Perception of Nurses About Patient Safety Culture in Accredited Hospital by CBAHI in King Khalid Hospital, HafrAl-Batin, Saudi Arabia in 2023

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ABSTRACT

Background: The Commission on Accreditation of Healthcare Organizations (CBAHI) measurespatient safety culture during accreditation of healthcare facilities in Saudi Arabia. The objective of this study is to assess the perception of nurses about patient safety culture in accredited hospitals by CBAHI in King Khalid Hospital, Hafr Al-Batin, Saudi Arabia in2023. **Methods**: This study is observational, quantitative, descriptive, and cross-sectional. The sample size was 133 participants selected through convenient sampling, and data was collected using theHospital Survey on Patient Safety Culture (HSOPS) survey questionnaire. Statistical tests were conducted to determine associations between nurse characteristics and their perception level. **Results**: The study was conducted in King Khalid Hospital, Hafr Al-Batin, Saudi Arabia, with 161nurses participating. The overall mean score of nurse perception of patient safety culture in the hospital was 3.31, indicating a relatively positive perception. No significant difference was foundin the perception of patient safety culture among nurses based on demographic factors. **Conclusion**: The study concludes that there is a relatively positive perception of patient safety culture, but there is still room for improvement in some areas, including communication, involvement of hospital management, and patient care during shift changes.

Introduction

The Saudi Central Board for Accreditation of Healthcare Institutions (CBAHI) is the national agency responsible for accrediting healthcare institutions in Saudi Arabia (Al-Dossary et al., 2018). CBHAI ensures that accredited healthcare institutions provide high- quality healthcare services that meet international standards and are recognized for their commitment to patient safety, quality of care, and healthcare excellence (CBHAI, 2021a). Currently, there are 815 healthcare institutions accredited by CBHAI in Saudi Arabia, including hospitals, primary healthcare centers, and ambulatory care centers (CBHAI, 2021b). These institutions are required to meet CBHAI's rigorous standards of care, safety, and quality, which include regular reviews and comprehensive evaluations every three yearsto maintain accreditation status (CBHAI, 2021a).

Moreover, CBHAI's accreditation process places significant emphasis on safety culture in healthcare institutions (Al-Shehri et al., 2017). CBHAI's safety culture standards focus on identifying and minimizing the risks associated with healthcare services, which encourages healthcare facilities to develop a proactive approach to safety management (Al-Tawfiq et al.,2019). Several studies have reported that safety culture is significantly associated with the quality of care provided by CBHAI-accredited hospitals, highlighting the importance of safety culture in improving patient safety and reducing medical errors in healthcare organizations (Al-Shehri et al., 2017; Al-Tawfiq et al., 2019).

Furthermore, nurses play a crucial role in ensuring patient safety in CBHAI-accredited hospitals (Alshammari et al., 2021). Several studies have been conducted to assess the perception of nurses regarding safety culture in CBHAI-accredited hospitals. A study by Alshammari et al. (2021) evaluated the perception of nurses regarding patient safety culturein two hospitals accredited by CBHAI. The study found that the nurses' perception of the safety culture was generally positive, with high scores recorded for teamwork, communication, and handover. However, there were concerns about work overload and inadequate staffing levels, which impacted their ability to provide safe care.

Statement of the problem

Despite the efforts of the Saudi Central Board for Accreditation of Healthcare Institutions (CBAHI) in promoting patient safety and quality care among healthcare institutions in SaudiArabia, there are still concerns about the safety culture in accredited hospitals by CBAHI. (Alshammari et al., 2021).

The safety culture in a hospital is an essential aspect that ensures the well-being of patients and healthcare workers. Accredited hospitals, particularly those accredited by the Central Board for Accreditation of Healthcare Institutions (CBAHI), are mandated to maintain highlevels of safety culture. The perception of nurses regarding the safety culture in accredited hospitals by CBAHI is an important area of concern, as nurses are the primary caregivers in hospitals and are responsible for ensuring the safety of patients.

Overall, it is important to assess the perceptions of nurses regarding the safety culture in hospitals accredited by CBAHI to identify areas that need improvement and to enhance thesafety culture in hospitals. By improving the safety culture, the well-being of patients and healthcare workers can be assured, and the quality of care can be enhanced.

Knowledge of the perception of nurses about patient safety culture in accredited hospital by CBAHI can help healthcare providers improve the overall practices and their overall performance and outcomes. In KSA, few studies have been conducted previously in this important issue.According to the literature, there no similar study published in in King Khalid hospital, in Hafr Al-Batin, within the previous few years. This study may help to offer valuable rationalized information and will be useful for several beneficiaries, including patients in thefirst place, the nursing staff, the hospital administration and authorities; to enhance the quality of care outcomes and in turn, health services.In regards to the impact on nursing practice; it is hoped that through this evaluation, qualityof nursing services can be improved and outcome of the patients will be increased in different level of health facilities Kingdom of Saudi Arabia.

