

Towards A Safer Health System: Attitudes Of Health Care Professionals Towards Patient Safety Culture

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Abstract

Objective: To measure the attitudes of health care professionals towards patient safety culture and to identify areas of improvement that will assist in achieving improved service excellence in the organization.

Methods: A mixed-method study was conducted at Shifa International Hospital and Shifa Foundation Community Health Centre. A total of 350 participants were recruited, and the duration of the study was six months after IRB approval. Demographic data was collected, and a safety attitude questionnaire (SAQ) with 1- 36 items was used for quantitative purposes. This questionnaire had some additional open-ended questions, 37-41, which were used as a qualitative analysis to enrich information. For quantitative analysis, the data was analyzed using SPSS version 21.00. The demographic data was analyzed by descriptive statistics. The answers to open-ended questions (37-41) were analyzed through thematic analysis, coding the data to identify themes.

Results: The Overall response rate was 78%. Out of all items, safety climate and job satisfaction scored highest, followed by teamwork climate and working conditions. The lowest scores obtained were of stress recognition and perception of management. Qualitative analysis resulted in the emergence of three main themes, i.e. Awareness of safety attitude culture, Reporting of adverse events and Recommendations for improving.

Conclusion: The institutions must prioritize a safety-oriented culture and continuously evaluate practices to ensure a safe and effective health system.

Keywords: healthcare professionals, patient safety culture, attitudes

Introduction

“Patient safety is the reduction of risk of unnecessary harm associated with healthcare to an acceptable minimum; [this minimum is defined based on] the collective notions of current knowledge, resources available and the context in which care was delivered and weighed against the risk of non-treatment or alternative treatment”.¹ It is stressed that the system of care delivery should prevent errors; learn from the mistakes if they occur; and built a culture of safety that involves health care professionals, organizations, and patients.^{1,2} It has evolved as a fundamental pillar for delivering the best possible patient care and is directly related to the attitude, beliefs, perceptions and values that employees share about safety in the workplace.³ An organization may have the best staff and equipment, but unless the safety culture is practiced, it is not delivering what it is meant to deliver in patient care. According to the 1999 Institute of Medicine (IOM) report, more people die from medical errors in a year than from highway accidents, breast cancer, or AIDS. The preventable medical errors lead to a significant loss of lives in United States, approximately the figures lie between 44,000 and 98,000,¹ potentially making it the third leading cause of death after heart disease and cancer.³ In 2023, a comprehensive study published in BMJ Quality & Safety sought to quantify the impact of diagnostic errors across the United States. The researchers analyzed national health data and estimated that approximately 795,000 Americans suffer permanent disability or death annually due to diagnostic mistakes. Notably, they identified that 15 specific diseases account for about half of these serious harms, with the top five—stroke, sepsis, pneumonia, venous thromboembolism, and lung cancer—comprising 38.7% of the total.

Contributions:

F.A, T.A, G.S, Z.S, M.F, H.T - Conception of study
- Experimentation/Study Conduction
F.A, T.A, G.S, Z.S, M.F, H.T -
Analysis/Interpretation/Discussion
F.A, T.A, G.S, Z.S, M.F, H.T - Manuscript Writing
F.A, T.A, G.S, Z.S, M.F, H.T - Critical Review

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The study highlighted that vascular events, infections, and cancers, collectively termed the "Big Three," are responsible for 75% of serious harm resulting from diagnostic errors. The harm manifests in the need for additional treatment, more diagnostic testing, re-admission to hospital and anxiety among family members. So, a health care system is bound to provide the safest of environments to patients to reduce medical error, enhance patient satisfaction, decrease medical malpractice claims and litigation and align with accreditation and regulatory requirements.⁴

Knowing the attitudes of healthcare professionals towards patient safety is vital in implementing the safe culture because it predicts the behavior of health care professionals to safety protocols, identifies barriers like resistance to change, targets intervention like training programs during clinical work, improves and opens communication, enhances teamwork by promoting collaboration and supports leadership. The tools used to assess safety culture are normally questionnaires.^{5,6} One such questionnaire is the SAQ (safety attitude questionnaire).⁶ The original SAQ has been validated in health care, is publicly available, and has been translated and validated into many different languages.^{7,8} Patient safety culture is an emerging modality in underdeveloped countries like Pakistan, and there is a paucity of data targeting patient safety culture. It is a neglected field as far as the health system is concerned, and many errors go underreported or unreported, which indirectly affects patient care.^{9,10} A 2023 study involving physicians and nurses reported moderately positive attitudes toward patient safety, with mean scores of 3.79 and 3.83 out of 5, respectively. Both groups expressed strong beliefs in the importance of team functioning and acknowledged that extended working hours could lead to errors.¹¹

The study aimed to measure attitudes of healthcare professionals towards patient safety culture in tertiary care, to identify challenges and make interventions accordingly.

