

 <p>ISSN (O): 2320-5407 ISSN (P): 3107-4928</p>	<p>Journal Homepage: - www.journalijar.com</p> <h2>INTERNATIONAL JOURNAL OF ADVANCED RESEARCH (IJAR)</h2> <p>Article DOI: 10.21474/IJAR01/22367 DOI URL: http://dx.doi.org/10.21474/IJAR01/22367</p>	
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RESEARCH ARTICLE

ASSESSING STAFF NURSES' PERCEPTION ABOUT PATIENT SAFETY CULTURE AT MANSOURA UNIVERSITY CHILDREN'S HOSPITAL

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Manuscript Info

Manuscript History

Received: 6 October 2025

Final Accepted: 8 November 2025

Published: December 2025

Key words:-

perception, Practice, Staff nurses, patient safety culture.

Abstract

Background: Establishing a patient safety culture should be a primary matter within every service provided to patients, aiming to maintain the effectiveness of healthcare delivery. Effective communication and leadership at all levels in healthcare organizations are two management elements that significantly influence the implementation of a patient safety culture and the delivery of high-quality care. Nurses have a critical role in setting up and preserving a positive culture of patient safety because they frequently interact with patients and provide all necessary nursing services in an efficient way, despite various challenges, to ensure high-quality care.

Aim: To determine level of staff nurses' perception of patient safety culture at Mansoura University Children's Hospital.

Methods: A cross-sectional, descriptive method was utilized employing 99 staff nurses as a sample at Mansoura University Children's Hospital. Data collection tool was the Hospital Survey on Patient Safety Culture (HSPSC).

Results: Over half (51.5%) of nursing staff studied had a positive perception about patient safety culture dimensions while almost one quarter of them (25.3%) had a negative perception.

Recommendations: Working closely with healthcare professionals from all hospital departments to foster a comprehensive strategy to enhance patient safety culture and care continuity.

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Introduction: -

It is crucial to establish a robust along with systematically organized culture which emphasizes patient safety in healthcare settings. That's because it necessitates creating an environment in which healthcare personnel collaborate as a team, freely exchange information, and receive strong leadership support in their commitment to patient safety. It will improve the overall performance of the healthcare system and lead to better patient care standards (Liemarto, & Ferijani, 2025). It is possible to achieve competence and proficiency in patient safety culture by minimizing and mitigating risky clinical behaviors and utilizing validated effective techniques to achieve optimal patient outcomes

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by assisting healthcare professionals in learning how to make preventing, recognizing, and correcting mistakes a priority in their work duties (Alrasheeday, et al.,2025). Identifying organizational strengths and weaknesses, assessing trends, figuring out what needs to be done to improve patient safety, and comparing metrics with other healthcare settings should all be part of improving patient safety culture. Integrating safety practices into workplace climate is vital to enhance safety for patients, which in turn results in improved quality of health services and a reduction of preventable negative outcomes (Albsoul, et al.,2025). Patient safety culture pertains to the collective principles, practices, alongside beliefs that emphasize patient-centered safety across healthcare institutions and affect the attitudes and manner of healthcare personnel. Healthcare managers have an ethical and legal obligation to guarantee the provision of secure medical and healthcare services (Wahyuningsih, Asih, Masitoh, & Rahmawati, 2024). It is also the recognition of individual imperfections, being proactively in the detection of hidden hazards, dedication to learn from mistakes, and integration of non-punitive methods for documenting and evaluating clinical errors in the context of unfavorable outcomes for patients (Huntsman, Greer, Murphy, & Li, 2022). Gaining the trust of patients requires reliable provision of safe, patient-centered care, and continuous dedication to safety. Health care professionals who show a dedication to safety are more likely to be trusted by patients. The patient experience is improved and confidence in the healthcare system is increased by an open culture which puts a high concentration on safety practices. Additionally, it helps healthcare workers deal with surroundings that are complicated and dynamic (Huang, Jen, Tsay, Wang, & Tung, 2024). To implement a patient safety-focused culture, activities, mechanisms, workflows, as well as attitudes may need to be changed. Organizations that have a strong reporting culture are able to collect information about occurrences, examine patterns, and put plans in place to stop mistakes in the future. Staff are more willing to talk about mistakes and safety issues when they have no fear of facing consequences (Labrague, 2024).

