Research Article

Patient safety culture: A survey of Tertiary care Hospital, Lahore.

Ishtiaq Ahmad,[1] Qurat ul Ain Naqvi,[2] Javaria Usman,[3] Sahibzada Mustaan Sultan Meeran,[4] Afshan Shahid,[5] Fizza[6]

[1-6] *Services Institute of Medical Sciences, Lahore*

Abstract

Background: The avoidance, mitigation, and improvement of health-related consequences or injuries resulting from health-related processes constitute patient safety culture.

Objectives: Our study aims to determine the level of patient safety culture awareness among health care professionals working in tertiary care hospital.

Methods: A cross-sectional study was conducted between June and August 2023. 257 healthcare personnel agreed to participate in this study after receiving informed consent. The participants were scheduled for one-on-one interviews. The data was collected by the researcher. For qualitative data, frequency and percentages and for qualitative data, mean and standard deviation, were computed. Chi square test was utilized to assess whether the data was statistically significant. Results were obtained using SPSS version 26.

Results: In this study, there were 107 (42%) doctors, 87 (34%) nurses, and 63 (24%) paramedics. The poor response turned out to be 97% and good response was 3%. Employees with <10 years experience responded poor then those with longer experience with p-value <0.005. Less experience medical workers (65%) responded poorly to mistakes. Among those with fewer than ten years of experience, hospital management and support received notably negative feedback (73%).

Conclusion: There is a need for work in developing an efficient team, resolving workplace and staffing issues, improving error response, and managing hospitals effectively with the right amount of support staff.

Keywords: Patient, safety, culture, teamwork, health care professional

Corresponding Author: Javaria Usman **Email:** drjavariakhalid@outlook.com

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Introduction

The field of reducing negative consequences associated with healthcare is known as patient safety culture. It affects patients' faith in healthcare facilities and staff and is impacted by personal perceptions.[1]

The study has shown how doctors, nurses, and paramedics comprehend and apply patient safety culture. Teamwork, staffing and workplace, organizational learning—continuous learning—reaction to error, superior support for patient safety, communication about error, communication about openness, reporting patient safety events, hospital management support for patient safety, hands-off-information exchange, and teamwork are some of thevariables that were used to assess this understanding and practices. Direct patient contact, experience in this hospital, and experience in the present speciality were the elements that influenced patient safety culture.

Poor safety culture is one of the top ten causes of disability and death worldwide. In tertiary care institutions, injuries affect 4 out of 10 patients, and up to 80% of those injuries are preventable.[2] This ratio is low for affluent nations, meaning that 1 in 10 patients suffer injury, of which half are avoidable.[2] Poor patient safety cultures in underdeveloped nations have been linked to an estimated 134 million adverse events being reported.[3]

Low knowledge of patient safety culture was discovered in a related study conducted in a Saudi Arabian tertiary care hospital. Additionally, it discovered that the age of healthcare providers differed in how they perceived the patient safety culture.[4]

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In terms of patient safety, Pakistan is just getting started. 87% of participants in research conducted at Agha Khan University said that patient safety meets their expectations. 31% of individuals reported 1 or 2 occurrences during a 1-year period.[5] A different study conducted at a tertiary care hospital in Lahore revealed that most people were unaware of high priority patient safety, which is explained by the hospital units' lack of support, the management's lack of response, and the heavy workload.[6]

This study aims to minimize the negative consequences caused by healthcare workers' incompetence and determine patient safety cultural awareness.

Methods

This study was conducted at Services Hospital located in Lahore. It can accommodate 1,196 inpatient beds and sees patients from across the nation, primarily from Punjab. Convenient non-probability sampling was carried out. A cross-sectional survey was carried out between June and August of 2023 with a sample size of 257 that was determined using WHO S-Size software with a 95% confidence level, an expected population proportion of 60%, and an absolute precision of 10%.[7] The Agency for Healthcare Research and Quality (AHRQ) released an updated version of the Hospital Survey on Patient Safety Culture (HSOPSC) questionnaire in 2004. It uses a 5-point Likert scale for agreement (from Strongly agree to Strongly disagree) or frequency (from Never to often), with 12 aspects and 42 questions.

The questionnaire is divided into nine sections covering work area/unit, supervisor/manager, communication, frequency of reported incidents, patient safety rating, hospital environment, quantity of reported events, and personal remarks.

