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Existing perception of Patient safety among health personnel in operating room at CHICH (Children Hospital & Institute of Child Health, Lahore).

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ABSTRACT… Objective: To assess the existing perception of patient safety among health personnel in operating rooms of tertiary care hospital in Pakistan. **Study Design:** Cross Sectional study. **Setting:** Children Hospital & Institute of Child Health Lahore. **Period:** July 2018 to December 2018. **Material & Method:** Participants were selected through proportionate simple random sampling. The WHO patient safety survey was used to assess perception of patient safety culture. Data was collected after taking consent. The data was entered in SPSS version 25 and analyzed by it. "Composite positive response rate" for the various dimensions were calculated. Reliability was checked by Cronabach alpha which was more than 0.7 (70%). **Results:** The overall response rate in the study was 100%. Average composite positive response percentage was 65.17% and it varied among different cadres of HCPs ranged from 51% to 88%. The dimensions "Personal attitude to Patient safety" and "Personal influence over safety" showed highest positive response among all cadres (88 % and 67 %) respectively. composite Positive percent response about patient safety culture varied among different cadres of health personnel, nurses showed highest positive response percentage of 71.2%. **Conclusion:** Safety culture assessment is a useful tool for evaluation of patient safety interventions, measuring organization's safety culture and raising awareness. WHO patient safety study tool showed the average positive response rate of 65.17% but the dimension "Safety of health care system", and "Error and patient safety" have least positive response which shifts the focus to organizational conditions that lead to adverse events and patient harm in healthcare organizations. The result also highlighted areas that required improvement, as perceived by health care workers.

Key word: Health Care Providers, Operating Rooms, Patient Safety Culture, Who Questionnaire, Workplace Safety.

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INTRODUCTION

Patient safety can be defined as the practices used to prevent harmful events resulting in negative outcome of health care delivery system i.e. morbidity & mortality. Patient safety involves the process or series of steps followed to reduce the probability and occurrences of adverse occasions resulting from experience to health care system. Patient safety remains the prime concern of every health care setup. Patient safety is a corner stone in delivery of high quality care provided to patients presenting in with different co-morbidities.[1] In recent years much attention has been given to use of safe practices, but unfortunately uniformly reliable and true safety in healthcare system has not yet achieved. The harm is not deliberate rather it is due to health system failure, management negligence or human errors which could be avoided to achieve the required goal.[2] Patients not only harmed by the use of technology by non-skill person but also harmed by the lack of communication in health care workers. Patient safety practices emphasize on reporting, analysis and prevention of these errors leading to adverse events.[3] Surgical suite is the most complex place in any hospital setting requiring more need of safety and training of health care professionals. Safety measures in surgical units is the outcome of multiple system emplacements such as organizational structure,

protocols, training received by professionals, and the quality of equipment or technology.[4] Among all these multiple factors, human error has most negative impact on the safety of patients.[5] Patient safety varies across institutions, within institutions, and between disciplines because it is not a single person's task it rather involves team work.[6] The difficulties are due to interdisciplinary differences in perception of patient safety among health care professionals.[7] According to Nieva patient safety culture can be depicted as "the product of individual and group values, attitudes, perceptions, competencies and patterns of behavior that determine the commitment to the style and proficiency of an organization's safety management".[8]

In 2008, WHO introduced World Health Organization Safety Checklist (Checklist WHO SSCL) to improve the patient safety. However, despite all such precautionary measures along with interventions to improve surgical care and anesthesia, WHO claims that there still exist quality control issues concerning surgical care and safety at workplace worldwide. Alarming figures were reported by WHO indicates that at least seven million patients experience surgical complications and one million of these patients expire during or after the intervention. Surprisingly, more than half of these injuries are totally preventable and treatable.[9]

Surgical aspects of patient safety vary depending upon the specialty; however the patient safety culture enables health care institutions to be aware of the areas that require attention in the operating room. Patient safety culture of as many as 30 countries can be found in literature, yet the variations are reported in the implementation of patient safety standards across different countries.[10] The WHO SSCL was introduced in 2008 with this very purpose to improve patient safety and inter-discipline communication which may serve to lessen avoidable complications and emphasize current safety procedures. It consists of the questions enquired at three stages of surgical procedure. Initial enquires are made just before the administration of anesthesia, then prior to the skin incision and finally before the exit of patient from the operation theatre. Figures reported by studies indicate that standardization of surgical processes cannot be confined to the operating room as majority of the surgical errors (53–70%) occur outside the operating room, i.e. before or after surgery. This implies that a thorough improvement of patient care can be achieved by targeting the entire surgical pathway by correct implementation of standardized checklists.[11]

MATERIAL & METHODS

Cross sectional study was conducted to assess the existing perception of HCP's towards patient safety culture in operating suit of The Children Hospital & Institute of Child Health Lahore. Duration of study was 6 month from July 2018 to December 2018 after the approval of synopsis. Proportionate simple random sampling was used and sample size was calculated using the formula ($n_n = N_n/1+N_e^2$). Required proportion of sample from different strata (Surgeons, Anesthetists, Nurses, and Technicians) was calculated. Sweepers were excluded. World Health Organization patient safety questionnaire developed at university of Aberdeen (2008) was used to assess the existing level of perception of different health care professionals working in operating rooms. The questionnaire consisted of 5 dimensions and 33 questions in different dimensions. Ethical review committee has approved this study (723/SAHS).