Significance of Study: -

Patient safety culture inspections are seen as the foundation for action planning. It helps health care organizations to investigate positive and negative aspects of their safety culture, recognize patient safety features that require immediate attention, assist units in identifying their greatest prevalent patient safety issues, and assess how their scores align with those of other healthcare facilities. Developing a robust patient safety culture is critical to enhance care quality, guaranteeing legal compliance, and cultivating patient trust. It necessitates constant dedication from leadership and active involvement from every member of staff. The starting point in establishing a robust patient safety culture in a hospital like Mansoura University Children's Hospital has been found to be evaluating the current state of that culture.

Aim of the study: -

The research aims to evaluate level of staff nurses' perception regarding patient safety culture at Mansoura University Children's Hospital.

Methods: -**Research design:**

A descriptive cross-sectional design was the research approach applied in this research.

The study setting:

The research was executed across every medical and surgical department of Mansoura University Children's Hospital, which is connected to Mansoura University Hospitals and provides a broad range of pediatric healthcare services.

Study participants:

A convenience sample was utilized which included all existing staff nurses (n= 99) who were actively in charge of delivering patient care in all medical and surgical departments who were accessible when the data was being collected.

Data collectiontools:

One tool was utilized to gather data: The Hospital Survey on Patient Safety Culture (HSPSC).

Tool (I): The Hospital Survey on Patient Safety Culture (HSPSC): -

The Agency for Healthcare Research and Quality publication (2018) designed it to evaluate the study units' patient safety culture. It is composed of two parts.

The first part: designed to detect personal attributes of research participants, like gender, educational level, and work department.

The second part: aims to measure staff nurses' level of perception about patient safety culture. It includes 42 objects divided into the following 12 domains: Management support for patient safety; three statements, Supervisor/Manager expectations & Actions promoting patient safety; four statements, Organizational learning-continuous improvement; three statements, Handoffs & Transitions; four statements, Communication openness; three statements, Teamwork within units; four statements, Nonpunitive response to errors; three statements, Overall perceptions of patient safety; four statements, Feedback and Communication about error; three statements, Teamwork across units; four statements, Staffing; four statements, Frequency of events reported; three statements. Staff nurses' replies were evaluated using a Likert scale with five points: (1) strongly disagree, (2) disagree, (3) neutral, (4) agree, and (5) strongly agree for each scale statement, with the exception of three dimensions] Communication openness, Frequency of events reported, and Feedback and communication about error[, which contained elements extending from (1) Never, (2) Rarely, (3) Sometimes, (4) Mostly, to (5) Always.

Scoring system: -

The scoring system is based on a statistical cutoff point divided into three categoriesas:

- Low level (<50% of the total score).
- Moderate level (50 %-<75% of the total score).
- High level ($\geq 75\%$ of the total score).

Validity and reliability: -

Validity: tools were developed to evaluate both face and content validity. Five specialists within the field of nursing administration reviewed the tools after they were translated into Arabic for clarity, relevance, applicability, comprehensiveness, comprehension, and simplicity of utilization. They also evaluated the whole instrument as being pertinent and suitable for testing what it was intended to measure, and depending on their assessments, the required additions, corrections, and modifications were made.

Reliability: The study instruments' inner uniformity was assessed via Cronbach's alpha. This test required a score of at least 0.5 and ideally over 0.7 and was for Tool I ($\alpha=0.901$), Tool II ($\alpha=0.896$), and Tool III ($\alpha=0.885$) which showed high reliability.

Pilot study: -

Before carrying out the primary study and starting data gathering, a pilot investigation has been done. Eleven nursing staff members participated in it (10% of the entire research sample) who were chosen at random to examine simplicity Along with employing the instruments, identify potential obstacles and problems throughout the data gathering process, test the intelligibility of the language, and estimate the time required to finish the questions. The research excluded the pilot study participants.

Ethical Considerations:

The Research Ethics Committee of the Mansoura University Faculty of Nursing granted ethical approval. The study sample provided written informed consent, participation was voluntary, and authorized approval to accomplish the study was acquired by the hospital's competent administration. All data was coded to ensure the subject's anonymity and confidentiality. The study sample's privacy was guaranteed. Data confidentiality was preserved, and the findings were utilized for future publishing and instruction in addition to being a part of the required research.