Healthcare personnel working during the day shift at Services Hospital in Lahore were included in the study while Healthcare professionals who have participated in a patient safety culture workshop or training were excluded. Version 26 of SPSS was used as analysis tool. Standard deviation and mean were used to evaluate quantitative variables. Frequency and percentage were used to evaluate qualitative factors. A cut off p-value of 0.05 was set for the significance analysis using the Chi square test.

Results

According to the work area/unit, 19 (7%) healthcare workers scored their patient safety as exceptional, 68 (27%) as good, 114 (44%) as acceptable, 50 (20%) as poor, and 6 (2%) as failing grade table 01.

Table 02 shows the relationship between occupational statistics and patient safety culture. Poor teamwork responses were common in the medical department and among those who put in more overtime. Employees with shorter experience periods responded poor than those with longer experience periods. Less experienced medical workers (65%) responded poorly to mistakes. Among those with fewer than ten years of experience, hospital management and support received notably negative feedback (73%).

Data on occupations linked to favourable answers are displayed in Table 03. Positive answers were recorded for aspects of assistance in a hospital unit by doctors (51%) and nurses (32%) with direct patient contact and less experience. With less than ten years of experience and direct patient contact, 39% of physicians and 36% of nurses gave positive answers when asked about strategies for enhancing patient safety and averting adverse occurrences. Physicians (43%) and nurses (41%) with fewer than ten years of experience who have direct patient contact reported good comments on interdepartmental cooperation.

Table 01: *Frequency distribution table for patient safety grade. n=257*

Patient Safety Grade Response	Frequency (n)	Percentage (%)
Excellent	19	7
Very Good	68	27
Acceptable	114	44
Poor	50	20
Failing	6	2
Total	257	100

Table 02: *Association between patient safety culture and occupational characteristics. n=257*

Occupational Characteristics:		Domain											
		Team Work			Response to Error			Communication about Openness			Hands-off and Information Exchange		
		Poor Response	Good Response	P Value	Poor Response	Good Response	P Value	Poor Response	Good Response	P Value	Poor Response	Good Response	P Value
Work Area:	Medicine	64 (25%)	42 (16%)	0.083	85 (33%)	21 (8%)	0.096	99 (39%)	7 (3%)	0.001	82 (32%)	24 (9%)	0.043
	Surgery	47 (18%)	22 (9%)		64 (25%)	5 (2%)		64 (25%)	5 (2%)		63 (25%)	6 (2%)	
	ICU and ER	8 (3%)	2 (1%)		9 (4%)	1 (0%)		6 (2%)	4 (1%)		10 (4%)	0 (0%)	
	Paramedics	56 (22%)	16 (6%)		64 (25%)	8 (3%)		57 (22%)	15 (6%)		61 (24%)	11 (4%)	
Work Experience in Hospital:	<10 Years	123 (48%)	77 (30%)	0.001	168 (65%)	32 (13%)	0.037	186 (72%)	14 (5%)	0.001	163 (63%)	37 (14%)	0.037
	>10 Years	52 (20%)	5 (2%)		54 (21%)	3 (1%)		40 (16%)	17 (7%)		53 (21%)	4 (2%)	

Table 03: *Association between occupational characteristics and positive responses in each Dimension*

Occupational characteristics	Dimensions								
	People support one another in this unit			There is good cooperation among hospital units that need to work together			Shift changes are problematic for patients in hospital		
	Frequency (n) (%)		P Value	Frequency (n) (%)		P Value	Frequency (n) (%)		P Value
	Yes	No		Yes	No		Yes	No	
Work staff: Doctors	66 (62%)	41 (38%)	0.003	60 (56%)	47 (44%)	0.001	72 (66%)	35 (33%)	0.259
Working experience in current hospital: <10 Years	112 (56%)	88 (44%)	0.001	115 (58%)	85 (42%)	0.068	136 (68%)	64 (32%)	0.001
>10 Years	18 (32%)	39 (68%)		25 (44%)	32 (56%)		22 (39%)	35 (61%)	
Direct contact with patients: Yes	113 (49%)	118 (51%)	0.111	126 (55%)	105 (45%)	0.946	147 (64%)	84 (36%)	0.034
No	17 (64%)	9 (36%)		14 (54%)	12 (46%)		11 (42%)	15 (58%)	

