



## Evaluating the attitude of Shahid Beheshti Hospital personnel in Hamadan, Iran, toward patient safety culture

Abbas Abdolvand<sup>1</sup>, Seyed Ali Mahdiyoun<sup>2</sup>, Elahe Mousavi<sup>3</sup>

1 Surgical Technologist of Operation Room, Imam Ali Hospital, Lorestan, Iran

2 Department of Anesthesiology, School of Paramedicine, Hamadan University of Medical Sciences, Hamadan, Iran

3 Department of Operating Room, School of Allied Medical Sciences, Ilam University of Medical Sciences, Ilam, Iran

### Original Article

#### Abstract

**BACKGROUND:** Nowadays, attention to patient safety is important in providing hospital services and any failure to do so can have adverse consequences. Safety is one of the most salient rights of patients when receiving health services. The purpose of this study was to evaluate personnel perspective about patient safety culture in Shahid Beheshti Hospital in Hamadan, Iran.

**METHODS:** This descriptive cross-sectional study was carried out on 101 medical personnel of Shahid Beheshti Hospital in Hamadan in operating rooms, intensive care, endocrine surgery, pulmonary, and emergency surgery in December 2019. Patient Safety Culture Survey Standard Questionnaire was used to assess patient safety culture. The first part of the questionnaire contained demographic information and the second part contained 42 questions. The results were analyzed by SPSS software.

**RESULTS:** 27.7% of study participants were operating room personnel. 36.6% (n = 37) of personnel were men and 63.4% (n = 64) were women. In terms of attitude toward patient safety in different parts of the hospital, the operating room received the highest score (143) and the emergency room the lowest score (124).

**CONCLUSION:** Increasing attention to the patient safety culture will lead to the development and advancement of the country's hospitals and will lead them to a patient-friendly hospital. Moreover, the lower average dimensions in this study should be considered in order to enhance these dimensions.

**KEYWORDS:** Patient Safety; Safety Culture; Hospital; Hospital Personnel

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### Introduction

Nowadays, the main issue in most countries is public health and healthcare preparation. Many developing countries are trying to create a health care system in order to meet basic needs of society.<sup>1</sup> Safety means avoiding any damage to the patient while providing health care services. In spite of many advancements

in health area, patient safety and patient-based health care services all over the world is still concerning. In other words, medical errors in different parts of the world are one of the important challenges of health system which threat all countries. During last two decades, this belief that health system is not safe adequately and it needs improvement has been considered on the world level.<sup>2</sup> The first step to transform and improve the system is evaluating its status. Hence, the strengths and weaknesses of the organization are identified and it is focused on reducing its weaknesses and reinforcing its strengths. It is evident that

#### Corresponding Author:

Elahe Mousavi; Department of Operating Room, School of Allied Medical Sciences, Ilam University of Medical Sciences, Ilam, Iran

Email: [elahe.mousavi90@yahoo.com](mailto:elahe.mousavi90@yahoo.com)

hospital and its parts each as an organization with vital duties should be evaluated synchronous to other units.<sup>3</sup> The status of patient safety culture will be studied from various aspects and this study has been formulated based on researches and programs of World Health Organization (WHO).<sup>4</sup> Patient safety culture demonstrates the priority of patient safety from health provider's point of view in their working places.<sup>5</sup> Patient safety culture means adopting patient safety as the top common priority and value within organization. Safety culture within organization providing health services creates an atmosphere in which patient safety is considered as one of the valuable priorities for that organization and it validates many behaviors leading to patient safety enhancement.<sup>6</sup> The safety culture needs 3 parts in health care area: first, people believe that health care is risky and it can be planned to prevent its defects. Secondly, all levels of organization make commitments to identify and to take lessons from errors. Thirdly, managers would discipline the environment when personnel induce more risks on others and the patients deliberately. From health providers' perspective, unwanted errors and complications in health care are tolerable partly but it is possible that this attitude contradicts patient views. A large number of patients facing health systems especially hospitals suffer injuries and complications when receiving health services.<sup>7</sup> In addition to damages to the patient, medical errors can lead to different problems such as failure of treatment, higher costs, and patients distrust to the health system. As medical errors are not preventable completely, it is emphasized on reducing them by identifying their causes and presenting appropriate approaches to prevent errors.<sup>8</sup> Considering the importance of patient safety culture as one of the basic elements of clinical domination and an under-monitoring criterion for health centers accreditation, we

tried to examine current status of patient safety, occurred medical errors, and the rate of events from personnel point of view in Shahid Beheshti Hospital of Hamadan, Iran, to reduce caused injuries to patients and increase their satisfactions as much as possible.

