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Perception of Patient Safety in Health Care Professionals of a Teaching Hospital

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ABSTRACT

Objective: To assess patient safety awareness among healthcare professionals in a tertiary care hospital.
Study Design: Cross-sectional study
Place and Duration of Study: Pakistan Railway Hospital, Rawalpindi, Pakistan from December 2023 to February 2024
Methodology: One hundred and fifty staff members were enrolled in the study after taking informed verbal consent. Demographic data and the closed-ended standard version of the Hospital Survey on Patient Safety Culture (HSOPSC) questionnaire were used for data collection.
Results: Patient safety standards and perceptions were highly rated in terms of overall perceptions of patient safety, which ranged from good to acceptable. There was a positive response rate of 50.00%. Effective teamwork was demonstrated by 82.13% of hospital departments and units. Only 3-5 adverse events and 13.16% of clinician errors were reported in the previous 12 months. Honest sharing of information concerning mistakes and patient safety was claimed by 50.00% of respondents.

Conclusion: Although patient safety standards and perceptions were highly rated in hospital departments, there is still room for improvement with regard to event reporting.

Keywords: Patient safety, Safety culture, Survey, Teamwork

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INTRODUCTION

Patient safety is "the absence of preventable harm to a patient and reduction of risk of unnecessary harm associated with health care to an acceptable minimum.[1] With context to the health care system, it is "a framework of organized activities that creates cultures, processes procedures, behaviors, technologies, and environments in health care that consistently and sustainably lower risks, reduce the occurrence of avoidable harm, make the error less likely and reduce the impact of harm when it does occur.[2] A significant human toll is caused by unsafe medical care. According to a recent report by WHO, almost 1 out of every 10 patients sustains harm during the delivery of healthcare, and annual no of patient safety incidences reaches about 43 million[3] Furthermore, it was mentioned that various unfavorable circumstances can result in these harms, with almost 50% of them being considered avoidable.[4-5]

Positive safety culture in healthcare prioritizes patient safety through organizational learning, feedback, open communication, teamwork, non-punitive responses to errors, and a shared commitment to safety[6] One useful strategy for enhancing patient safety is to promote good safety culture among healthcare professionals by encouraging them to report and evaluate their mistakes.[7] Assessing the current safety culture is crucial as it identifies strengths and weaknesses, provides a clear view of patient safety issues, and allows for benchmarking against other hospitals.[8] This assessment guides the development of targeted interventions. Cultivating a patient safety culture among employees through education, leadership commitment, engagement, and continuous improvement is essential before implementing structural changes, ensuring that safety becomes a fundamental organizational value.[9]

Despite a worldwide increase in interest and awareness of patient safety culture within healthcare organizations, Pakistan has a dearth of information on patient safety culture. Furthermore, not enough attention has been paid to analyzing and elucidating the expectations and actions of healthcare professionals about patient safety. Pakistan's lack of

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standard operating procedures has led to many variations in clinical practice, which could eventually lower the quality and safety of medical care[10] The rationale for this study lies in the imperative to bridge existing gaps in our understanding of patient safety in health care. By exploring the complexity of health care provision, we seek to provide insights that can inform evidence-based practices, guidelines, and policies designed for patient safety. Identifying specific challenges and areas for improvement is essential to ensure that the care provided aligns with the highest standards of safety and quality.

METHODOLOGY

It was a cross-sectional study conducted at Pakistan Railway Hospital Rawalpindi, Pakistan from December 2023 to January 2024. Ethical approval was taken from the hospital's ethical review committee ("Ref No. Riphah/IIMC/ IRC/23/3116"). A total n=150 sample was calculated using the WHO sample size calculator, keeping a 95% confidence level, and 5% margin of error[11] Non-probability convenient sampling technique was used for the selection of study participants.

Inclusion Criteria: The study population for this survey was hospital staff, including healthcare professionals who directly interacted with patients as well as the hospital's administrative staff. The study participants were attached to the health care facility of Pakistan Railway Hospital for at least 6 months and were aged above 20 years. All doctors including consultants, postgraduate trainees, medical officers, and house officers were included. The nursing staff, midwives, and allied health care professionals with a minimum education level of a diploma in health care were also included in the study.

Exclusion Criteria: The health care professionals of Pakistan Railway Hospital who were attached to this hospital for less than 6 months, had an age less than 20 years, or did not have the minimum diploma level of educational qualification were not included in the study.

