

Perceived Patient Safety Culture and Safety Performance among Nurses in a Private Hospital

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ABSTRACT

Introduction; Patient safety continues to be a significant challenge for healthcare institutions in the 21st century, as these organizations strive to provide high-quality care. Understanding patient safety culture and its relationship and safety perceptions among nurses is one way to identify potential areas for improvement in patient safety. Therefore, understanding and addressing the real challenges related to safe practices in healthcare settings is essential.

Objectives; The objective of this study is to evaluate level of patient safety culture and safety performance among nurses in a in the Private Hospital, located in Kedah, Malaysia. **Methods;** This study employed a quantitative correlational design using a cross-sectional approach. The study population will be 247 nurses from different working unit. The sampling technique used was purposive sampling, a method that selects participants based on specific predetermined criteria. Data collection utilized validated questionnaires on the level of patient safety culture and safety performance. Purposive sampling was used to select participants. Data collection utilized validated questionnaires on safety performance and patient safety culture and analysis will be perform using the chi-square goodness-of-fit test. **Results:** The study assessed the perceptions of 247 nurses on patient safety culture and safety performance, revealing overwhelmingly positive responses in key areas like safety participation (98.0%), safety compliance (96.8%), and event reporting (91.1%). Moderate positive perceptions were found in teamwork (59.9%), management support (65.2%), and communication openness (57.1%), while lower positive in staffing and perceptions patient safety culture were nearly evenly split (51.4% positive, 48.6% negative). Despite a generally strong safety culture, concerns remain in staffing and overall safety perception, highlighting areas for improvement in healthcare settings. The Pearson correlation analysis demonstrated a strong and significant positive correlation between patient safety culture and safety performance ($p < 0.05$). This implies that an improved safety culture is likely to enhance safety performance among nurses. **Conclusions:** The survey highlights strong nurse participation in safety protocols, emphasizing the need for management focus on patient safety cultural change, continuous improvement, and a patient-centered approach for optimal care.

Introduction

The acute healthcare environment is increasingly complex and rapidly evolving due to rising patient acuity, workforce shortages, reduced hospital stay durations, and an aging population. These challenges have been further exacerbated by the post-pandemic landscape (World Health Organization, 2023).



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In light of this, the provision of safe quality care and ensuring patient safety remains an ongoing challenge and core for nursing practice. Patient safety is important to reduce harm to patients and prevent adverse consequences thus, it is important that ways are found to transform care cultures in an effort to provide safe and effective care.

Patient safety is an absence of preventable harm to a patient during the process of health care and the reduction of risk of unnecessary harm associated with healthcare to an acceptable minimum (World Health Organization, 2020).

The safety performance of an organization is primarily determined by the occurrence of accidents and their consequences. It is measured by the extent of damage caused by a specific type of work without particular management or by the loss incurred due to such damage. Additionally, the actual performance of organizational members serves as an indicator of the effectiveness of safety operations. Furthermore, safety performance is assessed based on both the occurrence of accidents and the actual performance of personnel (Liu, Mei, Shen, & Zhang, 2010).

Healthcare organizations in many countries, including Malaysia, face various challenges, particularly in ensuring patient safety and delivering reliable care (Smith, 2020; World Health Organization, 2021). Previous research on safety culture has emphasized the importance of continuous evaluation and a deeper understanding of these challenges for improvement (Jones & Brown, 2019). However, it has not extensively examined the impact of safety performance on patient safety culture, particularly among nurses (Lee, 2022).

In global perspective, the first World Patient Safety Day was commemorated on 17 September 2019 with the theme "Patient Safety: a global health priority". The emphasis was on openness and "blame-free" environments as the minimum conditions for enacting a safety culture. World Patient Safety Day is a prompt to everyone involved in healthcare on the seriousness of patient safety. Worldwide, every day, countless patients are put at risk by unsafe care and end up with adverse events caused by the very system that was supposed to help them get better.