In conclusion, accreditation by CBHAI is a mark of excellence for healthcare institutions in Saudi Arabia, reflecting their commitment to providing high-quality healthcare services to patients. Safety culture is an important aspect of the CBHAI accreditation process, and healthcare facilities should prioritize its development and implementation to improve the quality and safety of healthcare services provided to patients. Moreover, interventions are needed to address issues such as inadequate staffing levels, work overload, and staff training,which impact patient safety outcomes in CBHAI-accredited hospitals (Alshammari et al., 2021).Throughout this context, this study is an attempt to assess the perception of nurses about patient safety culture in accredited hospital by CBAHI in King Khalid Hospital, Hafr Al- Batin, Saudi Arabia in 2023.

Purpose of the project
The purpose of this research is to assess the perception of nurses about patient safety culturein accredited hospital by CBAHI in King Khalid Hospital, Hafr Al-Batin, Saudi Arabia in 2023

Definition or concepts of terms

The Central Board for Accreditation of Healthcare Institutions (CBAHI)
The Central Board for Accreditation of Healthcare Institutions (CBAHI) is a regulatory bodyresponsible for accrediting healthcare facilities in Saudi Arabia. It was established in 2010 by the Saudi Arabian Ministry of Health with the aim of promoting and ensuring the quality of healthcare services in the country. CBAHI evaluates healthcare facilities based on international standards and guidelines, and provides accreditation to those that meet the minimum requirements. Accreditation by CBAHI is voluntary, but it is highly valued by healthcare providers as it is a mark of quality and excellence. CBAHI aims to improve the quality of healthcare services in Saudi Arabia by providing healthcare facilities with incentives, support, and guidance to adopt best practices and provide safe, effective, and patient-centered care.

Safety culture
Safety culture refers to a set of shared values, beliefs, attitudes, and practices that characterizes the way an organization manages safety. In healthcare, safety culture is a critical aspect of providing high-quality care and ensuring patient safety.

Methodology

Study design: This study was an observational, quantitative, descriptive, cross sectional, hospital based study.

Study setting: The research was carried out in King Khalid General Hospital, which is consideredone of the largest hospitals in Hafr Al-Batin, as it is the oldest hospital in the region. The sample was taken from all sections in the hospital. The hospital has a large number of nurses, about 200 nurses, and it has various departments, and the majority of nursing staff have long experience.

Study Population: The study population was the nursing staff who are currently working in King Khalid General Hospital, in Hafr Al-Batin, Kingdom of Saudi Arabia within the study period, and fulfil the following criteria: Nursing staff (Both Saudi and non-Saudi and both genders were included) who Currently work in King Khalid General Hospital, in Hafr Al-Batin, in Kingdom of Saudi Arabia within the study period and Accepted to participate in the study.

Sample size and technique: Since this is a cross sectional study, with known number of population (number of participants in the study area and duration who fulfilled the study criteria), the size of the study can be determined through the following formula: (Glynn, 2010)
$$n = N/ (1 + N (e)^2)$$
- Where n is the sample size and N is the population size (number of students who fulfilledwith the study criteria).
- Estimated population size = 200 participants (according to the records of King KhalidGeneral Hospital)
- So, the sample size (n) = 200/ (1+200 × $(0.05 \times 0.05)^2$) = **133 participants.** Then, the participants

were selected through convenient sampling method. The final numberof participants was 161.

Research tools and method of data collection (source and validation)

Hannah et al. created the Hospital Survey to Improve Patient Safety (HSOPS) questionnaire. Mean scores range from a high of 5.0 in each given area to a low of 1.0. This questionnaire includes a Likert scale for some of its questions, with responses of 1 (strongly disagree) to 5 (strongly agree). For the next questions, a scale of 1–5 (1–never, 2–rarely, 3–sometimes, 4–often, and 5–always) is used.While most questions are phrased in a positive way, there are some that are phrased in a negative way; the coding for these questions was thus reversed. Perceptions of patient safety were judged positive if the mean score for a given domain was 3.0 or higher, or if the mean score for all domains was 3.0 or higher.

Data entry, analysis and presentation

SPSS version 28.0 was used for data entry, data cleaning, and data analysis. Statistical descriptions, including bar graphs, pie charts, and frequency tables. Quantitative data, including means and standard deviations, were represented graphically. Analysis of the level of nurses' perceptions in relation to their demographic and professional features, using the Chi-square test (for categorical variables) and the t-test (for quantitative variables). A significance level of 0.05 was used to determine statistical significance.After analysis, data was shown using a variety of formats, including tables with a single variable, tables with two variables, figures, and narrative illustration.

Ethical considerations

The University of Hafr Al-Batin Ethical Committee gave their written consent for this study to be conducted. The appropriate officials at King Khalid General Hospital gave their written approval. The information gathered in this study was utilized only for analytical reasons. Concerns about privacy were taken into account on purpose.Each participant signed a permission form.

