Patient Safety & Quality Improvement Journal
http://psj.mums.ac.ir
PSQI

Viewpoints of Nurses and Therapeutic Staff toward Patient Safety Culture: A Case Study in Ardabil, Iran

Somayeh Zeynizadeh-Jeddi[1], Mahzad Yousefian[2], *Firouz Amani[3], Akbar Pirzadeh[4], Maryam Farajifard[5]

[1]*Department of Radiology, Alavi Hospital, Ardabil University of Medical Science, Ardabil, Iran.*
[2]*Department of Anesthesiology, Alavi Hospital, Faculty of Medicine, Ardabil University of Medical Science, Ardabil, Iran.*
[3]*Clinical Development of Research center, Alavi Hospital, Ardabil University of Medical Science, Ardabil, Iran.*
[4]*Department of Otorhinolaryngology, School of Medicine, Ardabil University of Medical Science, Ardabil, Iran.*
[5]*MSc in Clinical Psychology, Alavi Hospital, Ardabil University of Medical Science, Ardabil, Iran.*

ARTICLEINFO

Article type:
Original Article

***Article History*:**
Received: 30-Dec-2020
Accepted: 24-Feb-2021

Key words:
Ardabil, *Medical Errors*, *Nurse*, *Patient Safety Culture*.

ABSTRACT

Introduction:
The improvement of Patient Safety Culture (PSC) is the first step in patient immunity promotion. This study aimed to investigate the viewpoints of nurses and therapeutic staff toward PSC.

Materials and Methods:
This cross-sectional study was conducted on 70 nurses and staff working at Alavi Hospital, Ardabil, Iran, in 2019. The data were collected using a patient safety culture standard questionnaire entitled "A Hospital Survey on Patient Safety Culture", which was completed by all participants. Subsequently, the collected data were analyzed in SPSS software (version 24) according to the questionnaire guideline.

Results:
According to the results, 56 (80%) and 14 (20%) participants had moderate and high levels of PSC, respectively. The highest level of respecting PSC was observed in those with work experience of up to 21 years and operating room staff. Furthermore, PSC showed a significant relationship with hospital work experience and organizational position.

Conclusion:
The obtained results revealed the moderate level of PSC among nurses and hospital staff in Ardabil, Iran, which required future programing by hospital managers to promote PSC. Moreover, it is recommended to provide a reporting system and encourage the personnel to report the errors and modify the nurses in sections based on work loading.

▶ ***Please cite this paper as:***
*Zeynizadeh-Jeddi S, Yousefian M,*Amani F, Pirzadeh A, Farajifard M.Viewpoints of Nurses and Therapeutic Staff toward Patient Safety Culture: A Case Study in Ardabil, Iran. Journal of Patient Safety and Quality Improvement. 2021; 9(1):55-60. Doi: 10.22038/psj.2021.54574.1302*

Corresponding Author:
Clinical development of research center, Alavi Hospital, Ardabil University of Medical Science, Ardabil, Iran.
E-mail: biostat.f@gmail.com

Introduction

The first step in the patient immunity promotion and reduction in medical errors in all medical service providing organizations is the improvement of Patient Safety Culture (PSC). The PSC is one of the important items for immunity promotion and improvement of patient care (1,2).

Every day, health care workers make decisions about patient safety at all organizational levels; moreover, the assessment of the patient immunity is one of the important indices in hospitals which could be evaluated by the staff yearly performance that is collected based on the indices leading to making decisions (1,3).

In recent years, the patient safety topic has been changed to a goal for decreasing the occurrence and impact of human errors worldwide (4).

Due to an increase in medical errors, it seems necessary to be familiar with PSC in the health system to change this culture, thereby improving the quality of care since the enhancement of PSC is not a clinical subject but is related to an organizational dimension (5).Despite recent studies in this area, medical errors and the associated costs are still high for health systems and families (6). One of the main goals of the health systems is the improvement of patient safety, which requires continuous review of the PSC among nurses and medical staff (7).

Mostafaei et al. showed that the assessment of the current PSC and its improvement should be one of the priorities of the hospital managers and staff at the first step. Furthermore, the managers should encourage the staff and nurses to report errors without any fear of punishment and blame. The institutionalization of this requires the strong support of senior executives in organizations.

They also concluded that patient safety is a critical component of the quality of health care that has been increasingly considered by health researchers in recent years. According to the experts in this field, safety culture is one of the important factors contributing to patient safety in hospitals and medical centers, and the lack of a strong hospital safety culture means poor patient safety in the environment (8).

It can be stated that the PSC is one of the main elements of promoting safety and improving the quality of patient care; in addition, it is one of the most important concerns of individuals.