RESULTS

A total 155 questionnaire were distributed in randomly selected HCPs (Surgeons -24, anesthetists - 38, nurses - 52 and technicians-41). The overall response was 100%. Mean age of the study participants was 30years and SD 5.22 and the majority of them 94(60.6%) were females. Around 62.4% of the study participants had a work experience of at least 5 years.

Socio-demographic Details	n (%)
Age(Years)	
20-30	97(62.5%)
31-40	51(32.9%)
>40	07(4.4%)
Gender	
Male	61(39.4%)
Female	94(60.6%)
Experience(years)	
1-5	97(62.4%)
6-10	40(25.8%)
>11	18(11.4%)
Designation	
Surgeons	24(15.5%)
Anesthetists	38(24.5%)
Nurses	52(33.5%)
Technicians	41(26.5%)

Table-I. Socio-demographic characteristics of the study participants. n=155

The total composite positive response perception of patient safety among the HCP at the Children Hospital was found to be 65.17%. The dimensions Personnel attitude to patient Safety, Personnel Influence over Safety & Safety at the workplace showed highest positive response of 88%, 67% & 62.44% respectively. The dimensions Error and Patient Safety and Safety of the healthcare system had lowest response percentage of 57.42% & 51%.

The mean composite positive response percentage for surgeons, anesthetists, nurses and technicians varies in all five dimensions. This variation in perception of patient safety culture is based on their command and capabilities to secure patient. In dimension Error and Patient safety technicians and nurses have more awareness to day case error and error in operating rooms while anesthetists showed the least response.

In 2nd dimension which is Safety of the Healthcare System Nurses had more knowledge regarding healthcare system due to close connection with health care system. In Personal Influence over Safety nurses, surgeons and anesthetists had more command and they have more influence to patient safety. But technician need improvement in this section.

Dimension of Patient Safety	Numbers of items in the dimensions	Average composite positive response Percentage	Average composite positive response Standard deviation
Error and Patient Safety	7	57.42	11.23
Safety of the healthcare system	6	51	9.9
Personnel Influence over Safety	4	67	14.6
Personnel attitude to patient Safety	7	88	6.0
Safety at the workplace	9	62.44	16.7
Total	33	65.17	14.08

Table-II. Composite Positive Response Rate Of "Patient Safety" in all dimensions of WHO patient safety survey among health Personnel in OR.

	Average composite positive response percentage				
Dimension of Patient Safety	Surgeons n = 24	Anesthetists n = 38	Nurses n = 52	Technicians n = 41	Sig (p)
Error and Patient Safety	50.64	50.75	60.86	61	0.11
Safety of the healthcare system	30.83	49.83	66.33	41	0.00
Personnel Influence Over Safety	66.86	62.85	69	59	0.01
Personnel attitude to patient Safety	83.25	94	79.5	87	0.23
Safety At the workplace	62	64.05	68.33	56	0.15
Total	58.7	64.29	68.80	60.8	

Table-III. Average composite positive percentage of "patient safety culture" among different health care providers.

Personnel attitude to patient Safety dimension has best score in all five dimensions by all health care personnel. Least score in this dimension was 79.5% while highest score was 94% Safety at the Workplace dimension showed that nurses, surgeons and anesthetists do good to keep safety at workplace by saving themselves and patients. In this dimensions Nurse had 68.33% positive response. P value was calculated by taking means of individual's case across each dimension.

DISCUSSION

An assessment of patient safety culture of the organization allows hospitals to identify their strengths and weaknesses. Is also provides a clear overview of the patient safety aspects that require more attention.[13,14,15] A number of researches have been conducted on patient safety in recent years. In current study, the four HCP's were included and all had different response rate on 5 dimensions.

This study showed variations in the positive perception of patient safety ranging from 51% to 88%. Agency for Healthcare Research and Quality (AHRQ) had developed a 12 dimension questionnaire for assessment of patient safety.[16] But in current study WHO patient safety survey (2008) was used. The composite mean positive response of all 5 dimensions included in WHO patient safety survey was 65.17% though different health care personnel have different level of perception regarding patient safety.

Patient safety positive score of current study was much better as compared to other studies in developing countries such as Ethiopia (36.77%) and Tunisia (34.11%). The survey on patient safety was done in south India; it had the positive response rate 58.35% that is less than our results 65.17%.[3] Positive response rate of this study showed much better results when compared to developed countries such as 60% to 80% in Norway, USA, Egypt and China.[13]

The dimensions, "Personal attitude to Patient safety" and "Personnel influence over the safety", showed highest positive response among all cadres (88% and 67%) respectively.