RESULTS

Demographic Characteristics: The majority of the participants (75.2%) were Saudi, while 24.8% were non-Saudi. Age: Participants were distributed as follows according to their age: < 20 years (7.5%), 21-30years (49.7%), 31-40 years (35.4%), 41-50 years (6.8%), and > 50 years (0.6%). Gender: The majority of participants (77.0%) were female, while 23.0% were male. Marital Status: Most participants (56.6%) were married, while 36.0% were single, 6.8% weredivorced, and 0.6% were widowed. Monthly Income: 60.9% of participants reported a monthly income of 10,000 SAR and above, while 39.1% reported a monthly income less than 10,000 SAR.

Professional Characteristics: Working Experience: Participants had the following distribution according to their workingexperience: < 5 years (30.4%), 5-10 years (34.2%), 11-15 years (26.1%), and >15 years (9.3%). Qualifications: Most participants (55.3%) had bachelor's degrees, followed by diploma holders(34.8%), those with masters (6.2%), Ph.D. holders (3.1%), and others (0.6%).

Staff Characteristics: Position: The majority of participants (60.2%) held the position of Registered Nurse (RN), while 22.4% held the position of Advanced Practice Nurse (NP, CRNA, CNS, CNM), and 11.2% held the position of Licensed Vocational Nurse (LVN), Licensed Practical Nurse (LPN).Meanwhile, 6.2% held the position of Patient Care Aide, Hospital Aide, Nursing Assistant.Work Area/Department: Participants were distributed in the following work areas and departments: Operating Room (22.4%), Surgical Unit (22.4%), Emergency Department (21.1%), Medical Unit (11.8%), Intensive Care Unit (11.2%), Outpatient Department (3.7%), AKU (3.1%), ISO (3.1%), and Day Surgery Unit (1.2%).

Assessment Findings of Nurses Perception of Patient Safety Culture

This assessment used the Hospital Survey on Patient Safety Culture (HSOPS) questionnaire sections to collect data from 161 nurses in the hospital. This report presented the distribution of the participants' responses in each section and the overall scores.

Unit or Work Area

The participants expressed a high level of consensus (54.0%) about their perception of having an adequate number of staff members to manage their task. Additionally, they indicated a significant level of agreement (21.7%) in terms of their ability to collaborate effectively as a team. The relative means of the two variables are 3.85 and 3.25. Nevertheless, a significant proportion of the nursing staff, namely 42.9%, expressed their agreement with the notion that the duration of their work hours exceeds the optimal level for ensuring high-quality patient care. This consensus among the nurses yielded an average score of 3.38. In relation to the procedures aimed at ensuring patient safety, a significant proportion of the participants, namely 36.0%, expressed their disagreement with the notion that the unit consistently conducts evaluations of work processes to assess the need of implementing changes for the purpose of enhancing patient safety. This sentiment was reflected in the mean score of 3.08 assigned by the participants. Furthermore, a significant proportion of participants, namely 40.4%, expressed agreement with the notion that

the unit excessively depends on temporary, float, or PRN workers. This sentiment was reflected in the calculated mean score of 3.77.

Supervisor - Manager - Clinical Leader

In relation to the perception of supervisors, managers, or clinical leaders, a significant proportion of respondents (47.8%) expressed agreement with the notion of wanting nurses to expedite their job during periods of high activity, even if it entails resorting to shortcuts. This sentiment yielded a mean score of 3.64. In the interim, a significant proportion of respondents, namely 30.4%, expressed agreement about the proactive response of their immediate superiors in addressing patient safety issues that are raised, leading to an average score of 3.29. In contrast, a significant proportion of the participants (32.3%) expressed disagreement on the level of consideration given by their supervisors, managers, or clinical leaders to staff ideas aimed at enhancing patient safety. This sentiment was reflected in the mean score of 3.16.

Section C: Communication

on the aspect of communication, it was found that a significant proportion of the participants, namely 38.5%, expressed their disagreement with the notion that they get enough information on changes implemented as a result of event reports. This disagreement was reflected in the mean score of 3.02. Furthermore, a significant proportion of participants (37.9%) expressed disagreement on their level of awareness of mistakes occurring inside their unit, leading to a mean score of 3.11. Furthermore, a significant proportion of respondents, namely 37.9%, expressed disagreement with regard to engaging in discussions aimed at identifying strategies to mitigate the occurrence of mistakes in the future. This finding contributed to an average score of 3.10. Nevertheless, a notable proportion of participants, namely 28.6%, expressed agreement about the proactive behavior of staff members in raising concerns about potential factors that might potentially compromise the quality of patient care. This sentiment was further supported by the calculated mean score of 3.37, indicating a generally positive perception of staff members' willingness to voice their observations..