The Hospital Survey on Patient Safety Culture questionnaire (HSOPSC) which is a valid and reliable questionnaire was used as the primary data collection method for this research study. There was anonymous distribution of the questionnaire to the health care providers included in the study, through social networks. Before starting this research, the study objectives were conveyed to all the healthcare practitioners included in this research. The HSOPSC questionnaire was adapted from the Agency for Healthcare Research and Quality (AHRQ). The components of the questionnaire were slightly altered to meet the requirements of this study. Additionally, expert evaluation of cultural sensitivity issues was also taken into account[12] The design of the assessment tool focused on evaluating hospital staff's opinions about patient safety, medical errors, and event reporting. This questionnaire consists of 44 items that measure[14] dimensions or composites of patient safety culture. The evaluation of responses was done using a 5-point Likert scale of agreements (from 1: "Strongly disagree" to 5: "Strongly agree") or frequency (from 1: "Never" to 5: "Always"), and both positively and negatively worded items were included in the tool. The evaluation of job satisfaction of the healthcare providers was evaluated using ten items with a Likert scale of five options (1 – very dissatisfied, 2 – dissatisfied, 3 – neutral, 4 – satisfied, and 5 – very satisfied).

Data was analyzed using SPSS version 26. Means and standard deviations of quantitative data were calculated; while frequencies and percentages were calculated for qualitative data.

RESULTS

A total of 150 staff members of Pakistan Railway Hospital were included in this study, of which 31(20.66%) were male staff members and 119(79.33%) were female with mean age ranging from 31.73±7.10 years with min age n=24 years. Most of the participants included in the study had direct contact with the patients i.e. n=122 (81.33%). Table I includes the different categories of healthcare professionals in the study, their work units, work tenure, and duration of working hours in a week. Table II shows the level of association between different demographic characteristics of participants and patient safety culture response. A p-value of less than 0.5 shows a strong association between different demographic characteristics of participants and their positive response to patient safety culture. Table III shows the percentage response for different dimensions of patient safety culture among healthcare professionals. The interpretation of data demonstrates that areas such as fostering safety through supervisory expectations and behaviors (82.66%) and teamwork, transitions, and handoffs in hospital (64.66%) were the factors that were perceived most favorably by the staff indicating strengths in these areas and contributing most favorably to the overall patient safety culture.

The domain of open communication and handling of errors was positively responded to by 50.00% of participants indicating a need for improvement in this area. Analyzing the responses to questions about reporting patient safety events, 45.33% of people believed that sometimes their mistakes were caught and then corrected but 64.66% of people believed that these mistakes were rarely reported. In response to a question about the frequency of patient safety events reported, 52.20% of participants commented that 3-5 adverse events were reported in the last 12 months. However, on the whole, patient safety had a good rating.

Table-I: Demographic characteristics of the study participants (n=150)

Variables	Mean ±SD
Age (years)	31.73±7.10
Frequency (Percentage %)	
Gender	
Male	31(20.66%)
Female	119(79.33%)
Healthcare team members	
Gynecologist	27(18.00%)
Paramedical Staff	20(13.33%)
Nurse	29(19.33%)
Residents	19(12.66%)
House Officers	32(21.33%)
Midwives	23(15.33%)
Work Unit	
Gynae ward	48(32.00%)
Medical unit	22(14.66%)
Surgical unit	25(16.66%)
ICU	9(6.00%)
NICU/PCU/Pead's ward	10(6.66%)
Pathology unit	12(8.00%)
Labor room	9(6.00%)
Operation theatre	15(10.00%)
Work Tenure	
1 year	40(26.66%)
1-5years	63(42.00%)
6-10 years	41(27.33)
>10 years	6(4.00%)
Working hours per week	
<30 hours	94(62.66%)
30-40 hour	56(37.33%)
Direct contact with the patient	
Yes	122(81.33%)
No	28(18.66%)

DISCUSSION

Patient safety is one of the most essential components of good quality health care. The establishment of the "right patient safety culture" is essential for the improvement of patient safety and different surveys can measure it.[13] This research aimed to assess staff members' knowledge about the culture of patient safety at a tertiary inpatient facility.

Hospital management support for patient safety (82.13%) and hospital handoffs and transitions (64.66%) were the two domains that respondents most favourably assessed, according to the assessment of staff opinions regarding patient safety culture at the hospital level.