Discussion

The purpose of this study, which was carried out in a tertiary care hospital in Lahore, Pakistan was to investigate healthcare professionals' perceptions of patient safety culture and related elements. It is a useful addition to help advance medical procedures. Administrative bodies will use this as a guidebook to help them identify issues, strengths, and weaknesses related to patient safety culture and to help them take the necessary action. The total positive response rate across all 7 domains turned out to be 14.95% which suggests poor patient safety across all domains, individual domains have showed good responses due to some improvements in overall behaviour of healthcare workers among themselves and better work environment but these findings are lower than a study conducted by Bashir H et al (47%) and Algethami F et al (59%).[8-9] A total of 87 (34%) participants deemed patient safety grade as excellent or very good it is slightly lower than a study by Hameed S (39%)[10] and a study by Sok May C (69%)[11] which can be attributed to a slightly larger number of respondents, better infrastructure , a more departmentally diverse response output and less experience time in their respective hospitals. The good responses recorded in domains Teamwork, Organizational learning-continuous improvement, response to error and Hands Off information exchange are 82(32%), 27(11%), 35(14%) and 41(16%) which are comparable to the findings of Abraham V et al with respect to team work (43.72%)[12] however findings significantly differed in domains like Organisational learning (91%)[12] and response to error (51%).[12] Findings of domains in this study are lower than Tadia VK for Teamwork (74%), Organizational learning-continuous improvement(69%), response to error (42%) and Hands off information exchange(73%) this can be attributed to the difference in number of different work staff with respect to their area of work, the number of patients flow in the hospital, the attitude of supervisors and colleagues towards each other.[13] It has been seen that more work experience and longer duration of work has contributed to decrease in overall good responses across all domains for instance in the teamwork domain only 5(2%) positive responses were observed for healthcare professionals with >10 years experience and 41(16%) for those working >40 hours. These are supported by a study Segura-García MT et al[14] which shows healthcare workers with >40 hours per week schedule giving a good response of (27%).[14] The primary reason which can be attributed to it is long working hours decreasing overall productivity of healthcare workers and increasing the chances of errors related to patient safety. In this study, the variables of age, sex, marital status, training attendance, and encouragement of incident reporting were all non-significant.

This study emphasized the elements that contribute to the existing patient safety culture. It serves as a jumping off point for interventions related to patient safety culture. The study used widely-accepted and extensively tested data collection instruments in several contexts. Extra efforts were made to reduce bias that was observed or predicted by include negative elements in the question objectives explanation. The study's conclusions are limited to public tertiary care facilities.

We accept the existence of some limitations that this investigation encountered. One tertiary care hospital provided the data. There was also a small sample size. As the interviews were conducted during the first shift of the day, the study may include additional behavioural bias. Because the questionnaire is lengthy, participants may become disinterested and provide inconsistent answers. The volume of replies from various units varies, which may potentially have an impact on the outcomes. For negatively warded questions, the HSOPSC employs reverse scoring, which may cause respondents' uncertainty and influence their decision to select a lower score for that area. Because they could not communicate well within the unit, the majority of respondents had less than five years of work experience, which is a constraint.

In order to improve patient safety culture in the current healthcare environment, it is essential to cultivate leadership commitment, offer ongoing training, and encourage candid communication among employees. Building teams, controlling workload and personnel levels, and providing strong leadership support are all crucial. Prioritize ongoing quality improvement, include patients in their care, and set up anonymous feedback mechanisms. Acknowledge and honour good practices, set external benchmarks, and remain dedicated to continuous observation and modification for a safer medical setting.

Conclusion

The high percentage of adverse event reports, which demonstrates active participation in the reporting system and accountability, the friendly and cooperative work atmosphere among co-workers, and the efficient communication and information sharing system were some of the strengths. Lack of efficient coordination, personnel problems, difficulties in honest communication regarding mistakes, an excessive workload, and inadequate leadership were some of the shortcomings. The findings encourage us to create a framework for productive teamwork, address staffing concerns, and close communication gaps in order to improve patient safety culture as a whole. Action needs to be taken to address the shortcomings and preserve the good aspects.

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Authors contributions:
IA, SM, JU: Involved in conceptualization, methodology, writing original draft.
QN, AS: Involved in investigation, data curation, formal analysis and contributed in writing original draft.

F: Involved in design of study, revise critically and final review & editing.

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