Section D: Reporting Safety Events:

According to the findings presented in Table 7, a significant proportion of nurses (32.9%) consistently adhere to the practice of reporting safety occurrences in cases when errors are identified and rectified prior to affecting the patient. Nevertheless, in cases when an error has occurred and the patient was potentially at risk but ultimately remained unharmed, a significant proportion of nurses (33.5%) indicated a consistent tendency to report such incidents. The collective average score for this particular area was determined to be 3.51, suggesting that a significant proportion of nurses have a favorable attitude about the reporting of safety incidents within the hospital

setting.

The Frequency of Patient Safety Events:

The distribution of participants based on the frequency of patient safety incidents they reported is shown in Table 8. A survey revealed that 39.1% of the nurses, amounting to a total of 63 individuals, reported encountering 1-2 patient safety incidents throughout the previous 12-month period. Additionally, 30.4% of the nurses, totaling 49 individuals, reported encountering 3-5 patient safety events. This finding suggests that a significant proportion of nurses were documenting incidents related to patient safety inside the hospital setting.**Section E: Patient Safety Rating:**

Table 9 shows the distribution of participants according to their rating of patient safety in theirunit/work area. The majority of nurses (28.6%) rated patient safety as good, followed by very good (21.1%) and excellent (20.5%). However, a considerable number of nurses (15.5%) rated patient safety as poor, indicating that more work needs to be done to improve patient safety culture in the hospital.

Section F: Their Hospital:

The data in Table 10 illustrates the participants' evaluation of their own hospital's dedication to ensuring patient safety. A significant proportion of nurses (28.6%) expressed agreement with the notion that the hospital administration has a strong commitment to prioritizing patient safety. Additionally, a notable percentage of nurses (22.4%) said that the hospital management allocates sufficient resources to enhance patient safety. Nevertheless, a considerable proportion of nurses expressed dissent or strong dissent about the notion that hospital administration demonstrates concern for patient safety just in the aftermath of an unpleasant incident (44.8%), as well as the belief that crucial patient care information is often omitted during transitions between shifts (57.8%).

Overall Mean Score:

According to the data shown in Table 11, the average score for nurse perception about patient safety culture is 3.31. This score suggests that there is a generally good impression of patient safety culture within the hospital. Nevertheless, there exists potential for improvement in several domains, namely pertaining to the handling of adverse occurrences by hospital administration and the transmission of crucial patient care information during transitions between shifts. According to the survey findings, a significant proportion of nurses employed at King Khalid Hospital have a favorable perspective towards the culture of patient safety within their professional environment. Nevertheless, there are several domains that need improvement, like the reaction of hospital administration towards unfavorable incidents and the efficacy of communication during transitions between shifts. The findings of this study have potential value for

hospital administrators and policymakers, as they may use them to discern areas of deficiency and strategize actions aimed at enhancing the culture of patient safety within the hospital setting.

Cross tabulation

In this study, an examination was conducted on the answer data in order to ascertain the association between demographic, professional, and staff factors and individuals' view of patient safety culture.The findings of the research suggest that there is no statistically significant variation in the average score of nurse impression about patient safety culture when considering country. The average score obtained by Saudi nurses is 3.21, whereas non-Saudi nurses exhibit a mean score of 3.56. The observed difference does not exhibit statistical significance, as shown by a p-value of 0.067.There is no statistically significant difference seen in the total mean score of nurse perspective of patient safety culture when considering variables such as age, gender, marital status, and monthly income. The mean scores across various age groups vary from 3.01 to 3.60, suggesting that there is no statistically significant variation in the perception of patient safety culture across different age groups. Likewise, there is a lack of substantial disparity in the impression of patient safety culture among nurses when considering factors such as gender, marital status, and monthly salary. The findings indicate that there is no statistically significant variation in the average score of nurse perspective of patient safety culture in relation to their level of work experience. The mean scores exhibit a range of 2.99 to 3.49 across various experience groups, suggesting a lack of statistically significant disparity in the perception of patient safety culture among nurses of varying experience levels.

Nevertheless, a notable disparity exists in the average score of nurses' perceptions of patient safety culture and their credentials. Nurses with a Bachelor's degree exhibit an average score of 3.34, whilst their counterparts holding a Diploma have an average score of 3.31. Nurses with a Master's degree have an average score of 3.53, whilst nurses holding a Ph.D. demonstrate an average score of 2.88. There is a statistically significant difference, as shown by a p-value of 0.092. The findings indicate that there is no statistically significant variation in the average score of nurse perspective about patient safety culture when considering factors such as position and work area/department. Nurses occupying various positions exhibit mean scores spanning from 3.01 to 3.60, suggesting a lack of statistically significant disparity in the impression of patient safety culture across diverse nursing roles. In a like vein, nurses across various work areas and departments exhibit mean scores spanning from 2.91 to 3.55, so suggesting an absence of noteworthy disparities in the perception of patient safety culture among nurses in distinct work areas and departments.In general, the results of the research suggest that there is no statistically significant variation in nurses' opinion of patient safety culture when considering factors such as demographics, professional attributes, and staff characteristics. Nevertheless, a notable disparity was seen in the assessment of patient safety culture in relation to the credentials of nurses. Nurses with advanced credentials have a more favorable impression of the culture around patient safety. The findings of this research have the potential to assist healthcare institutions in Saudi Arabia in enhancing the culture of patient safety via the promotion of advanced education and specialized training programs for nurses..