Experts believe that hospitals should also promote PSC among their staff (9-12). Due to the lack of any study about the PSC in the hospitals in Ardabil, Iran, this study aimed to evaluate the viewpoints of nurses and medical staff toward PSC.

Materials and Methods

This cross-sectional study was conducted on 70 cases that were randomly selected using the random sampling methods from all units and sections of Alavi Hospital, Ardabil, Iran, during 2019. The inclusion criteria were: 1) minimum education level of diploma, 2) employment in Alavi Hospital, Ardabil, and 3) complete willingness to participate in the study.

The data were collected using a questionnaire covering such demographic characteristics as age, gender, educational degree, work experience, and the number of working hours per week and month. Moreover, "A Hospital Survey on Patient Safety Culture (HSOPSC)" was used in this study, the validity and reliability of which were previously checked by Arabloo et al. (2). The HSOPSC included 42 items in 12 different dimensions of PSC.

All items were rated on a five-point Likert scale of 4=strongly agree to 0=strongly disagree.

In this questionnaire, the "agree" and "strongly agree" responses were considered positive, "neither agree nor disagree" was regarded as neutral, and "disagree" as well as "strongly disagree" were considered negative answers. Furthermore, the scores higher than 70% (≥ 145) and lower than 145 were regarded as high and moderate levels, respectively.

The collected data were analyzed in SPSS software (version 24) according to the questionnaire guideline. Moreover, ANOVA and t-test were utilized to compare the mean of PSC between the groups and variables. A p-value less than 0.05 was considered statistically significant.

Results

According to the obtained results, 48.6% of the participants were in the age range of 30-40 years, and 60% of the cases were nurses. Furthermore, 37.1% of the respondents had hospital work experience of 6-10 years, and 34.3% of the participants worked 6-10 hours in a related section. In addition, 37% of the cases worked 41-45 hours a week, and 90% of the respondents had an MSc degree. Regarding the type of university, 51.4% of the participants graduated from non-governmental universities, and 47.1% of them worked in the morning shift. Out of all participants, 56 (80%) and 14 (20%) cases had moderate and high levels of PSC, respectively. The total mean score of PSC was obtained at 135.8±12.1, and the highest score (4.23±0.63) was related to the expectations and performance of the head of the department on the PSC dimension. It should be noted that the lowest score (1.43±0.71) was related to the frequencies of event reporting (Table 1).

Table 1: Descriptive statistics of the patient safety culture scores in the studied cases

Dimensions	Min	Max	Mean	SD
Frequencies of event reporting	1.00	5.00	1.4286	.71366
General understanding of patient safety	1.50	4.75	3.5607	.61005
Expectations and performance of the head of the department toward the patient safety culture	3.00	5.00	4.2321	.63033
Organizational learning and continuous improvement	2.33	5.00	3.9381	.52718
Departmental group work	2.00	5.00	3.8429	.69830
Open communication	2.00	4.33	3.0048	.60458
Communication and feedback on errors	1.00	4.67	2.3143	.80234
Non-punitive response in case of errors	1.00	4.67	2.8810	.95475
Working issues related to the staff	1.00	4.75	2.5393	.87811
Management support for patient safety	1.33	5.00	3.5476	.85698
Inter-departmental group work	1.00	5.00	3.1536	.84944
Delivery and transformations in hospital	1.00	3.4250	3.4250	.84950
Total	106	168	135.8	12.1

Additionally, the highest and lowest levels of PSC were related to the operating room section and Labour Delivery and Recover Room (LDR), respectively.

The PSC revealed no significant association with age, mean work time, education level, the type of university, and work shift. The PSC was mostly observed by those with work experience of up to 20 years and operating room staff. The relationship of PSC with hospital work experience and organizational position was also significant in this study (Table 2).

Table 2: Relationship between demographic characteristics and the patient safety culture scores