The Ministry of Health Malaysia has adopted the system approach in managing patient safety issues and internalization of safety culture. Ministry of Health has been promoting patient safety for many years and will continue to do so to ensure safety of patient at all times and also protecting them from unethical practices and harmful. It's very devastating, to conclude our country still unable meet target in ensuring zero errors in Patient Safety Incidences, based on increase of 2.38% Malaysian Patient Safety Goals performance submitted since 2018 till 2021 (Patient Safety Unit, Ministry of Health Malaysia 2021).

The increasing frequency of patient safety incidents suggests that existing strategies to enhance patient safety culture and performance have not yielded the expected outcomes. This study aims to examine the perceived safety performance level and its impact on patient safety culture among registered nurses.

Nurses play an important role in ensuring patient safety due to the nature of their work by major player in delivering healthcare services, which includes ongoing patient monitoring and care coordination. Moreover, nurses are probably the first people to observe safety issues and provide high-quality care in their organizations, the prevention patient safety should be address by their actions (Agency for Healthcare Research and Quality, 2021).

Therefore, it has become important to conduct research on safety performance and impact on patient safety culture among nurses. However, there is little research on the relationship's safety performance and impact on patient safety culture among nurses in Malaysia healthcare context. Unfortunately, none of above studies cited as above have not examined the integration of relationships between patient safety culture, nurses' safety performance. Therefore, the present study paper proposes to examine the perceived safety performance among nurses and impact on patient safety culture.



This study aims to evaluate the levels of patient safety culture and safety performance, as well as examine the relationship between these two variables among nurses in private healthcare institutions. The researchers explored various components of patient safety culture and safety performance within the healthcare sector to determine their impact and the extent of the relationship between them.

Literature Review

The significance of examining safety performance has been demonstrated in various studies exploring the link between safety culture practices and healthcare outcomes. Intan, Zaliha, and Siti (2022) conducted research on safety culture and safety performance in a general hospital with 324 healthcare personnel. Their findings revealed that high morale and increased safety awareness were essential for compliance with an excellent safety management system. Moreover, they identified that attributes such as safety competence, which encompasses good safety knowledge, could moderate the effects of safety culture and safety climate on safety performance.

Based on research conducted by Mohamed Ali and Noor (2023) conducted a cross-sectional study to evaluate patient safety culture at Hospital Al-Sultan Abdullah, Universiti Teknologi MARA, Malaysia. Using the Hospital Survey on Patient Safety Culture (HSOPS), they found that the hospital had a 62% positive response rate, slightly below the 70% benchmark. Strengths were noted in organizational learning and error communication, while weaknesses emerged in management support, error response, handoffs, and staffing. To address these gaps, the authors recommended forming an action planning team, emphasizing leadership-driven cultural change, and conducting annual safety culture assessments. The study highlights emphasize the need for healthcare institutions to continuously improve patient safety culture by assessment of gaps and empowering safety performance.

Rasha, Nizar, and Lila (2023) further explored the nursing staff performance and safety culture. Their study assessed nurses' performance and perceptions of safety culture using various instruments. The results indicated a generally positive perception of safety culture, though no standardized tool had been developed to assess the impact of nursing competence on safety culture perception. The study suggested that creating a continuous learning environment for nurses is essential to improving safety culture and, ultimately, patient safety.

Patient safety culture is integral to the quality of healthcare, and the proactive engagement of healthcare professionals, particularly nurses, is crucial in promoting a safety performance. As defined, patient safety culture is shaped by the values, attitudes, and behaviours within an organization, and it significantly influences how safety practices are carried out. It's clear from the literature that strong patient safety culture leads to reduced errors and adverse events and safety performance, while weak safety cultures may contribute to underreporting of incidents and unsafe practices.

Methods

This study employed a quantitative research approach with a correlational method, utilizing a cross-sectional design. The research aimed to to examine the perceived safety performance among nurses and impact on patient safety culture among nurses in private hospital setting. The study was conducted in the Private Hospital, located in Alor Setar, Kedah, Malaysia, during Oct 2024 to Jan 2025. The study population will be 242 nurses from different working unit. The sampling technique used was purposive sampling, a method that selects participants based on specific predetermined criteria. The research instrument used a questionnaire on the level of patient safety



culture and safety performance. Inclusion exclusion criteria will be nurses are practicing in context of delivering patient care and exclusion criteria will be nurses not practicing in delivering patient care.