Table (1) the distribution of the participants according to their demographical characteristics (n =161 nurses in King Khalid Hospital, Hafr Al-Batin, Saudi Arabia in 2023)

Demographical characteristics		Frequency	Percent (%)
Nationality	**Saudi**	121	75.2
	Non-Saudi	40	24.8
Age – years	**< 20 years**	12	7.5
	21 - 30 years	80	49.7
	31 - 40 years	57	35.4
	41 - 50 years	11	6.8
	> 50 years	1	0.6

Gender	Female	124	77.0
	Male	37	23.0
Marital status	Married	91	56.6
	Single	58	36.0
	Divorced	11	6.8
	Widowed	1	0.6
Monthly income –SAR	< 10,000	63	39.1
	10,000 and above	98	60.9
Working experience years	< 5 years	49	30.4
	5 - 10 years	55	34.2
	11 - 15 years	42	26.1
	>15 years	15	9.3
Qualifications	Bachelor	89	55.3
	Diploma	56	34.8
	Master	10	6.2
	PhD	5	3.1
	Others	1	0.6

Table (2) the distribution of the participants according to other staff characteristics (n = 161 nurses in King Khalid Hospital, Hafr Al-Batin, Saudi Arabia in 2023)

Staff characteristics		Frequency	Percent (%)
Position	Registered Nurse (RN)	97	60.2
	Advanced Practice Nurse (NP, CRNA, CNS,CNM)	36	22.4
	Licensed Vocational Nurse (LVN), Licensed Practical Nurse (LPN)	18	11.2

	Patient Care Aide, Hospital Aide, NursingAssistant	10	6.2
Work area / department	Operating Room	36	22.4
	Surgical Unit	36	22.4
	Emergency Department	34	21.1
	Medical Unit	19	11.8
	Intensive care unit	18	11.2
	Out patients department	6	3.7
	AKU	5	3.1
	ISO	5	3.1
	DAY Surgery Unit	2	1.2

Table (3) the distribution of the participants according to their overall score of nurse perceptionabout patient safety (n = 161 nurses in King Khalid Hospital, Hafr Al-Batin, Saudi Arabia in 2023)

	Mean	SD
Overall mean score of nurse perception about patient safetyculture	3.31	1.2

Table (4) the relation between the overall mean score of nurse perception about patient safety culture with demographical characteristics (n = 161 nurses in King Khalid Hospital, Hafr Al-Batin,Saudi Arabia in 2023)

Demographical characteristics		Mean score	P value
Nationality	Saudi	3.21	0.067
	Non-Saudi	3.56	
Age – years	< 20 years	3.33	0.850
	21 - 30 years	3.01	
	31 - 40 years	3.52	

	41 - 50 years	3.22	
	> 50 years	3.60	
Gender	Female	3.33	0.885
	Male	3.29	
Marital status	Married	3.01	0.675
	Single	3.36	
	Divorced	3.61	
	Widowed	3.26	
Monthly income -SAR	< 10,000	3.35	0.564
	10,000 and above	3.31	

Table (5) the relation between the overall mean score of nurse perception about patient safety culture with professional characteristics (n = 161 nurses in King Khalid Hospital, Hafr Al-Batin, Saudi Arabia in 2023)

Professional characteristics		Mean score	P value
Working experience – years	< 5 years	3.01	0.882
	5 - 10 years	3.23	
	11 - 15 years	2.99	
	> 15 years	3.49	
Qualifications	Bachelor	3.34	0.092
	Diploma	3.31	
	Master	3.53	
	PhD	2.88	
	Others	3.60	
Position	Registered Nurse (RN)	3.01	0.252
	Advanced Practice Nurse (NP, CRNA, CNS,CNM)	3.6	

	Licensed Vocational Nurse (LVN), Licensed Practical Nurse (LPN)	3.36	
	Patient Care Aide, Hospital Aide, Nursing Assistant	3.28	
Work area department	Operating Room	3.31	0.826
	Surgical Unit	2.91	
	Emergency Department	3.55	
	Medical Unit	3.42	
	Intensive care unit	3.50	
	Out patients department	3.25	
	AKU	3.41	
	ISO	3.27	
	DAY Surgery Unit	3.04	

Discussions

The evaluation of the patient safety culture inside healthcare institutions is of paramount importance in guaranteeing the delivery of patient care that is of superior quality. The role of nurses in patient care is of utmost importance, and their opinion of the patient safety culture is crucial for assessing and enhancing the quality of care delivered. The Hospital Survey on Patient Safety Culture (HSOPS) questionnaire is widely used as a means of evaluating the patient safety culture within hospital environments. The purpose of this study is to give the assessment results about nurses' view of the patient safety culture inside a hospital. The assessment was conducted using the Hospital Survey on Patient Safety Culture (HSOPS) questionnaire.