Materials And Methods

The study was conducted at Shifa International Hospital and Shifa Foundation Community Health Centre, which is a sister organization of Shifa Hospital. Shifa International Hospital Islamabad is a 550-bed tertiary healthcare facility and has been providing services to local and international patient communities for more than 25 years. The duration of the study was six months, December to June 2019. The sample size was 350. It was a mixed-method study combining both the quantitative and qualitative approaches to provide a comprehensive understanding. The quantitative arm used a convenience stratified sampling technique to recruit the healthcare workers to participate in the study. The health care professionals working at Shifa International hospital and Shifa community health center who consented to participate were included in the study, while those who did not consent were not recruited. The study was conducted according to ethical standards and principles. IRB approval was obtained before the commencement of research(IRB#1095-371-2018). Informed consent was acquired from all participants. The research was conducted with respect for participants' privacy, confidentiality and autonomy. The recruited population was divided into different strata based on age, gender and professional role and then randomly selecting samples from each stratum, thereby reducing sampling bias. After informed consent and assurance of anonymity, the demographic details of participants were noted, which included age, gender, employment status, title, department/specialty and duration of employment. The quantitative data was collected using a Safety attitude questionnaire (SAQ) short version with 1- 36 items. The Safety Attitude Questionnaire (SAQ) covers key domains such as teamwork climate, safety climate, job satisfaction, stress recognition, perception of management and working conditions. Qualitative data was gathered through open-ended questions (questions 37-41) given at the end of the SAQ questionnaire. SAQ was distributed to participants and collected after 2 weeks with a reminder given in between to complete the questionnaire. Quantitative data was analyzed in SPSS version 21 using descriptive statistics. Each item of SAQ was rated on a 5-point Likert scale 1-5 from strongly disagree to strongly agree. The overall domain score was calculated by summing all items in each domain and then dividing by the number of items, and negative statements were scored inversely. Higher scores indicate more favorable attitudes, and lower scores highlight areas with negative perceptions. The qualitative data was analyzed by thematic analysis. Data was searched for codes, similar codes grouped to generate themes and then naming themes and finally writing the report.

Results

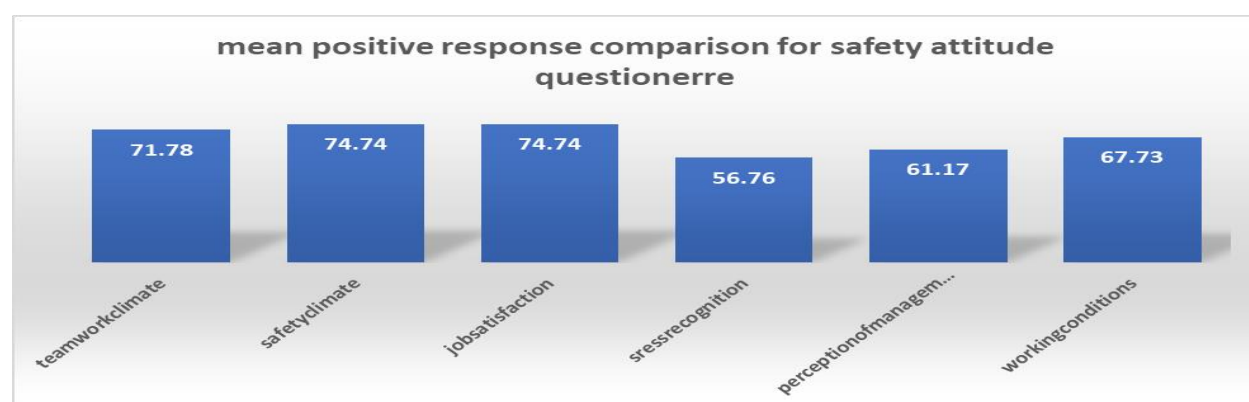
Table 1 shows the demographic details of all the participants. The response rate was 78%, with the highest response from nursing staff, i.e., 41%, followed by residents. 47% of the participants were in the age group 21-30, and 51% were females.

SAQ response analysis showed a mixed attitude towards patient safety culture among healthcare providers, as shown in Graph 1. The mean positive response rate of teamwork was 71.78%, indicating that the organization has strong collaboration and communication among team members. The safety climate and job satisfaction rate were 74.74%, suggesting a safe environment for patients where the margin of error is low and contentment of employees as far as their roles are concerned, respectively. The lowest rate was for stress recognition, which was 56.57%, showing an area where stress management should be addressed to improve employee output. Similarly, the perception of management and working conditions had a rate of 61.17% and 67.13%,

respectively, which can be improved by leadership development programs and carrying out workplace assessments to address challenges.

