Additionally, a review of 18 studies conducted in Arab countries indicated that healthcare professionals in these regions still perceive a "culture of blame," which deters them from reporting incidents (18). This is particularly concerning given that addressing non-punitive responses to errors is vital for improving patient safety.

Lestari et al (19) conducted a meta-analysis of eleven descriptive studies involving hospital personnel, finding that only 8.3%

and 32.3% of respondents rated Iran's patient safety culture as excellent or very good, respectively. This underscores the need for significant improvements in Iran's patient safety culture.

Conversely, there is limited information regarding nurse burnout among those working in public and private hospitals, especially in resource-limited settings like Indonesia. Consequently, this research was conducted to describe the patient safety culture among nurses in both public and private hospitals in Bandung, Indonesia.

METHODS

Study design
A cross-sectional design was employed for research conducted at a general public hospital in Karawang, West Java, Indonesia. This is the only general public hospital in Karawang and serves as a reference hospital for the region. Both healthcare providers and patients come from diverse ethnic backgrounds.

Sample
Senior nurses eligible to participate in the study were required to hold clinical or managerial positions, including roles such as rotating shift nurses, direct ward/unit supervisors (head nurses), rotating shift nursing supervisors, nurse educators, nurse managers, and nurse executives. They needed to have at least three years of nursing education and a minimum of six months of current workplace experience. Nurses who were excluded from the study were those absent due to illness or maternity leave, those who received specific training on patient safety during the study period, and those who were unwilling to participate. The sample size was determined using Cohen's tables, indicating that 64 participants were necessary to achieve reliable results at a medium effect size, with a power estimate of 0.8 and an alpha level of 0.05 (20). Ultimately, the study recruited a total of 154 participants, leading to an attrition rate of 20%.

Instrument

The socio-demographic questionnaire for this study included fourteen categories, encompassing characteristics such as gender (male and female), age, years of work experience, and educational qualifications (diploma, bachelor's, master's, and above). To assess perceptions of patient safety culture, the study employed the Hospital Survey on Patient Safety Culture (HSPSC), developed by the Agency for Healthcare Research and Quality (AHRQ) of the United States Department of Health and Human Services in 2016. This survey evaluates the importance of safety culture through twelve different composites, covering a total of forty-two topics. Respondents rated each question using a five-point Likert scale, where a score of five indicates "strongly agree" and a score of one indicates "strongly disagree," or a five-point frequency scale, where a score of five signifies "always" and a score of one means "never."

Procedure

This study received ethical clearance from the Institutional Review Board of the affiliated university (III/065/KEPK/STIKEP/JABAR/III/2024), and the researcher obtained a research authorization from the hospital where the study was conducted. To ensure transparency, the investigator presented the study's goals and objectives to the hospital administration. After receiving permission, the researcher distributed the research questionnaire to all nurses working in the intensive care unit. Nurses were given one week to complete the questionnaires at their convenience. Once the collection period concluded, the researcher carefully reviewed the completed questionnaires to ensure they were fully filled out and met the study's criteria.

Data analysis

The characteristics of the research variables were described through the use of univariate analysis, which was the method of data analysis utilized in this study. In order to compare the variables of interest between public and private hospitals, a bivariate analysis was carried out using the chi-square test and the independent t-test. A p-value that was lower than 0.05 was considered to be indicative of a variation that was statistically significant. We used SPSS version 23.0 (SPSS Inc., Chicago, Illinois, United States) to do the analysis on the data.

RESULTS

In this study, a total of 66 nurses from private hospitals and 52 nurses from public hospitals participated. The average age of nurses in public hospitals was 36.11 years (with a standard deviation of 4.78), while the average age of those in private hospitals was 32.45 years (with a standard deviation of 3.67). More than half of the participants held a bachelor's degree, and the majority had been married for over seven years and had more than seven years of work experience in nursing.

Table 1. Demographic characteristics of nurses in internsive care both in public and private hospital (n = 118)

Characteristics	Public hospital (n=52)	Private Hospital (n=66)	t/x^2	Sig.
Age, mean ± SD	36.11 ± 4.78	32.45 ± 3.67	0.457	0.666
Working years, mean ± SD	9.12 ± 3.25	7.67 ± 2.78	0.254	0.389
Married, n (%)	43 (82.7)	53 (80.3)	1.132	0.631
Education level, n (%)				
loma III	21 (40.3)	28 (42.4)	0.541	0.765
Bachelor	31 (59.6)	38 (57.6)		

When comparing patient safety culture practices, nurses working in private hospitals exhibited a higher overall score than those in public hospitals, with scores of 3.65 (SD = 1.12) versus 3.11 (SD = 1.43), respectively (p-value = 0.001). Specifically, within the patient safety culture practice domain, nurses in private hospitals reported significantly higher rates in several areas: teamwork (4.21 (SD = 1.35) vs. 3.78 (SD = 1.76), p-value = 0.001), response to error (3.56 (SD = 1.93) vs. 3.31 (SD = 1.93), p-value = 0.001), and communication openness (3.88 (SD = 1.56) vs. 2.35 (SD = 0.92), p-value = 0.001).