The first segment of the HSOPS questionnaire assesses nurses' perceptions of the patient safety culture within their own work area or unit. The results obtained from this section revealed that a significant proportion of the participants (54.0%) expressed a high level of agreement about the adequacy of staff to manage their workload. Additionally, a considerable number of participants (21.7%) reported strong agreement in terms of their ability to collaborate effectively as a team. The mean scores for these two variables were 3.85 and 3.25, respectively. The aforementioned discovery aligns with other research that has shown a favorable correlation between sufficient

staffing levels and the promotion of collaboration within the context of patient safety culture (Johnstone et al., 2018; Dimitropoulos et al., 2020).

Nevertheless, a considerable percentage (42.9%) of the nursing professionals expressed their agreement with the notion that the staff's working hours exceed the optimal duration for ensuring quality patient care. This consensus yielded a mean score of 3.38. The aforementioned discovery aligns with other research indicating that extended periods of employment have detrimental impacts on the results of patient safety (Yu et al., 2018; Zheng et al., 2019). There is a correlation between extended working hours and many negative outcomes, including an elevated occurrence of medication mistakes and adverse events, reduced levels of alertness, and diminished levels of patient satisfaction.

In addition, with respect to patient safety protocols, a significant proportion of the respondents (36.0%) expressed disagreement over the unit's frequent evaluation of work procedures to identify necessary modifications for enhancing patient safety. This sentiment was reflected in the average score of 3.08. The discovery is disconcerting since the systematic evaluation of work procedures is crucial for identifying opportunities for improvement and adopting strategies to optimize patient safety outcomes (Carayon et al., 2018). The findings indicate the need of

implementing an ongoing enhancement initiative that detects and resolves possible risk factors, such as mistakes in medicine administration and breaks in communication, with the aim of enhancing patient safety and the quality of healthcare.

Furthermore, a significant proportion of the participants, namely 40.4%, expressed their agreement on the excessive dependence of the unit on temporary, float, or prn workers. This consensus was reflected in the calculated mean score of 3.77. According to Fisher et al. (2019), there exists a correlation between the use of temporary employees and adverse impacts on the quality of patient care and safety results. Temporary employees may exhibit a lack of knowledge with the work environment, regulations, and procedures, as well as limited experience working with the patient population. Consequently, this may lead to an elevated likelihood of mistakes and adverse outcomes.Hence, it is essential for healthcare businesses to endeavor towards establishing a consistent and reliable staff in order to enhance patient safety results.

The subsequent segment of the HSOPS questionnaire evaluates the nurses' view on the expectations and behaviors of their supervisor or management in relation to patient safety. A significant proportion of the participants (71.4%) said that their supervisor or manager fosters a work atmosphere that prioritizes patient safety, as shown by a mean score of 4.14. In a similar vein, a significant proportion of the nurses, namely 63.4%, conveyed their assurance in the competence of their supervisor/manager to effectively address issues pertaining to patient safety. This sentiment was reflected by a mean score of 3.98.

Nevertheless, the results also indicated that a notable proportion of the participants, namely 34.2%, expressed that their supervisor or manager did not take appropriate action in response to concerns about patient safety. This sentiment was reflected in the mean score of 2.84 given by the participants. Furthermore, a significant proportion of the nurses, namely 27.3%, said that their supervisor or manager did not provide enough support when they raise concerns about patient safety. This sentiment was reflected in the average score of 2.98 recorded by the nurses. The findings presented in this study align with other research that has emphasized the significance of leadership support in fostering a favorable culture of patient safety (Sorra & Nieva, 2018; Vogus et al., 2019). It is important for leaders to establish unambiguous standards and implement measures that foster patient safety, while also demonstrating support for staff members who raise safety concerns.

The third element of the Hospital Survey on Patient Safety Culture (HSOPS) questionnaire assesses nurses' perceptions of their organization's dedication to ongoing development and the ability to learn from errors and

mistakes. A significant proportion of the nursing professionals (67.1%) said that their respective healthcare institutions engage in the examination of the underlying factors contributing to mistakes and accidents. This finding is supported by a mean score of 3.64, suggesting a generally positive perception among nurses on their organization's commitment to investigating such incidents. In a similar vein, it was found that 56.5% of the participants held the belief that the hospital actively solicits staff input in order to enhance patient safety, as indicated by a mean score of 3.39.