Data Collection:

All available staff nurses received the tool. The purpose regarding this research and the way to fill it out were described by the researcher. It took 20 to 25 minutes for staff nurses to finish the tool by reading the questions and completing the tool. The data was collected on Sunday, Monday, Tuesday, and Wednesday, four days weekly, in both the morning and evening shifts. Data collection began in January 2024 and concluded in late April 2024.

Data Analysis:

Arranging, tabularizing, and analyzing the gathered data were performed with SPSS software (Statistical Package for the Social Sciences, version 22, SPSS Inc.). It was agreed that normalization was assumed. Consequently, categorical data was described using percentages and frequency. Continuous variables were represented by the mean

and standard deviation. When variables are parametric and continuous, a two-way ANOVA test was used to examine Variations in measurements that were repeated. When variables are ordinal, Friedman's test was used to examine changes in repeated measures (Dawson & Trapp, 2001).

Results: -

Table (1) displays the personal characteristics of the Mansoura University Children's Hospital staff nurses under study. It revealed that 85.9% of the staff nurses under study were female. Regarding the educational background of staff nurses, over two thirds (61.6%) had a bachelor's degree, and over one-third (40.4%) had more than 20 years of expertise, with an average score of 17.23 ± 6.5 .

Table (2) demonstrates mean scores of the staff nurses' perception about aspects of patient safety culture. It displayed that the overall patient safety culture mean scores was 134.90 ± 12.14 . It revealed that the non-punitive response to errors dimension recorded the lowest mean score (7.18 ± 2.83). Furthermore, the dimension which scored the greatest mean score (14.84 ± 3.46) is Teamwork within units.

Table (3) shows level of the studied staff nurses' perception regarding patient safety culture at Mansoura University Children's Hospital. It exhibited that over half of the participants (54.5%) were characterized by a moderate perception level, while (20.2) had low level and nearly one quarter of them (25.3) was at high level.

Table (4) exhibits the relationship between the staff nurses' overall patient safety culture perception scores and their personal characteristics at Mansoura University Children's Hospital. It demonstrated that the difference was not statistically significant. between the patient safety culture perception scores obtained by staff nurses and their sex, academic qualification as well their clinical experience.

Table (1): Personal characteristics of the studied staff nurses(n=99).

Personal Characteristics	The studied staff nurses (n=99)	
	No.	%
Sex		
▪ Male	14	14.1
▪ Female	85	85.9
Educational qualification		
▪ Diploma of Nursing	18	18.2
▪ Technical Nursing Institute	20	20.2
▪ Bachelor Degree	61	61.6
Years of Experience		
▪ <10 years	20	20.2
▪ 10-20 years	39	39.4
▪ >20years	40	40.4
Range	2 - 25	
Mean±SD	17.23 ± 6.5	

Table (2): Mean Scores of the studied staff nurses' Patient safety culture dimensions at Mansoura University Children's Hospital (n=99)

Patient safety culture dimensions (Each item was scored 0-5)	Patient safety culture dimensions mean scores score of the studied staff nurses (n=99)	
	No. (Score)	Range Mean±SD
Supervisor / Manager Expectations & Actions Promoting Patient Safety	20	8-16 12.07 ± 2

Organizational Learning—Continuous Improvement	15	3–15 11.15 ± 2.58
Teamwork Within Units	20	4–20 14.84 ± 3.46
Non punitive Response to Errors	15	3–13 7.18 ± 2.83
Staffing	20	4–14 10.41 ± 2.09
Management Support for Patient Safety	15	4–14 9.61 ± 1.89
Teamwork Across Units	20	8–16 10.98 ± 1.45
Handoffs & Transitions	20	4–16 9.73 ± 3.20
Overall Perceptions of Patient Safety	20	4–20 12.92 ± 2.36
Communication Openness	15	3–12 7.99 ± 1.75
Feedback & Communication About Error	15	3–15 9.12 ± 2.54
Frequency of Events Reported	15	5–15 8.64 ± 2.26
Total patient safety culture	210	93–155 134.90 ± 12.14

Table (3): Total level of perception of patient safety culture among the participating staff nurses at Mansoura University Children's Hospital (n=99)