Gazerani *et al.* in a cross-sectional study entitled the evaluation of the operating room safety status based on safety-friendly hospital standards on 77 managers, supervisors, and operating room personnel of 4 hospitals in Bojnord City, Iran, concluded that Bojnord hospitals are in good conditions in terms of operating room safety index.<sup>4</sup>

In addition, the study of Alemdar and Aktaş, which was conducted on 78 nurses in Turkey, showed that the most common errors included: disease contamination, diagnostic errors, and the use of drugs with side effects. As a result of the present study, nurses reported nosocomial infections. Further, in this study, diagnostic errors were found to be the most common medical errors, and excessive work fatigue and long working hours were found to be the causes of most common medical errors.<sup>17</sup> In the study by Brasaite *et al.*, the knowledge of health care professionals about patient safety, the level of existing knowledge, knowledge deficiencies, and improving their knowledge were investigated. These researchers considered the attitude of the target groups towards patient safety, the attitude towards incident reporting, and the improvement of safety attitude. The results of this study showed that more research should be done in the field of examining the knowledge and skills of health professionals in the field of patient safety.<sup>18</sup>

The purpose of this study was to evaluate personnel perspective about patient safety culture in Shahid Beheshti Hospital in Hamadan.

## Methods

This was a cross-sectional descriptive study which was conducted in Shahid Beheshti Hospital of Hamadan in 2019. The research

society included all medical personnel (physicians, nurses, anesthesiology and operating room personnel) from operating room, intensive care, endocrine surgery, pulmonary, and emergency surgery units who had the entry criteria to study (having at least 1 year work experience, no exit from related units). Exit criteria included moving the workplace from the operating room to other departments, not continuing the cooperation of health care workers, and the questionnaire was found to be incomplete.

According to the census, the sample volume was 101. To collect data, Patient Safety Culture Survey Standard Questionnaire was used. This questionnaire has been designed by Agency for Healthcare Research and Quality of United States (US) and its reliability and validity were confirmed by Moghri *et al.* in Iran.<sup>9</sup> To conduct the mentioned study, 6 dimensions of patient safety culture would be measured in addition to demographic questions. These dimensions consist of: working unit information (18 questions), related working unit manager (4 questions), communications (6 questions), frequency of reported accidents (3 questions), patient safety degree (1 question), and about hospital (11 questions). Each dimension has multiple questions based on a 5-point Likert scale including completely disagree (1), disagree (2), no comment (3), agree (4), completely agree (5).

After completion, questionnaires had been inserted by samples using SPSS software (version 16, SPSS Inc., Chicago, IL, USA) and were analyzed by descriptive statistics and inferential statistics methods. This study is ethically licensed by the Ethics Committee of Hamadan University of Medical Sciences (No. IR.UMSHA.REC.1398.1399).

## Results

In the present study, 27.7% (n = 28) of operating room personnel, 20.8% (n = 21) of intensive care personnel, 15.8% (n = 16) of

internal pulmonary surgery personnel, 10.9% (n = 11) of internal endocrine personnel, and 24.8% (n = 25) of emergency personnel were included. Moreover, 34.7% (n = 35) of personnel had work experience from 1 to 5 years, 19.8% (n = 20) between 6 to 10 years, 18.8% (n = 19) between 11 to 15 years, 17.8% (n = 18) between 16 to 20 years, and 8.9% (n = 9) more than 20 years. 36.6% (n = 37) of personnel were men and 63.4% (n = 64) were women. Maximum frequency of personnel employment type was related to official personnel. The mean age of personnel was 32 years (Table 1). The score of attitudes toward patient safety culture was 13165 totally. Personnel who had been recruited formally had a better attitude toward patient safety culture. However, variables of age, gender, and experience had no significant relationship with patient safety culture.

**Table 1. Participant's demographic data frequency distribution in the research**

Variables	n (%)
Work place	
Operating room	28 (27.7)
Intensive care	21 (20.8)
Pulmonary surgery	16 (15.8)
Endocrine surgery	11 (10.9)
Emergency	25 (24.8)
Working hours in week	
Less than 20	2 (2.0)
20 to 39	19 (18.8)
40 to 59	44 (43.6)
60 to 79	19 (18.8)
80 to 99	12 (11.9)
More than 100	5 (5.0)
Gender	
Men	37 (36.6)
Women	64 (63.4)
Experience (year)	
1 to 5	35 (34.7)
6 to 10	20 (19.8)
11 to 15	19 (18.8)
16 to 20	18 (17.8)
More than 20	9 (8.9)
Type of employment	
Official	35 (34.7)
Corporate	12 (11.9)
Contractual	25 (24.8)
Planning	29 (28.7)

**Table 2. Questionnaire dimensions and their descriptive statistics**

Questionnaire dimensions descriptive statistics	Score averages	No. of question	Minimum score	Maximum score	Status
Working unit information	55.41	18	18	90	Moderate
Working unit manager	14.03	4	4	20	Moderate
Communications	19.87	6	6	30	Moderate
Accident type frequency	8.45	3	3	15	Moderate
Patient safety degree	3.07	1	1	5	Moderate
About hospital	33.87	11	11	55	Moderate

The obtained results showed that 55% of personnel had no episodic reports during last year, 35% had 1 to 2 reports, and 10% had more than 3 reports. Besides, about different dimensions of questionnaire, the moderate state was reported in all items (Table 2). Average attitude toward patient safety in each unit is reported in table 3.