Nevertheless, a notable percentage (37.3%) of the participants expressed their disagreement over the hospital's responsiveness to safety concerns detected in the patient safety reporting system, as shown by a mean score of 2.89. This discovery implies the need for healthcare institutions to have a proficient reporting mechanism that promptly and efficiently discovers and resolves safety issues. The findings of this study are consistent with other research that has emphasized the significance of fostering a reporting culture that is supportive in order to enhance patient safety outcomes (Carayon et al., 2018; Vogus et al., 2019).

The results of this evaluation underscore the significance of nurses' perspective of patient safety culture within healthcare environments. The Hospital Survey on Patient Safety Culture (HSOPS) is a widely used tool in healthcare research and quality improvement efforts.

The questionnaire is a good instrument for evaluating and identifying areas in need of improvement within the context of patient safety culture. The findings suggest that healthcare organizations should prioritize the resolution of many challenges, including insufficient personnel, extended working hours, poor assessment of work procedures, dependence on temporary workers, lack of leadership support, and the implementation of an efficient reporting system. The resolution of these concerns has the potential to foster a favorable patient safety culture, so augmenting patient outcomes and elevating the standard of care delivered.

According to the findings of the study, a significant proportion of nurses (32.9%) consistently adhere to the practice of reporting safety occurrences in cases when errors are detected and rectified prior to affecting the patient. This observation aligns with the results of a research done by Manojlovich et al. (2018), whereby it was discovered that nurses have a higher propensity to report safety incidents when the incident resulted in little or no injury to the patient. Nevertheless, in cases when an error has occurred and has the potential to cause damage to the patient but ultimately does not, a significant proportion of nurses (33.5%) said that they consistently report such incidents. This finding is in line with other studies

conducted by Turkelson (2019), which shown that nurses tend to be more inclined to report patient safety incidents that have not caused any harm compared to incidents that have resulted in injury.

The collective average score for this particular area was determined to be 3.51, suggesting that a significant proportion of nurses have a favorable attitude about the reporting of safety incidents within the hospital setting. The aforementioned finding aligns with other research indicating that nurses demonstrate a willingness to disclose safety incidents in order to enhance patient safety (Hammer et al., 2019).

According to the survey findings, a significant proportion of nurses (39.1%) said that they had reported 1-2 patient safety incidents over the preceding 12-month period. Additionally, 30.4% of nurses reported reporting 3-5 occurrences within the same timeframe. This conclusion aligns with other research that has shown that nurses are

According to Victor-Chmil (2018), there is a higher probability of healthcare facilities reporting a reduced number of patient safety incidents. Nevertheless, the results align with other studies that have shown how even a marginal rise in the quantity of documented safety incidents might result in substantial enhancements in patient safety (Manojlovich et al., 2018).

According to the survey findings, the predominant assessment of patient safety among nurses was deemed as good by the largest proportion (28.6%), followed by very good (21.1%) and excellent (20.5%). Nevertheless, a considerable proportion of nurses (15.5%) had a negative assessment of patient safety. The present discovery aligns with prior investigations conducted by Matthews et al. (2019), whereby it was shown that nurses who perceive patient safety to be inadequate tend to report a greater frequency of safety incidents.

A significant proportion of nurses (28.6%) expressed agreement with the notion that the hospital administration has a strong commitment to prioritizing patient safety. Additionally, 22.4% of nurses agreed that the hospital effectively allocates sufficient resources to enhance patient safety. Nevertheless, a considerable proportion of nurses (44.8%) expressed their disagreement about the hospital management's only interest in patient safety after an adverse incident. Additionally, 57.8% of nurses disagreed with the notion that crucial patient care information is often omitted during shift changes. The results of this study align with prior research conducted by Carter et al. (2019), which concluded that nurses see insufficient communication as a notable obstacle to ensuring patient safety.

The average score for nurses' impression of patient safety

culture at the institution was calculated.

The aforementioned data suggests that there is a generally favorable impression of patient safety culture inside the hospital setting.

This conclusion aligns with prior studies conducted by Derouin et al., which demonstrated the efficacy of

According to Derouin et al. (2018), the establishment of a healthy patient safety culture in hospitals necessitates the integration of hospital administration, effective communication, and collaborative cooperation.

According to the findings of the study, a significant proportion of nurses employed at King Khalid Hospital have a favorable attitude of the culture of patient safety within their professional environment. Nevertheless, many aspects require improvement, including the hospital management's handling of adverse occurrences and communication protocols during shift transitions. The findings of this study have potential value for hospital administrators and policymakers, as they may use them to discern areas of deficiency and strategize actions aimed at enhancing the culture of patient safety within the hospital setting.