Total Patient Safety Culture	Total level of the studied staff nurses pre and post training program (n=99)	
	No. (Score)	%
Total perception level		
Low level (42-104)	20	20.2
Moderate level (105–156)	54	54.5
High level (157-210)	25	25.3
Total score		

Range (42-210)	93–155
Mean±SD	134.90 ± 12.14

N.B. Perception level was divided into; low level (<50% of scores), moderate level (50<75% of scores) and high level ($\geq 75\%$ of scores)

Table (4): Total patient safety culture perception scores of the studied staff nurses in relation to their personal characteristics at Mansoura University Children's Hospital (n=99)

Personal Characteristics	Total patient safety culture perception scores of the studied staff nurses (n=99)	
	Mean±SD	P value
Sex		
▪ Male	134.07±11.51	0.274
▪ Female	135.04±12.30	0.785
Educational qualification		
▪ Diploma of Nursing	139.72±8.09	1.844
▪ Technical Nursing Institute	134.75±11.53	0.164
▪ Bachelor Degree	133.52±13.09	
Years of Experience		
▪ <10 years	134.05±10.29	1.358
▪ 10-20 years	137.33±10.90	0.262
▪ >20years	132.95±13.89	

Discussion:-

Patient safety culture is regarded as a reliable indicator of a hospital's success and is crucial to guarantee the provision of high-quality healthcare. It affects not only patient outcomes but also the functioning of the healthcare system. Consequently, the success of any complete patient safety strategy depends on enhancing nurses' capacity to preserve the culture of patient safety (Freedman, Li, Liang, Hartin, & Biedermann, 2024). Nurses are an essential component of every hospital's patient safety initiative, as they deal directly with patients on a daily and often hourly basis. Therefore, appropriate patient safety strategies must concentrate on improving their capacity to deliver accurate and evidence based high-quality care (Pierre, Grawe, Bergstrom, & Neuhaus, 2022). The goal of this research was to determine level of how staff nurses perceive patient safety culture at Mansoura University Children's Hospital. Results of the present investigation demonstrated that over half of participating nurses (54.5%) had moderate level of perception about patient safety culture. This could reflect initiatives of hospital administration, which demonstrate patient safety culture as a primary focus and foster a work environment which supports patient safety; staff nurses openly discuss practices that could destructively impact patient care; nurses receive information concerning mistakes that occur within the department and engage in discussions on how to avoid errors from future occurrence; managers ignore frequent patient safety concerns and promote performance completed in compliance with standard safety protocols; nurses consistently engage in continuous actions to strengthen patient safety; and leaders assess their effectiveness after making changes to enhance safety for patients.

This is in accordance with the findings of Yilmaz, Yildiz Keskin, and Sönmez's (2025) study, who found that the overall mean positive response score indicated a moderate level and identified as an aspect of patient safety culture with neutral performance. Additionally, it was mentioned that healthcare settings are extremely complicated, which emphasizes the importance of paying attention to efficient systems and procedures, encouraging open communication across all staff levels, and strengthening patient safety culture through ongoing education. These results are in accordance with Alabdullah& Karwowski (2025), who performed research to reveal trends patient safety culture in US hospital settings in order to determine PSC's advantages and disadvantages across different time points. They determined that healthcare workers' perceptions of PSC were generally moderate. This showed that despite observable advancements, more work is still needed to foster a stronger safety culture throughout hospitals, which in turn highlighted obstacles including poor communication and mistakes, as well as a fear of reporting mistakes and consequences that must be systematically addressed. In the same line with Alotaibi, Hassan, and Gabr

(2025), who investigated the association among healthcare workplace and patients' safety culture in Saudi Arabia, and exposed that most the participating staff nurses exhibited a moderate overall patient safety culture. This could be explained by inadequate leadership commitment, which could hinder employees from implementing safety procedures. In order to minimize risks and prevent recurrence and guarantee the consistent provision of high-quality care, patient safety protocols require being maintained issues ought to be discovered and corrected immediately. These findings are in harmony with a study conducted by Mekonnen, Girma, Telay, and Abie (2025) and concluded that the rates for favorable reactions across each aspect of patient safety culture were moderate because open reporting and collaboration are still hampered by intermittent commitment to safety practices and fear of blame. Therefore, areas that need more improvement should receive prompt attention.