Table 1: Demographic details of the participants

Category	Frequency N%
Total numbers	350
Age in Years	
21-30	164(47%)
31-50	150(43%)
51-60	36(10%)
Gender	
Female	180(51.4%)
Male	170(48.5%)
Current role	
Nursing Staff	145(41%)
Consultant/Associate Professor	30(8.5%)
Specialist/Assistant Professor	47(13%)
Resident	80(22.8%)
Technical Staff	38(10.8%)
Others	10(2.85%)
Duration of Employment	
<06 months	28(8%)
1-4 Years	160(45.7%)
5-10 Years	130(37%)
11-20 Years>	30(8.5%)
21 Years	029(0.5%)



Graph 1: Comparison of mean scores of Safety Attitude Questionnaire

The responses to open-ended questions from 37 to 41 were read, and emergent ideas were identified in the answers provided by the participants. These ideas were coded as sub-themes. Three themes, subthemes with their frequencies and quotes are shown in Table 2.

Table 2: Themes, subthemes ,frequencies & quotes

Themes & subthemes	Frequency	Quote
1. Awareness of safety culture		
safety initiatives	170	
safety protocols	150	“ I am not aware of the exact definition of safety culture or climate. Never received any formal training in this respect
2. Reporting of adverse events		
Fear of litigations	220	
Scared of penalties	180	“Reported only one incident in last two years although at unit level did give feedback and tried to improve things”
3. Recommendations for improvement		
Training programs	300	
Refresher courses	50	“Annual audit and training programs should be implemented for better patient care”

Discussion

SAQ response analysis showed a mixed attitude towards patient safety culture among healthcare individuals. Suboptimal teamwork and lack of communication have negative effects on patient care. In our study the mean positive response rate of teamwork was 71.78%, which is aligned with broader findings in the literature, like a study carried out by Brenner who stressed the need for a coordinated teamwork approach to improve patient care and avoid untoward reactions of a procedure^{5,6,8,11,20} The safety climate and job satisfaction rate was 74.74%, corresponding to a cross-sectional study carried out by Dutra and Guirardello who examined the relationship between the nursing work conditions, safety climate and job satisfaction and concluded that enhancing the nursing work environment can positively impact nurses' job satisfaction and perceptions of safety and at the same time reducing missed care events.¹² Another study by Remtulla concluded that psychological safety in primary care teams is influenced by organizational culture, and addressing barriers can foster a safer, more supportive environment for better team communication, indirectly improving job satisfaction and performance.¹³ Hessels et al.'s study concluded that safety culture is essential for both patient and staff well-being.¹⁴ The study showed a lower rate of stress recognition, which was 56.57%, showing an area where stress management should be addressed to improve employee output. Amoadu M. conducted a scoping review exploring how psychosocial safety climate influences occupational health and safety and found out that a positive safety climate directly impacts workers' health and that work-based stressors negatively affect their ability to maintain a positive safety culture, thereby compromising patient care.¹⁵ Tripathi P.'s research also emphasizes that fostering a positive psychosocial environment enhances employee well-being and organizational safety.¹⁶ Suptitz et al.'s study highlighted that increased stress in critical and non-critical units hurts the overall safety climate of the institution.¹⁷ A study conducted in 2019 at a Primary health care by Souza et al. Identified that stress at the workplace can lead to sickness and disturbed work routines, leading to poor patient care.¹⁸ Similarly, the perception of management and working conditions had a rate of 61.17% and 67.13%, respectively. The research by Brandon highlighted that management's commitment to safety improves patient safety outcomes and at the same time improves staff well-being, thus suggesting that positive perceptions of management and working environment are integral to strengthening the culture of safety in healthcare environments.¹⁹ The qualitative data showed that most of the participants had some idea of safety culture but did not receive any formal training. However, if it is incorporated into the curriculum, it will reduce errors and would cultivate a strong safety mindset among future professionals.²⁰ The participants were of the view that reporting an error was not done due to fear of punishment, so the errors are not reported or underreported.²¹ A study conducted in Pakistan by Ahmed FA calls for a systematic approach to address the challenges and enhance healthcare delivery because, despite significant steps in quality improvement, the research identifies gaps in reporting systems, staff training, and management commitment, which hinder progress in improving patient care.²² Employees should be encouraged to report incidents, and regular audits should be carried out.¹¹

Conclusions

The attitudes of healthcare workers showed positive responses towards most of the parameters like teamwork, safety climate and job satisfaction; however, increased stress level, fear of reporting errors, and lack of formal training need targeted interventions. These results should be used by the institution to make hospital protocols towards the approach to patient safety and to address the shortcomings and initiate a continuous assessment of safety culture. Addressing communication barriers and fostering a non-punitive environment are key strategies for advancing patient safety culture.

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