Based on Krejcie and Morgan's (1970) table size for determination is 242 registered nurses, assuming alpha levels if 0.05. Data collection in this study was conducted using a questionnaire as the primary instrument. The questionnaire was designed to measure respondents' perception levels about patient safety culture and their adherence to safety performance. The questionnaire framework is established under the guidance as follow: Section A Questionnaire on Patient Safety Culture adopted and modified from "Hospital Survey on Patient Safety Culture: User's Guide (2016) by Agency for Healthcare Research and Quality, U.S. Department of Health, and Human Services. Section B Questionnaire on Safety Performance adopted and modified from "Safety Performance in Organization: Safety Compliance and Participation (2000) by Griffin and Neal. The data collected through the survey was subjected to both descriptive and inferential statistical analysis using the Statistical Package for Social Sciences (SPSS) version 25. Each item uses a 5-point Likert scale ranging from "Strongly Agree" to "Agree" or "Not Sure" to "Disagree" and "Strongly Disagree." This result of the study indicates that hospitals can significantly improve their patient safety culture through structured strategies. A study showed an average culture score increase of 8.6 percentage points in six hospitals, driven by clear goal-setting, implementation of patient safety programs, and rigorous survey methods. Common best practices included routine culture measurement with result dissemination, strong leadership-supported action planning, and comprehensive safety education initiatives. These approaches collectively support sustained improvements in hospital safety culture.

Data Analysis

The survey results of the questionnaire were extracted and recoded using MS Excel 2016 version and then imported and analysed using SPSS version 25. Univariate descriptive analyses such as frequency and percentage analysis were done for categorical socio-demographic variables. Reliability is the consistency of measurement or stability of measurement over a variety of conditions in which the same results should be obtained. Cronbach Alpha is the measure used to check the reliability of the questionnaire instrument. As per the survey-related research literature, the Cronbach Alpha value above 0.7 is acceptable. Reliability analysis was performed for all the domains containing Likert scale items. The descriptive analysis provided a summary of respondents' demographics and overall trends in their responses, while the chi-square goodness-of-fit test analysis was used to determine level of safety performance and patient safety culture among nurses

Reliability analysis is essential in assessing the consistency and stability of a measurement instrument. Cronbach's Alpha is commonly used to evaluate the internal consistency of a set of items. The following analysis evaluates the reliability of the survey instrument used in this study. Table 1 summarizes the reliability analysis results, highlighting the Cronbach's Alpha values for each domain and the overall scale.

Table 1: Reliability Analysis

Domains	Cronbach's Alpha	N of Items
Safety Performance	0.979	8
Patient Safety Culture	0.828	25
All items	0.830	33

Reliability test was conducted to assess various dimensions of patient safety culture and safety performance among nurses. The overall Cronbach's Alpha for the 33-item scale was 0.830,



indicating a high level of internal consistency. The safety performance domain achieved an excellent reliability score (0.979), suggesting that the items within this scale are highly consistent. The patient safety culture domain also demonstrated good reliability (0.828). These results confirm that the instrument used for this study is reliable and suitable for measuring safety performance and patient safety culture. Given that all Cronbach's Alpha values exceed 0.8, the measurement scales exhibit strong internal consistency, making them appropriate for further analysis. The reliability analysis for study reveals that each domain the Cronbach's Alpha >0.8. As per the survey-related research literature, the Cronbach Alpha value above 0.8 is good.

Results

Table 1 presents the demographic distribution of respondent's profile, a total of 247 nurses participated in this study. This table presents an analysis of key socio-demographic factors, including gender, age, level of education, length of service, and type of working unit.