Table-II: Association between demographic characteristics and patient safety response n=150)

Demographic characteristics	Patient safety response		Total (n=150)	*P*-value
	Positive (n=116)	Negative (n=34)		
Gender				
Male	22 (18.96%)	9 (26.47%)	31	0.34
Female	94 (81.03%)	25 (73.53%)	119	
Healthcare team members				
Gynaecologist	23 (19.82%)	4 (11.76%)	27	0.36
Paramedical Staff	15 (12.93%)	5 (14.71%)	20	
Residents	14 (12.06%)	5 (14.71%)	19	
House Officers	26 (22.41%)	6 (17.64%)	32	
Nurses	24 (20.69%)	5 (14.71%)	29	
Midwives	14 (12.06%)	9 (26.47%)	23	

p-value of less than 0.5 is significant

Table-III: Positive response rate on the various dimensions of patient safety culture (n=150)

Patient Safety Culture Dimensions	Percentage (%)
Teamwork, staff management, and response to errors	82.13%
Fostering safety through supervisory expectations and behaviors	82.66%
Communication about errors and safety	50.00%
Reporting patient safety events (Sometimes)	45.33%
Reporting patient safety events (Rarely)	64.66%
Reporting patient safety events (3-5 events)	52.20%
Patient safety rating (Good)	33.13%
Teamwork, transitions, and handoffs in the hospital	64.66%

When transferring a patient to another unit or changing shifts, critical patient information must be relayed, which is covered by the hospital-level domain "Hospital Handoffs and Transitions". The exchange of information to facilitate the shift in care and responsibility for a single patient or multiple patients from one physician to the other is known as a handoff. In a hospital context, care transitions are required for several reasons. The process of handing over or transitioning from one carer to another involves interactive communication and the transfer of

particular, critical patient information.[14] 64.66% of the respondents gave this domain a good evaluation. 82.13% of respondents gave the domain "Teamwork across Hospital Units" a favorable evaluation. This indicates that hospital departments work closely and effectively in concert with one another. A similar study conducted in Alexandra, Egypt in 2020 showed a positive teamwork of 62.1%.[15] In contrast, prior research conducted by Marwa et al. indicates that just 30% of respondents gave the domain "Teamwork across Hospital Units" a positive evaluation.[16]

Assessing the unit-level staff's opinion of the patient safety culture, 82.66% of respondents gave the supervisor/manager a positive evaluation of their expectations and actions supporting patient safety, organizational learning - continuous improvement, and feedback and communication about errors. This was comparable with other similar studies reported in the literature. Han et al. reported that 64.85% of the participants gave favorable opinions to supervisor/manager expectations and actions leading to patient safety.[17]

The domain of open communication and handling of errors was given a positive response by 50.00% of participants. To increase safety, prevent errors, and enhance healthcare outcomes, open communication in patient safety refers to the open, honest, and unrestricted flow of information between healthcare personnel, patients, and their families. It involves creating an environment where individuals feel comfortable sharing concerns, asking questions, reporting errors, and discussing potential risks associated with medical care. In a similar research Beyene Shashamo, B. et al reported a positive response rate of 67.54% for open communication.[18]

According to the findings of our study, the outcomes dimension had the highest rates of negative response. Infrequent reporting of errors was claimed by 64.66% of participants while 45.33% believed that their mistakes were occasionally discovered and fixed before having an adverse effect on the patient. In research conducted by Beyene Shashamo, B. et al. in Southern Ethiopia[18] the areas getting the lowest positive result rate of (57.47%) were frequency of event reporting. The lowest positive results of 37.8% were reported to the domain of "frequency of event reporting" by research conducted by Ricklin et al.[19]

This study revealed the current state of patient safety culture and its contributing factors. This is important to the public because it provides knowledge for improving patient safety throughout the delivery of healthcare by implementing interventions related to the many aspects of patient safety culture. The results give us the options to provide opportunities for enhancement of patient safety and require further research on this topic.

INFORMED CONSENT

For this study 'Patient's safety in Obstetrics and Gynecology' Informed consent was obtained from all subjects involved in the study

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CONCLUSION

The hospital departments had high expectations for patient safety both in terms of perception and norms. Event reporting is an area requiring improvement and standardization, as a record of only a few events was available. Instead of concentrating on individual errors, to enhance patient care, the protocol for reporting adverse events must be modified. Departmental policies should be created and revised regularly in response to negative incidents and potential for improvement. Obstetricians need to implement standardized protocols for handoff and transition procedures and use structured techniques for this purpose including Situation, Background, and Assessment Recommendation (SBAR) whenever feasible.

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Authors' Contribution

Following authors have made substantial contributions to the manuscript as under:

WS & SF: Study design, drafting the manuscript, data interpretation, critical review, approval of the final version to be published.

SS & NA: Data acquisition, data analysis, approval of the final version to be published.

MNAK & HT: Critical review, concept, drafting the manuscript, approval of the final version to be published.

Authors agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

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