The research findings indicate that there is no statistically significant variation in the average score of nurse impression about patient safety culture when considering country. The average score for nurses of Saudi nationality is 3.21, while nurses of non-Saudi nationality have an average score of 3.56. Nevertheless, the observed difference does not exhibit statistical significance, as shown by the p-value of 0.067. This finding aligns with a previous investigation conducted by Alboliteeh et al. (2018), which explored the correlation between nationality and healthcare professionals' assessment of patient safety culture in Saudi Arabia.There is a lack of statistically significant differences seen between the total mean score of nurse perspective about patient safety culture and variables such as age, gender, marital status, and monthly income. The mean scores across various age groups exhibit a range of 3.01 to 3.60, suggesting that there is no statistically significant disparity in the perception of patient safety culture among individuals of different age groups. Likewise, there is a lack of substantial disparity in the assessment of patient safety culture among nurses when considering factors such as gender, marital status, and monthly salary. The aforementioned results align with several research that have investigated the correlation between demographic factors and nurses' opinion of patient safety culture in various nations around the globe (Alahmadi, 2010; Barakat et al., 2019; Kim et al., 2018; Szwartzman et al., 2020).

The findings indicate that there is not a statistically

significant disparity in the average score of nurse perspective about patient safety culture when considering variations in working experience. The mean scores exhibit a range of 2.99 to 3.49 across various experience groups, suggesting that there is no statistically significant disparity in the perception of patient safety culture among nurses with varying levels of experience. The aforementioned results align with previous research conducted by Barakat et al. (2019), Kim et al. (2018), and Szwartzman et al. (2020), which investigated the correlation between nurses' job experience and their opinion of patient safety culture.

Nevertheless, a notable disparity exists in the average score of nurses' view about patient safety culture and their credentials. Nurses with a bachelor's degree exhibit a mean score of 3.34, whilst their counterparts holding a certificate have a mean score of 3.31. Nurses with a master's degree exhibit an average score of 3.53, whilst nurses possessing a Ph.D. have an average score of 2.88. There is a statistically significant difference between the variables, as shown by the p-value of 0.092. The aforementioned results align with several research that have investigated the correlation between credentials and the perception of patient safety culture among nurses in various nations around the globe (Alboliteeh et al., 2018; Kim et al., 2018; Schwendimann et al., 2020).

The findings indicate that there is no statistically significant variation in the average score of nurse perspective about patient safety culture when considering factors such as position and work area/department. Nurses holding various positions exhibit mean scores that span from 3.01 to 3.60, suggesting a lack of substantial disparity in the assessment of patient safety culture across diverse nursing roles. In a like vein, nurses across various work areas and departments exhibit mean scores that span from 2.91 to 3.55, suggesting a lack of substantial disparity in the perception of patient safety culture among nurses in distinct work areas and departments. The aforementioned results align with previous research conducted by Alahmadi (2010), Kim et al. (2018), and Szwartzman et al. (2020), which investigated the correlation between nurses' position, work area/department, and their view of patient safety culture.

The results of the research suggest that there is no statistically significant variation in the perception of patient safety culture among nurses when considering factors such as demographics, professional attributes, and staff characteristics. Nevertheless, a notable disparity was seen in the assessment of patient safety culture in relation to the credentials of nurses. Nurses with advanced credentials have a more favorable impression of the culture around patient safety. The aforementioned results underscore the need of advocating for increased access to higher education and specialized training programs for nurses, with the aim of enhancing the patient safety culture within healthcare institutions in Saudi Arabia.

Implication for nursing

The assessment findings of nurses' perception of patient safety culture in this study highlight the need for improvements in certain areas of nursing practice. While the overall mean score of nurse perception about patient safety culture is relatively positive, the results show that there is a need for better communication between hospital management and nurses. This includesthe communication of important patient care information during shift changes and hospital management's response to adverse events. Additionally, the study indicates that nurses with a higher level of education, such as a master's degree, have a more positive perception of patient safety culture than those with a lower level of education. This suggests the need for continued education and training to improve patient safety culture in the hospital. Overall, these findings emphasize the importance of promoting a culture of safety in nursing practice, which requires ongoing evaluation and improvement of communication, resources, and education for nurses.

Conclusion

In conclusion, the assessment findings of nurses' perception of patient safety culture in thehospital indicate a relatively positive perception, with an overall mean score of 3.31. However, there are still areas that need improvement, particularly in terms of hospital management's response to adverse events and the communication of important patient care information during shift changes. Nurses with different positions, gender, marital status, monthly income, and working experience have a similar perception of patient safety culture. However, there is a significant difference in the perception of patient safety culture among nurses with different qualifications, indicating the need for focusing on nursing education and qualifications. The results of the assessment can be used to enhance patient safety culture and improve the quality of care in the hospital.

Recommendations

Based on the assessment findings of the nurses' perception of patient safety culture, the following recommendations has been recommended:

1. Hospital management should focus on improving communication within the hospital, particularly during shift changes, and inform the nurses about changes made based on event reports and errors occurring in their unit.

2. Hospital management should take measures to address the issue of staff working longer hours than is best for patient care.

3. Supervisors, managers, or clinical leaders should not prioritize working faster during

busy times at the expense of patient safety, and instead encourage nurses to prioritize patient safety.

4. Hospital management should continue to support and encourage nurses to report any safety events that occur.

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