Average composite positive response calculated in current study was highest among nursing staffs (68.80%) as compared to surgeons (58.72%), anesthetists (64.29%) and technicians (60.8%). Another study from the India reported more positive response among Nurses (61%).[3] Differences among HCP's perception of patient safety speculate the differences in their work organization, content, and professional training. This difference in perceptions of HCPs is because of their different expertise and work responsibilities.[4] The more positive response obtained by nurses in all 5 dimensions could be the result of inbuilt system developed by the organization for nursing staff which facilitates day to day supervision and conflicts management among the staff.

CONCLUSION

Safety culture assessment is useful tool for evaluation of patient safety interventions, measuring organization's safety culture and raising awareness. WHO patient safety study tool showed the average positive response rate of 65.17% but the dimension "Safety of health care system", and "Error and patient safety" have least positive response which shifts the focus to organizational conditions that lead to adverse events and patient harm in healthcare organizations. The result also highlighted areas that required improvement, as perceived by health care workers.

REFERENCES

1. Gizaw AB, Hailu FB, Negese DT. **Perception towards patient safety practice and associated factors among health care providers of Jimma Zone Public Hospitals.** Adv Tech Biol Med. 2018; 6(261):2379-1764.

2. Flin R, W. J. S. C. T. M., 2009. **Better knowledge for safer care, Human factors in Patient safety: Review of topics and tools: Reports for methods and measures Geneva.** World health Organization.

3. Adhisakthi Rajalatchumi, Thanjavur S. Ravikumar, 2018. Perception of Patien Kaliaperumal Muruganandham, Mahalakshmy Thulasingam, Kalaiselvi Selvarajt. **Safety Culture among Health care Providers in a Tertiary Care Hospital, South India.** J Nat Sc Biol Med, Volume 9, pp. 8-14.

4. Van Beuzekom M, Boer F, Akerboom S, Dahan A. **Perception of patient safety differs by clinical area and discipline.** British journal of anaesthesia. 2013 Jan 1; 110(1):107-14.

5. Cook R, Rasmussen J. **"Going solid": A model of system dynamics and consequences for patient safety.** BMJ Quality & Safety. 2005 Apr 1; 14(2):130-4.

6. Huang DT, Clermont G, Sexton BJ, Karlo CA, Miller RG, Weissfeld LA, Rowan KM, Angus DC. **Perceptions of safety culture vary across the intensive care units of a single institution.** Critical care medicine. 2007 Jan 1; 35(1):165-76.

7. Van Beuzekom M, Boer F, Akerboom S, Dahan A. **Perception of patient safety differs by clinical area and discipline.** British journal of anaesthesia. 2013 Jan 1; 110(1):107-14.

8. Nieva VF, Sorra J. **Safety culture assessment: A tool for improving patient safety in healthcare organizations.** BMJ quality & safety. 2003 Dec 1; 12(suppl 2):ii17-23.

9. Van Beuzekom M, Boer F, Akerboom S, Hudson P. **Patient safety in the operating room: An intervention study on latent risk factors.** BMC surgery. 2012 Dec; 12(1):1-1.

10. Mallouli M, Tlili MA, Aouicha W, Ben Rejeb M, Zedini C, Salwa A, Mtiraoui A, Ben Dhiab M, Ajmi T. **Assessing patient safety culture in Tunisian operating rooms: A multicenter study.** International Journal for Quality in Health Care. 2017 Apr 1; 29(2):176-82.

11. Verwey S, Gopalan PD. **An investigation of barriers to the use of the World Health Organization Surgical Safety Checklist in theatres.** South African Medical Journal. 2018 Apr 1; 108(4):336-41.

12. Nie Y, Mao X, Cui H, He S, Li J, Zhang M. **Hospital survey on patient safety culture in China.** BMC health services research. 2013 Dec; 13(1):1-1.

13. Khoshakhlagh AH, Khatooni E, Akbarzadeh I, Yazdanirad S, Sheidaei A. **Analysis of affecting factors on patient safety culture in public and private hospitals in Iran.** BMC health services research. 2019 Dec; 19(1):1-4.

14. El-Jardali F, Dimassi H, Jamal D, Jaafar M, Hemadeh N. **Predictors and outcomes of patient safety culture in hospitals.** BMC health services research. 2011 Dec; 11(1):1-2.

15. Basson T, Montoya A, Neily J, Harmon L, Watts BV. **Improving patient safety culture: A report of a multifaceted intervention.** J Patient Saf. 2018; 14(2):107–11.

16. Sorra J, Gray L, Streagle S, et al. **AHRQ Hospital Survey on Patient Safety Culture: User's Guide.** AHRQ Publication No. 18-0036-EF Agency for Healthcare Research and Quality. July 2018.

AUTHORSHIP AND CONTRIBUTION DECLARATION

Sr. #	Author(s) Full Name	Contribution to the paper	Author(s) Signature
1	M. Naveed Bhatti	Conceptulization of study design.	
2	Rubab Zohra	Data analysis, Write up, Article writing, Study design.	
3	Nabila Talat	Supervised the study, Proof reading.	
4	Muhammad Ihsan	Helped in data collection & study design.	