**Table 3. Average score of attitudes toward patient safety culture in related units**

Average attitude toward patient safety in each unit	
Operating room	143.1
Intensive care	125.0
Internal pulmonary	130.8
Internal endocrine	131.6
Emergency	124.8
Total average	131.6

## Discussion

The purpose of this study was to evaluate personnel perspective about patient safety culture in Shahid Beheshti Hospital in Hamadan.

Results of this study showed that average dimensions of questionnaire and as a result, attitude toward safety culture, were on a moderate level. Personnel perceptions of safety culture have an undeniable effect on patient safety enhancement. Patient safety culture can be improved by increasing personnel safety level.<sup>10</sup> Moreover, the results indicated that 79% of personnel were working more than 40 hours per week. Hellings *et al.* stated this amount to be 69% but this is inconsistent with conducted studies in Belgium in which only 3% worked more than 60 hours per week.<sup>11</sup> Regarding medical personnel working hours standard which is 36 hours in week, these data

are more than normal. High work hours cause fatigue that is a serious risk for patient safety and maybe one of its reasons is lack of needed personnel. Although no significant relationship was observed between gender and attitude toward culture in this study, male personnel with score 133 had better attitude toward patient safety culture than women with score 130. However, Shamsadini Lori *et al.* found that female nurses had a better attitude toward patient safety culture than male ones.<sup>12</sup> There was no significant relationship between attitude score with the type of employment in this study but official personnel had higher attitude toward safety culture. In this regard, in a study by Izadi *et al.*, official nurses had a better attitude toward patient safety culture.<sup>13</sup> Perhaps it can be inferred that experience causes more attention and commitment to patient safety culture.

In this study in questionnaire dimensions section, the working unit information dimension includes interorganizational groupwork, non-punitive response to errors, and issues related to personnel, which is in a moderate state while in Akbari *et al.* study, the highest score is for these dimensions and it is an excellent status.<sup>14</sup> By comparing these dimensions to other studies, we should try to improve them. No significant relationship was found between personnel attitude toward safety culture and work experience in this research which is consistent with Agharahimi *et al.* study.<sup>15</sup> Among various parts of hospital, the highest score of safety was related to operating room unit (Table 3), the reason of which can be the importance of safety rules.

On the other hand, the lowest score obtained from safety culture was related to emergency unit due to patient numerous referrals to the emergency unit.<sup>16</sup>

In general, in this study, the attitude score towards patient safety culture was equal to 131.65. The results of this study showed that the mean of the different dimensions of the questionnaire and the attitude towards the safety culture were at an average level. The study by Mohebi Far *et al.* was conducted with the aim of evaluating the patient safety status in Tehran hospitals, Iran, using patient safety standards which showed that the level of compliance with patient safety standards was 77%, which was evaluated at the optimal level. The staff's understanding of the safety culture has an undeniable effect on improving patient safety and it is possible to improve the patient safety culture by raising the level of staff safety. It is necessary to improve the level of awareness of patients and their caregivers in the field of health in order to give them the power and the possibility to participate in making the right decision about their treatment and to ensure the correct identification of the patients' identity and verifying it in all stages of treatment.<sup>5</sup>

At the end, of the limitations in this research, we can point to the personnel reluctance to participate in this study which had been solved in part by the author.

It is suggested that in the field of improving patient safety culture, measures should be taken at several ministerial, managerial, and staff levels so that the number of employees, especially nurses, is adjusted according to the number of patients and their workload and working hours. The hospital managers should implement the policies of patient care, error tolerance, and non-punishment culture in the hospital and support their employees. Employees should also receive the necessary training in this field.

## Conclusion

There are several studies in safety area which indicate the importance of safety culture in hospitals. Results of this study state that general status of patient safety culture in Shahid Beheshti Hospital is moderate; therefore, it seems necessary to implement safety practices in order to enhance and improve safety culture level. As it is essential to enhance service quality in medical sector currently, patient must be a strategic priority for top managers in hospitals. It is hoped that all hospitals of the world make investments on patient safety culture as a basic priority in a near future.

## Conflict of Interests

Authors have no conflict of interests.

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