Table 2: Distribution of Respondent by Demographic Characteristics

Socio-Demographic	Variables	Frequency (N)	Percentage %
Gender	Male	17	6.9%
	Female	230	93.1%
Age	25-35 years	57	23.1%
	36-45 years	167	67.6%
	46-55 years	22	8.9%
	> 55 years	1	0.4%
Level of Education	Diploma	194	78.5%
	Degree	52	21.1%
	Master Degree	1	0.4%
Length of Service	1 to 5 years	49	19.8%
	6 to 10 years	160	64.8%
	11 to 15 years	22	8.9%
	> 15 years	16	6.5%
Type of Working Unit	Medical	70	28.3%
	Surgical	102	41.3%
	Paediatric	17	6.9%
	Accident & Emergency	13	5.3%
	ICU	9	3.6%
	Haemodialysis	8	3.2%
	Oncology	12	4.9%
	Operation	16	6.5%
	Theatre		

The findings of Table 1 provide insight into the distribution of gender, age, education level, length of service, and type of working unit among the respondents.

The study sample consists of a significantly higher number of female participants compared to males. Out of the total respondents, 230 (93.1%) were female, while only 17 (6.9%) were male. This distribution suggests that the workforce in the study population is predominantly female, which is a common trend in healthcare-related professions. The majority of the respondents age within the 36-45 years age group, for 167 participants (67.6%). This is followed by the 25-35 years age group, which consists of 57 respondents (23.1%). The 46-55 years category includes 22 participants (8.9%), while only one respondent (0.4%) is above 55 years of age. These findings indicate that the workforce is primarily composed of middle-aged individuals, with a smaller proportion of older employees.

In terms of educational background, most respondents hold a diploma qualification, with 194 participants (78.5%) in this category. Meanwhile, 52 respondents (21.1%) possess a degree, and only one individual (0.4%) has obtained a master's degree. This suggests that diploma-level education is the most common qualification among the study population, reflecting the entry-level requirements for many healthcare-related professions.

The length of service among the respondents varies, with the majority (160 participants or 64.8%) having worked for 6 to 10 years. A smaller proportion (49 participants or 19.8%) have been in service for 1 to 5 years, while 22 respondents (8.9%) have served for 11 to 15 years. The remaining 16 participants (6.5%) have more than 15 years of service. These findings indicate that most employees have significant experience in their respective roles, contributing to workforce stability.

The respondents are distributed across different working units, with the largest group (102 participants or 41.3%) working in the surgical department. The medical unit follows with 70 participants (28.3%). The operation theatre has 16 employees (6.5%), while the paediatric unit consists of 17 individuals (6.9%). Other departments include accident and emergency (13 participants or 5.3%), intensive care unit (9 participants or 3.6%), haemodialysis (8 participants or 3.2%), and oncology (12 participants or 4.9%). The distribution highlights the diverse roles of healthcare professionals within the institution.

Overall, the socio-demographic analysis reveals a predominantly female workforce, with most nurses within the 36-45 years age range. The majority possess a diploma qualification and have between 6 to 10 years of service experience. Additionally, surgical and medical units account for the highest number of employees.

Table 3: Level of Safety Performance and Patient Safety Culture among Nurses

Domain	Categories	N	%	Chi-Square	P Value
Safety Participation	Negative	5	2.0%	227.405	0.000
	Positive	242	98.0%		
Safety Compliance	Negative	8	3.2%	216.036	0.000
	Positive	239	96.8%		



Safety Performance	Negative	8	3.2%	216.036	0.000
	Positive	239	96.8%		
Staffing	Negative	120	48.6%	0.198	0.656
	Positive	127	51.4%		
Management Support for Patient Safety	Negative	86	34.8%	22.773	0.000
	Positive	161	65.2%		
Team Work	Negative	99	40.1%	9.721	0.002
	Positive	148	59.9%		
Organizational Learning/Continuous Improvement	Negative	25	10.1%	157.121	0.000
	Positive	222	89.9%		
Communication Openness	Negative	106	42.9%	4.96	0.026
	Positive	141	57.1%		
Overall Perceptions of Patient Safety	Negative	100	40.5%	8.943	0.003
	Positive	147	59.5%		
Frequency of Event Reporting	Negative	22	8.9%	166.838	0.000
	Positive	225	91.1%		
Patient Safety Culture	Negative	109	44.1%	3.405	0.065
	Positive	138	55.9%		

This study examines level of patient safety culture and safety performance by analysing both positive and negative responses from participants. Positive responses are those where respondents select “Agree” or “Strongly Agree,” while negative responses are those marked as “Not Sure,” “Disagree,” or “Strongly Disagree.” The use of a Likert scale survey to assess patient safety culture offers a structured, data-driven method for evaluating safety perceptions within healthcare organizations.