Table 2. Sex difference on patient safety culture practice (n=118)

Variables	Public Hospital		Private Hospital		p-value
	Mean	SD	Mean	SD	
Patients' safety culture	3.11	1.43	3.65	1.12	0.001
Domain score					
Teamwork	3.78	1.76	4.21	1.35	0.001
Staffing and Work Pace	3.42	1.56	3.49	1.40	0.485
Organizational Learning – Continuous Improvement	3.56	1.44	3.66	1.37	0.326
Response to Error	3.31	1.93	3.56	1.93	0.001
Supervisor, Manager, or Clinical Leader Support for Patient Safety	3.64	1.57	3.44	1.68	0.116
Communication about Error	2.15	1.10	2.32	0.87	0.520
Communication Openness	2.35	0.92	3.88	1.56	0.001
Reporting Patient Safety Events	2.21	1.43	2.56	1.35	0.236
Hospital Management Support for Patient Safety	2.54	1.51	2.61	1.37	0.264
Handoffs and Information Exchange	3.53	1.20	3.47	1.23	0.318

Table 2 indicates that there were no statistically significant differences between the two groups of nurses regarding several key factors related to patient safety culture. These factors include staffing levels, work pace, organizational learning, communication about errors, reporting of patient safety events, support for patient safety from hospital management, handoffs, and information exchange. This suggests that both groups of nurses, regardless of whether they worked in public or private hospitals, shared similar perceptions and experiences related to these aspects of patient safety.

DISCUSSION

The study revealed that both public and private hospital employees rated the culture of patient safety as moderate. Nurses play a crucial role in enhancing care quality and ensuring patient safety, as emphasized by Polo et al (2018) and Vaismoradi (2018). Their continuous availability to assist patients and effective communication with medical staff and families are essential. Research by Olsen and Bjerkan (21) suggests that a significant number of deaths could be avoided through improved nursing care. Furthermore, organizations that prioritize patient safety

tend to report fewer problems and adverse events, according to Boamah et al (22). However, nursing errors are often linked to a lack of understanding, inadequate training, and poor communication and coordination among healthcare providers, as identified by Aranaz-Andrés et al (23), Gaal et al.(24), and Nezamodini et al (25). Notably, Nezamodini et al. (2016b) found that both registered nurses and nursing students frequently face challenges in effective communication. To strengthen patient safety culture in clinical settings, more robust interventions in nursing practice are essential (26).

Nurses in private hospitals demonstrated a higher score for patient safety culture compared to those in public hospitals. This disparity may be influenced by differing demographic characteristics. In our study, the nurses were older than those in previous research, with a mean age ranging from 32 to 36 years. Additionally, the majority held a bachelor's degree, were married, and had work experience spanning from 7 to 9 years. These factors could shape their perceptions and experiences related to nursing practices. Future studies should further explore the factors associated with patient safety culture in Indonesia. Nurse management should prioritize fostering a supportive working environment to enhance the culture of patient safety.

"Teamwork within units" received higher scores across countries at various stages of development, as well as in studies with differing temporal characteristics. Collaboration among multiple specialties is inherently necessary in medical treatment. Typically, teams are formed by individuals working together to achieve specific goals that all members have agreed upon. Each team member is expected to contribute a unique set of skills, responsibilities, and functions while utilizing shared resources and maintaining open lines of communication.

Observational studies of team behavior in relation to high standards of clinical performance have identified patterns of communication, coordination, and leadership that facilitate effective teamwork (27). These patterns are closely linked to high clinical performance standards, further supporting the effectiveness of teamwork.

Both public and private hospitals demonstrated the poorest performance in the area of "communication about errors," indicating significant opportunities for improvement, particularly concerning nonpunitive responses to mistakes within the context of patient safety culture. The findings revealed that nurses felt threatened when reporting errors, leading to this component receiving the lowest scores. This aligns with the research conducted by El-Jardali et al (28), which showed that nurses lacked trust in nonpunitive error reporting policies and perceived penalties as major deterrents to reporting. Similar conclusions were reached in studies by Nie et al (29). According to Reason and Hobbs (30), a robust safety culture rests on three pillars: learning, justice, and reporting. A strong reporting culture values the concerns of individuals regarding safety and actively works towards resolving these issues. Therefore, it is crucial for healthcare facilities to reframe mistakes as opportunities for learning and improvement rather than as failures, as emphasized by Ammouri et al (1).

Study Limitation

One limitation of this study is its focus on data from only one public hospital and one private hospital, which may not accurately reflect the overall state of nursing across Indonesia's 36 provinces. However, the study does involve a large private hospital and a national referral hospital, which adds some depth to the findings. Additionally, the patient safety culture scores could have been either inflated or underestimated due to the reliance on self-reported questionnaires. This suggests a need for further research to investigate the psychometric properties of the Bahasa version of the Maslach Burnout Inventory

(MBI), particularly to establish appropriate score cutoffs for this context in Indonesia.

Implication for Practices

Public and private hospitals can use this study as a foundational resource to regularly evaluate the state of their nursing staff concerning patient safety culture. Following this assessment, it is essential to implement targeted interventions aimed at creating a safe work environment for nurses. Such initiatives would empower nursing staff to engage more effectively in promoting patient safety, ultimately enhancing the overall quality of care provided to patients. By fostering a supportive atmosphere that prioritizes safety and open communication, healthcare facilities can cultivate a robust patient safety culture that benefits both staff and patients alike.

CONCLUSION

The study revealed that nurses in both public and private institutions reported a moderate level of patient safety culture, with those in private hospitals demonstrating significantly higher scores. This difference may be linked to variations in training and the working environment between the two types of facilities. To enhance patient safety, it is crucial to foster a comfortable work atmosphere and actively address risks associated with patient safety incidents. Given these findings, future research should involve a larger sample size and explore patient safety culture across a broader range of healthcare settings, including multiple wards within both public and private hospitals. This approach would provide a more comprehensive understanding of the factors influencing patient safety culture in diverse contexts.

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