Demographic characteristics	Levels	Mean±SD	n	%	p-value
Age groups	20-30	134.9±10.8	17	24.3	0.38
	30-40	134.4±8.9	34	48.6	
	40-50	139.1	19	27.1	
Organizational position	Nurse	135.6±9.2	42	60	0.007
	Midwife	131.3±16.8	12	17.1	
	Operating room Staff	152±9.5	5	7.1	
	Laboratory staff	139±15.2	6	8.6	
	Radiology staff	127.8±5.3	5	7.1	
Hospital work experience	<5	135±11	16	22.9	0.032
	6-10	133.3±9.6	26	37.1	
	11-15	132.1±5.6	9	12.9	
	16-20	137.5±17	12	17.1	
	>20	148.7±13.5	7	10	
Work experience in a ward	<5	136.4±11.5	33	47.1	0.3
	6-10	133±12.7	24	34.3	
	11-15	133.3±0.6	3	4.3	
	>16	141.4±13.5	10	14.3	
Work in a week (hours)	30-40	136.1±10.4	19	27.1	0.24
	41-50	135.3±12.7	38	54.3	
	51-55	147±19.2	4	5.7	
	56-60	132.3±7.9	9	12.9	
Education level	Diploma	134±11.3	2	2.9	0.87
	Bachelor's degree	136±12.2	64	91.4	
	Higher education	133±14.4	4	5.7	
Type of University	Non-governmental	135.5±11.8	36	51.4	0.84
	Governmental	136.1±12.6	34	48.6	
Shift work	Morning	136.8±13.2	33	47.1	0.72
	Evening	146±9.2	2	2.8	
	Night	132±11.2	2	2.8	
	Circle	134.6±11.3	33	47.1	

Discussion

According to some studies, the PSC level of nurses was at a moderate level, which was in line with the findings in this study (2,7). Abdi et al. concluded that the PSC of nurses was in low to moderate levels, which was consistent with the findings in the present study (13). Similarly, Mostafaei et al. conducted a study and revealed that the PSC levels in hospitals in Tehran, Iran, were lower than those in the present study; moreover, some necessary plans were suggested for the promotion of PSC among the staff and nurses in the future (2).

The improvement of the PSC should be a priority among hospital administrators. Healthcare staff should be encouraged to report errors without fear of punitive action, and it needs strong support from the senior managers of the organization (8).

The results of a study conducted by Faryabi et al. indicated that the moderate levels of observing PSC in the hospitals in Jiroft, Iran, which was similar to the findings of the current study (14).

In the same vein, Amiran et al. demonstrated that the staff worked at the studied hospital had a moderate level of PSC, which was in line with the results of our study (15). Mahfoozpour et al. conducted a study and revealed that among all PSC dimensions, the highest score was related to inter-departmental group work, followed by organizational learning and continuous improvement.

In the studies in America and Turkey, the highest score was observed in the inter-departmental group work. In another study conducted in Norway hospitals, the highest and lowest scores were related to the inter-departmental group work and management support for the patient safety dimension, respectively. Furthermore, a study was performed in Belgium, and the lowest score was obtained at management support for the patient safety dimension (16,2).

The inter-departmental group work in the above studies obtained the highest score, which was similar to the findings in this study. It can be inferred that due to the cooperation of staff and their teamwork in each care unit, people have become familiar with the importance of this issue over time and have institutionalized it.

Pourshareiati et al. in a study concluded that the highest and lowest scores in PSC dimensions were related to organizational learning and continuous improvement, as well as delivery and transformations in hospitals, respectively.

According to the t-test results, there was a significant relationship between gender and the PSC. Moreover, a significant association was observed between work experience and PSC (7). In the same line, Pourshareiati and Alahmadi et al. revealed the lowest scores by the staff, which could be related to the lack of nurses for clinical work that led to increasing the error probability. Since staff are the predictors of patient safety, the possession of a strong and motivated workforce is one of the biggest challenges facing hospitals (7,17).

In a study carried out by Faryabi et al., the reporting of injuries and medical errors was at a moderate level, which was not in line with the results of other studies. However, the findings of this study were consistent with those in a study performed by Rokoyl et al. probably due to the less familiarity of the hospital personnel with PSC and its importance, which requires more research in this regard (14,18-23).

Conclusion

The results revealed moderate levels of PSC among nurses in the hospital, which can be due to the punitive culture in the hospital environment, the unfair distribution of nurses in the wards, as well as the lack of support from nurses and patient safety management. In this regard, it is recommended to create a hospital space where staff report errors without fear of reprisal. Furthermore, nursing staff should be managed in the units based on workload adjustment, a reporting system should be set up, and the staff should be encouraged to report errors.

The results of this study can help hospital administrators and managers to create a safe environment for patients on the one hand, as well as health system policymakers to design efficient health systems and promote patient safety goals on the other hand. This study could be a piece of evidence for conducting comprehensive studies in the country in the future.