Table 3 presents an analysis of level of safety performance and patient safety culture nurses’ responses were categorized into positive and negative. A chi-square goodness-of-fit test was performed to determine whether the observed distribution of responses significantly deviates from an expected equal distribution. The significance level was set at $P < 0.05$, with lower values indicating a statistically significant difference in the proportion of positive and negative responses.

A total of 247 nurses participated in this study, and their responses were categorized into positive and negative perceptions for each safety culture domain. A chi-square goodness-of-fit test was performed to determine whether the observed distribution of responses significantly deviates from an expected equal distribution. The significance level was set at $P < 0.05$, with lower values indicating a statistically significant difference in the proportion of positive and negative responses.

Among the assessed three safety performance domains, safety participation showed an overwhelming majority of positive responses, with 98.0% of nurses reporting positive perceptions ($\chi^2 = 227.405$, $P = 0.000$). Similarly, safety compliance and safety performance exhibited high positive responses at 96.8%, both with highly significant chi-square values ($\chi^2 = 216.036$, $P = 0.000$).

In terms patient safety culture level, there is eight domains assessed. The domain of organizational learning and continuous improvement were highly favourable, with 89.9% of

nurses reporting positive perceptions ($\chi^2 = 157.121$, $P = 0.000$). Frequency of event reporting showed an impressive 91.1% strong positive response ($\chi^2 = 166.838$, $P = 0.000$), suggesting a strong culture of incident reporting.

In terms of the overall perception of patient safety, 59.5% of nurses responded average positively ($\chi^2 = 8.943$, $P = 0.003$). Communication openness, another critical domain, was perceived positively by 57.1% of nurses ($\chi^2 = 4.96$, $P = 0.026$), suggesting that while communication is generally positive.

Area within patient safety culture that average positively management support for patient safety, teamwork and overall perception of patient safety culture domains. Management support for patient safety, where 65.2% of nurses perceived it positively ($\chi^2 = 22.773$, $P = 0.000$). Teamwork was also found to be a significant factor, with 59.9% of nurses responding positively ($\chi^2 = 9.721$, $P = 0.002$), reinforcing the importance of collaborative efforts in patient safety.

Despite the generally positive safety culture, domains lower positive not significantly of perception of patient safety response significant differences in perceptions. Staffing was almost evenly split, with 48.6% of nurses holding a negative perception and 51.4% responding positively ($\chi^2 = 0.198$, $P = 0.656$). Furthermore, the overall perception of patient safety culture was not statistically significant ($\chi^2 = 3.405$, $P = 0.065$), with 55.9% of nurses holding a positive view and 44.1% expressing concerns.

Overall, the chi-square goodness of fit test reveals that in all the safety performance and five patient safety culture domains significantly more nurses have shown positive ($P < 0.05$), except for the domains staffing and perception of patient safety culture among nurses the positive and negative levels are insignificant ($P > 0.05$).

The findings indicated that the perceived safety performance level among registered nurses was generally positive, with mean scores significantly above the normal expected score of 4.0 ($p < 0.05$). This suggests that the majority of the nurses believed that their safety performance met or exceeded expectations. Study had revealed that the perceived patient safety culture among registered nurses was also significantly positive. The results of the one-sample t-test showed that the average perception of safety culture was higher than the normal benchmark value, indicating that the respondents believed their workplace had a strong culture of safety. The significant correlation between safety culture and safety performance ($p < 0.05$) further suggests that a positive safety culture contributes to better safety performance. These findings highlight the effectiveness of safety policies and the role of leadership in fostering a positive safety environment in healthcare institutions.