Furthermore, these results are consistent with Sani, Jafaru, Ashipala, and Sahabi, (2024) who performed research on the stress at work on nurses' perceptions of patient safety culture and observed that the who observed that most of research participants had a moderate perception of patient safety culture. This discovery is essential for producing an intervention that assesses patient safety culture as the initial phase and starting point toward enhancing healthcare's general efficiency, service quality, and safety procedures. This outcome aligns with Alkubati, et al., (2024) who assessed the relationship amongst the occurrence of adverse events and critical care nurses' opinions of patient safety culture in critical care units in Egypt. According to the findings, the majority of nurses had a moderate overall view of patient safety culture, that implied that nurses validated their inadequate competence in performing safe clinical practices for patients and stressed the significance of empowering nurses to strengthen their competency in patient safety. This result matches up with the research conducted by Al Muharraq, et al., (2024) which showed that staff nurses had a moderate level of safety culture perspective. Therefore, in order to emphasize the enhancement of patient safety and shift to more supportive, learning-focused approaches within health care organizations, healthcare management, nurse managers, and leaders should demonstrate an appropriate interest in fostering a strong culture of safety along with providing sufficient resources. This is similar to Mrayyan, (2022) who explored patient safety culture predictors and consequences in Jordan, which demonstrated that nurses' assessment of patient safety culture was tended to be positive and moderate. Therefore, in order to boost PSC and improve healthcare outcomes, safety-related measures are recommended to be prioritized. Additionally, the moderate level of perception indicated that while nurses were aware of safety, there was still a gap that required initiatives to promote a long-lasting safety culture.

As well, the current study reflected no statistically significant variance between patient safety culture perception scores of staff nurses and their sex, educational background and their clinical expertise. Working inside the same organizational setting with same safety policies, procedures, and standards may be the cause of this. Moreover, views of patient safety culture are more influenced by workplace culture and leadership than by individual demographic characteristics. In this regard, the study's findings are matched with those of Alotaibi, Hassan, and Gabr (2025), who investigated the relationship between workplace for nurses and patients' safety culture and found no apparent disparities in the nurses' views and understanding of patient safety culture founded on their years of experience or gender. These findings are in agreement with Rawas & Abou Hashish's (2023) assessment of the factors influencing and resulting from patient safety culture in Saudi Arabia, which found no significant variation regarding perceived patient safety culture based on the sociodemographic features of nurses, including sex, age group, years of experience, or educational level. Additionally, Zabin, Qaddumi, and Ghawadra (2025), who investigated the association concerning occupational stress and Nurses' views on patient safety culture in Palestinian healthcare settings, discovered that respondent traits like gender, age group, marital status, and academic level were not substantially correlated with how PSC was perceived because nurses generally deal with similar working conditions that trigger similarities in safety perceptions more than demographic groups.

Conclusion: -

This study concluded that a moderate level of perception of patient safety culture was held by over half of the staff nurses surveyed.

Recommendations: -

- Holding orientation programs and sessions to promote a culture that is focused on patient safety at both top and lower management levels.
- Securing the resources and support needed for staff training, patient safety culture initiatives and continuous improvement activities.

- Cultivating a non-punitive environment that encourages staff to express concerns and increase the effectiveness of patient safety culture strategies.
- Offering leadership development initiatives that are especially designed for unit managers about patient safety culture principles.
- Establishing regular meetings and feedback mechanisms to facilitate transparent communication, allowing nursing staff to share insights, report issues, and contribute to continuous improvement initiatives.
- Changing the organizational culture of blame to support culture so the staff would report defects without fear so the administrator can investigate the root of the problem.
- Working closely with colleagues from various departments to foster a comprehensive strategy to enhance patient safety culture and care continuity.

Further research:

- Analyzing the influence of patient safety culture practices on process efficiency in organization.
- Extending research beyond nursing staff to include multidisciplinary teams as nurses, physicians, and pharmacists to see effect of patient safety culture within diverse healthcare facilities.
- Approaches and strategies for enhancing the culture of patient safety in health care institutions.
- Examining the various aspects that affect staff nurses' patient safety culture competencies.

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