References

1. Shamsadini Lori A, Osta A, Atashbahar O, Ramazani S, PourAhmadi M, Ahmadi Kashkoli S. Patient Safety Culture from the Viewpoint of Nurses of Teaching Hospitals Affiliated with Shahid Beheshti University of Medical Sciences. Health_Based Research. 2016; 2 (1) :81-92.
2. Arabloo, J., Rezapour, A., Ebadi Fard Azar, F., Mobasheri, Y. Measuring Patient Safety Culture in Iran Using the Hospital Survey on Patient Safety Culture (HSOPS): an Exploration of Survey Reliability and Validity. International Journal of Hospital Research, 2012; 1(1): 15-28.
3. Adams RE, Boscarino JA. A community survey of medical errors in New York. International Journal for Quality in Health Care. 2004; 16(5): 353-62.
4. Johnstone M-J. Patient safety ethics and human error management in ED contexts: Part I: Development of the global patient safety movement. Australasian emergency nursing journal. 2007; 10(1): 13-20.
5. Bognár A, Barach P, Johnson JK, Duncan RC, Birnbach D, Woods D, et al. Errors and the burden of errors: Attitudes, perceptions, and the culture of safety in pediatric cardiac surgical teams. The Annals of thoracic surgery. 2008; 85: 1374-81.
6. Singer S, Lin S, Falwell A, Gaba D, Baker L. Relationship of safety climate and safety performance in hospitals. Health services research. 2009; 44 (2): 399-421.
7. Pourshareiati F, Amrollahi M. Patient Safety Culture from Rahnemon Hospital Nurses' Perspective . ohhp. 2017; 1 (1) :52-61
8. Mostafaei D, Aryankhesal A, Dastoorpoor M, Rahimikhalifekandi Z, Estebsari F. Patient Safety Culture Assessment of Clinical and Paraclinical Staff Perspective in Selected University of Medical Sciences Hospitals in Tehran. Iran J Health Educ Health Promot. 2018; 6 (3):293-301.
9. Bognár A, Barach P, Johnson JK, Duncan RC, Birnbach D, Woods D, et al. Errors and the burden of errors: attitudes, perceptions, and the culture of safety in pediatric cardiac surgical teams. Ann Thorac Surg 2008;85(4):1374-81.
10. Kaafarani HM, Itani KM, Rosen AK, Zhao S, Hartmann CW, Gaba DM. How does patient safety culture in the operating room and post-anesthesia care unit compare to the rest of the hospital? Am J Surg 2009;198(1):70-5.
11. Milligan F, Dennis S. Building a safety culture. Nurs Stand 2005;20;48-52.
12. Bodurs S, Filiz E. A survey on patient safety culture in primary healthcare services in Turkey. Int J Qual Health Care 2009;21(5):348-55.
13. Abdi Zh, Maleki MR, Khosravi A. Perceptions of patient safety culture among staff of selected hospitals affiliated to Tehran University of Medical Sciences. Payesh Health Monit J Iran Instit Health Sci Res 2011;10(4):411-9.
14-Faryabi R, Shahbazi H, Alizadeh siuki H, Rahimi T. The Investigation of the patient safety culture status in Hospitals of Jiroft City in 2014. jms. 2015; 2 (4) :30-23.
15.Amiran P, Pour riba M, Fatemi Mehr A. Evaluation of Patient Safety Culture Based on the Viewpoint of Nurses and Physicians Employed in a Military Hospital. Military Caring Sciences.2018; 5(1): 26-33.
16. World Health Organization. World Alliance for Patient Safety. Forward programme 2008-2009. 1st ed. WHO Press: 2008.
17. Alahmadi H. Assessment of patient safety culture in Saudi Arabian hospitals. Quality and Safety in Health Care. 2010; 19(5): 1-5.
18. Mozafari J, Fahimi MA, Masoumi K, Asgari Darian A, Arash Forouzan. Emergency Medicine Residents Perception about Patient Safety Culture. Adv Bio Res 2013; 7(5): 155-8.
19. Yaghobifar MA, Takbiri A, Haghgoshaye E, Tabarraye Y. The survey of patient safety culture and recognizing its weaknesses and strengths in Sabzevar hospitals: 2011. J Sabzevar Univ Med Sci 2013; 20(2): 154-64. [In Persian]
20. Ravaghi H, Barati Marnani A, Hoseini AF, Takbiri A. The Relationship between Health Care Providers' Perceptions of Patient Safety Culture and Patients' Perceptions of Medical Errors in Teaching Hospitals in Tehran: 2011. J Health Adm 2012; 15(48): 57-68. [In Persian]
21. Bodur S, Filiz E. A survey on patient safety culture in primary care healthcare services in Turkey. INT J QUAL HEALTH C 2009; 21(5): 348-55.
22. Tabrizchi N, Sedaghat M. The First Study of Patient Safety Culture in Iranian Primary Health Centers. Acta Medica Iranica, 2012; 50(7): 505-510.
23. Rockville W, Sorra J, Famolaro T, Yount N D, Smith S A, Wilson S and et al. Hospital Survey on Patient Safety Culture: 2014 User Comparative Database Report. Agency for Healthcare Research and Quality U.S. Department of Health and Human Services. No. 14-0019-EF March 2014.