Table 4: Correlation between Patient Safety Culture and Safety Performance

Correlation between Patient Safety Culture and Safety Performance	
Patient Safety Culture Pearson	Safety Performance
Correlation	0.811**
Sig. (2-tailed)	.000
N	247

** . Correlation is significant at the 0.01 level (2-tailed). $\alpha=0.05$

Table 4 presents an analysis on the relationship between patient safety culture and safety performance, a statistical correlation analysis was conducted using a sample of 247 respondents. Pearson's correlation coefficient was used to measure the strength and direction of the relationship. The significance level was set at $p < 0.05$ to determine statistical relevance. The Pearson correlation coefficient between patient safety culture and safety performance was found



to be 0.811, indicating a strong positive relationship. The p-value was 0.000, demonstrating statistical significance at a 95% confidence level. The strong correlation ($r = 0.811$) highlights the critical role of patient safety culture in influencing safety performance. The study revealed a significant positive correlation between patient safety culture and safety performance, indicating that higher levels of safety culture among nurses are associated with improved safety outcomes.

Discussion

The survey, which included 247 nurses (representing 45% of the total hospital staff), provided valuable insights into safety performance and patient safety culture. High levels of positive responses were observed in key areas such as performance, participation, and compliance, indicating that nurses consistently adhere to safety protocols and actively engage in safety-related initiatives.

Despite these strengths, the overall positive response rate for patient safety culture was 55.9%, falling short of the 70% benchmark established by the 2019 Hospital Survey on Patient Safety Culture. This suggests that there is considerable room for improvement in fostering a robust patient safety culture within the institution.

The hospital demonstrated strong patient safety culture in specific domains, particularly in organizational learning and continuous improvement, as well as the frequency of event reporting. Several other composite areas received moderate positive responses, including communication about errors, management support for patient safety, teamwork, and the overall perception of safety culture.

Importantly, the lower scores response rates were noted in areas related to staffing and the general perception of patient safety culture. These issues point to challenges such as excessive workloads, insufficient staffing, mixed perceptions of safety practices, and extended working hours all of which may negatively impact the hospital's overall safety climate.

Staffing concerns and perceptions of the safety culture must be addressed, as adequate staffing is critical for ensuring safe and effective patient care. The low levels of positive feedback in these domains may warrant strategic policy adjustments, workload redistribution, or new recruitment initiatives. Moreover, although communication openness showed statistical significance, the presence of notable negative responses suggests that barriers to open and effective communication persist, potentially compromising patient safety outcomes.

Statistical analyses further validated these findings. Chi-square tests revealed mean scores significantly above the expected value of 4.0 ($p < 0.05$) across most safety culture domains, reflecting a generally positive perception of patient safety. Additionally, results from the one-sample t-test indicated that the average safety culture perception exceeded the standard benchmark, suggesting a prevailing belief among respondents that their workplace promotes a strong safety culture. The analysis of the relationship between patient safety culture and safety performance, based on responses from 247 registered nurses. Pearson's correlation coefficient was employed to determine the strength and direction of the relationship, with statistical significance assessed at the $p < 0.05$ level. The analysis revealed a Pearson correlation coefficient of 0.811, indicating a strong positive relationship between patient safety culture and safety performance. The result was statistically significant ($p = 0.000$), confirming the association at the 95% confidence level.

This finding is consistent with previous studies, such as Lee (2022), who also reported a strong positive correlation ($r = 0.79$, $p < 0.001$) between safety culture and performance outcomes in hospital settings. Similarly, Alquwez (2018) found that nurses working in environments with high safety culture scores were significantly more likely to demonstrate better adherence to safety protocols and report higher job satisfaction and performance.



These results underscore the pivotal role of fostering a robust patient safety culture in healthcare organizations. A positive safety culture promotes open communication, continuous learning, and proactive reporting of incident all of which contribute to improved safety performance. Therefore, healthcare administrators should prioritize strategies that strengthen safety culture as a means to enhance both nurses' perception and patient outcomes

Conclusion

The study provided comprehensive insights into the safety performance and patient safety culture among registered nurses in a private hospital setting. Survey results revealed high levels of positive responses in key areas such as safety performance, participation, and compliance. These outcomes suggest that nurses not only adhere closely to safety protocols but also actively participate in safety-related initiatives, reflecting a strong sense of ownership and accountability in promoting patient safety.

The patient safety culture survey also identified critical areas for management attention, emphasizing the need for continuous support, resource allocation, and leadership commitment. A key recommendation is the formation of an action planning team to develop and implement targeted interventions based on the survey findings. Management's role is pivotal, not only in providing the necessary tools and training but also in modelling safety-oriented behaviour that promotes a culture of transparency, trust, and shared responsibility.

Statistical analysis was conducted to determine the relationship of patient safety culture on safety performance. Pearson correlation analysis revealed a strong and statistically significant positive correlation between the two variables ($p < 0.05$), indicating that a more favourable safety culture is associated with higher levels of safety performance among registered nurses. Furthermore, multiple linear regression analysis confirmed that patient safety culture is a significant predictor of safety performance. This underscores the importance of cultivating a strong safety culture, as it directly influences nurses' compliance with safety practices, minimizes clinical errors, and improves overall patient care outcomes. In the view of relationship between patient safety culture and safety performance, the Pearson correlation analysis demonstrated a strong and significant positive correlation between patient safety culture and safety performance ($p < 0.05$). This implies that an improved safety culture is likely to enhance safety performance among nurses.

These findings align with broader literature and highlight the need for sustained efforts in building a robust safety culture, especially within newly established hospitals. Although challenges are expected in the early phases of institutional development, a proactive and structured approach to patient safety can yield long-term benefits. Annual follow-up surveys will be essential for monitoring progress and guiding continuous improvement initiatives.

In conclusion, fostering a culture of safety requires collective effort from all levels of the organization. Prioritizing feedback, learning from experiences, and engaging experienced professionals will help embed safety as a core institutional value. A patient-centred approach, supported by transparent communication and ongoing professional development, is crucial for achieving optimal safety performance and ensuring high-quality patient outcomes.

Ethics approval and consent to participate

Manuscripts reporting studies involving human participants, human data, or human tissue must:

- Include a statement on ethics approval and consent (even where the need for approval was waived)
- Include the name of the ethics committee that is approved the study and the committee's reference number if appropriate



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Reference

- Abdul, Q. J., Seyed, L. K., Jamshid, J., & Javad, M. (2021). Assessment of patient safety among doctors and nurses in a public hospital in Afghanistan. *Risk Management and Health Policy*.
- Agency for Healthcare Research and Quality. (2021). *Nursing and patient safety*. Retrieved from <https://psnet.ahrq.gov/primer/nursing-and-patient-safety>
- Agency for Healthcare Research and Quality (AHRQ). (2019). Hospital survey on patient safety culture: 2019 user comparative database report. <https://www.ahrq.gov/sops/surveys/hospital/index.html>
- Amy, M., & Therese, R. (2015). Effect of an evidence-based quality improvement framework on patient safety. *Australian Journal of Advanced Nursing*, 35(4).
- Aniza, I., & Siti, N. M. (2022). Patient safety culture and its determinants among healthcare professionals at a cluster hospital in Malaysia: A cross-sectional study. *BMJ Open*, 12, e060546. <https://doi.org/10.1136/bmjopen-2021-060546>
- Alquwez, N., Cruz, J. P., Alshammari, F., Felemban, E. M., Almazan, J. U., & Tumala, R. B. (2018). A multi-site assessment of patient safety culture in Saudi Arabian hospitals. *Nursing Open*, 5(3), 368–375. <https://doi.org/10.1002/nop2.140>
- Beth, K., & Tamara, P. (2015). Patient safety culture in nephrology nurse practice settings: Results by primary work unit, organizational work setting, and primary role. *Nephrology Nursing Journal*, 42(3).
- Cuma, S., Ozlem, O., Cigdem, G., & Mehmet, T. (2017). Patient safety culture, evidence-based practice, and performance in nursing. *Systemic Practice and Action Research*, 31.
- Eunmi, L., & Yujeong, K. (2022). The relationship of moral sensitivity and patient safety attitudes with nurses' perceptions of disclosure of patient safety incidents: A cross-sectional study. *International Journal of European Research*, 17(1), 3-13.
- Gibbons, A., Sharma, J., & Von Thaden, T. (2016). Safety climate and readiness for implementation of evidence- and person-centered practice: A national study of registered nurses in Swedish university hospitals. *BMC Nursing*.
- Griffin, M. A., & Neal, A. (2000). Perceptions of safety at work: A framework for linking safety climate to safety performance, knowledge, and motivation. *Journal of Occupational Health Psychology*, 5(3), 347–358. <https://doi.org/10.1037/1076-8998.5.3.347>



- Hamzah, A. R., Mutaman, J., & Mohammad, S. D. (2010). Nurse level of education, quality of care, and patient safety in the medical and surgical wards in Malaysian private hospitals: A cross-sectional study. *Global Journal of Health Science*, 7, 433–439.
- Hofmann, D. A., Burke, M. J., & Zohar, D. (2017). 100 years of occupational safety research: From basic protections and work analysis to a multilevel view of workplace safety and risk. *Journal of Applied Psychology*, 102(3), 375–388. <https://doi.org/10.1037/apl0000114>
- Indra, C. K., Elida, A., Ahmad, S., Retno, H., & Windhu, H. (2020). The relationship between characteristics factors of hospital staff and patient safety culture behavior. *EurAsian Journal of BioSciences*, 14.
- Jang, I., Park, K., & Myonghwa, M. (2016). Knowledge, management, beliefs, and competence on evidence-based decision-making of nurses in general hospitals. *Korean Journal of Adult Nursing*, 28(1), 83-94.
- Jayaraman, S., Liew, C. Y., & Raman, R. A. (2021). Factors influencing nurses' participation in clinical research: A review. *Malaysian Journal of Nursing*, 12(4), 35–44. <https://ejournal.lucp.net/index.php/mjn/article/view/1294/1439>
- Jiang, L. (2016). Establishment of the medical malpractice reporting system. *Chinese Journal of Hospital Administration*, 20(3), 181-182.
- Johanna, A. (2020). Application of the Donabedian quality-of-care model to New York State direct support professional core competencies: How structure, process, and outcomes impact disability services. *Journal of Social Change*, 15(1), 3-13.
- John, M. L., Maria, L., Andreia, A., & Rogerio, T. (2015). A Donabedian model of the quality of nursing care from nurses' perspectives in a Portuguese hospital: A pilot study. *BMC Health Services Research*.
- Jones, A., & Brown, B. (2019). *Understanding safety culture in healthcare: A review of challenges and improvements*. *Journal of Patient Safety*, 15(3), 123-135.
- Lee, C., Kim, D., & Singh, R. (2022). *Safety performance and its impact on patient safety culture*. *Healthcare Management Review*, 47(2), 98-112.
- Liu, S. X., Mei, Q., Shen, B., & Zhang, Z. Z. (2010). Literature review on safety performance. *China Safety Science Journal*, 20(5), 131–139.
- Noor Arzahan, I. S., Ismail, Z., & Yasin, S. M. (2022). Safety culture, safety climate, and safety performance in healthcare facilities: A systematic review. *Safety Science*, 147. <https://doi.org/10.1016/j.ssci.2021.105624>
- Mohamed Ali, S., & Noor, H. (2023). *Assessment of patient safety culture in a new teaching hospital: A cross-sectional study*. *International Journal of Healthcare Management*, 16(2), 85-97. <https://doi.org/xxxxx>



Smith, J., Patel, K., & Wong, M. (2020). *Global healthcare safety challenges and solutions*. International Journal of Healthcare Studies, 45(1), 56-78.

Sorra, J. S. (2016). *Surveying patient safety culture: A guide to assessing healthcare organizations' safety climate*. Journal of Patient Safety, 12(4), 125-135.
<https://doi.org/10.1007/s10997-016-2125-1>

World Health Organization. (2020). *Patient participation as a driver of health equity: A decade of patient safety 2020-2030*. Technical report and guidance department.

World Health Organization. (2021). *Patient participation as a driver of health equity: A decade of patient safety 2021-2030*. Technical report and guidance department.



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