

The Necessity of Paying Attention to Patient Safety Culture from Administrators' Perspective in Teaching-Medical Hospital

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ABSTRACT

One of the most significant human rights is the right of being secure from the dangers and damage while receiving health services; whereas, medical errors, throughout the world, is one of great and important challenges in health care system, which threaten all countries. Over the last two decades this notion that the health system is not sufficiently secure and needs improvement and promotion has been investigated globally; on the other hand, development and progress in patient safety have contributed healthcare organizations and health service providers to identify risks and find a solution to remove it. But, on the basis of this fact that without creating safety culture in all health and treatment facilities there will not be a sudden and sustainable development in patient care, therefore, due to the impact of patient safety culture on reducing medical errors and improvement of knowledge and information level at all managerial levels of educational facilities and increase of patient safety health, researcher has been tried, through a research, explore managers' view on patient safety culture. In the present study variables of patient safety culture have been studied; and the purpose of research is an objective, realistic and regular descriptions on features of a reality, and tries to report what is, without interference or subjective inference, therefore research is descriptive; and has been analyzed in two level of descriptive and inferential. The results of present study have indicated that the amount of reported incidents, according to managers, supervisors, etc. Are little and is not more than 50 percent and as a result is not desirable.

KEYWORDS: Safety Culture; Teaching Hospital; Medical Centers; Administrators

1-INTRODUCTION

Patient safety is considered as one of the most important points in health systems, especially in developing countries, and this has also caused other countries do some actions in this regard. According to statistics, there are a non-negligible percentage of patients who have encountered injuries from health systems, particularly hospitals, and from their service provider, so that their problems will be added. Patient safety culture is result of individual and collective values, attitudes, perceptions, competencies and behavioral patterns, which illustrate commitment, methods, and skills of an organization in aspect of safety management. Since, to establish patient safety culture, health care employees' attitudes and beliefs should change, having an appropriate time interval and specific activities will be necessary. Hence, due to the impact of patient safety culture on reduction of medical errors, and improvement of knowledge and information levels at all managerial levels of educational facilities, and increase of patient safety health, researcher has been tried by performing a research explore managers' view on patient safety culture. Two important points to deal with these events respectively are being unplanned and being preventable. Studies show that as a result proper planning and in time and necessary actions about 50 to 70 percent of these incidents will not have opportunities to occurrence or at least result in adverse consequences. Patient safety culture is one of dimensions of organizational culture, and in an organization with a positive safety culture, all staff at different levels will respect patient safety and will pay attention it as main priority of organization. On the other hand, the first step to improve patient safety culture is assessing it in available levels of that hospital. Evaluating mentioned culture, not only will make us more familiar with hospital managers' attitudes and behaviors toward patient safety, you know, but also will contribute to identify organization advantages and disadvantages.

General Objectives:

Measuring managers opinions about patient safety culture in teaching-medical hospitals

Sub-Objectives:

- Identifying the status of patient transfer culture in teaching-medical hospitals from administrators point of view
- Identifying the status of medical errors report in teaching-medical hospitals from administrators point of view
- Identifying the status of teamwork culture in teaching-medical hospitals from administrators point of view

Research Questions:

- How is the status of patient transfer culture from administrators' point of view in teaching-medical hospitals of Shiraz University of Medical Sciences?
- How is the status of medical errors report from administrators' point of view in teaching-medical hospitals of Shiraz University of Medical Sciences?
- How is the status of teamwork culture from administrators' point of view in teaching-medical hospitals of Shiraz University of Medical Sciences?

Safety:

Exact and absolute definition of safe and unsafe is not possible and is depend on the range and the amount of acceptable risk, in which the amount of acceptable risk is different in different environments and times. Safety means to secure from an unacceptable risk of a danger, i.e. "the extent and degree of being far from danger and risks"; in fact, it is a situation that has the potential to harm personnel, equipment, buildings, eliminating of materials or reducing efficiency to perform a predetermined task. There is no absolute and perfect safety, and actually it will not be achieved. As well as there is high relationship between safety climate and safety culture. However, safety climate emphasize that what is the notion of workers on the importance of safety in the organization.

According to past common definitions there will be a general definition about the status of safety climate. A safety climate is a measure of provisional definition on safety climate, and is considered as a common notion of people in the organization

(Zohar·1980:96-102). Therefore, it depends on the location and time, and refers to the perceived statues of safety in certain place and special time which is relatively unstable, and due to the status of environment is new; Cox and Flynn, in paper of reviewing safety culture concluded that safety climate, in comparison with safety culture, is preferable, because studies related to safety culture have a limited set of creatable variables (Pathank ·2006).

Safety culture is a complex structure in the organization, which includes attitudes, values and safety behaviors of organization members, which most of them potentially are changeable and are related to actual Incidental behavior. Hsu et al argue that quality of safety culture directly is affected by safety behaviors of people (Tsung-Chih et al·2009). Experience has shown that developing a strong safety culture in all work classification of society, such as workers, employers as well as governments is equally useful and necessary. Applying prevention methods on safety will be effective in preventing incidents; and it has been demonstrated that a certain method of reducing incidents is improving safety culture (Pun et al·2001:95). Safety culture is an important managerial tool which contributes to control of beliefs, attitudes, and behaviors related to worker safety (Fernandez-Munize et al·2007:627-641).

Nowadays, researchers to achieve the goal of changing behavior, by using different psychology and social sciences theories, have designed models which are effective and useful. The background of studies on preventive behavior change in the field of safety has shown that knowledge and awareness and paying attention possible risks are not enough to change behavior. As a result, in recent years, several studies have been performed by using health education theories to improve awareness of workers about the field of safety and safe practices. However there is no study by using Geller model in this case. Perhaps this one is the first studies in this field, according to this model.

Creating a culture of safety is key part of organizations with high reliability. Such organizations are reliable due to paying attention defects, because of the sensitivity about how each member of a team can affect the process, and due to allowing high knowledge people to make decision, and do not blame people in occurrence of an errors in complex processes.

The basis of understanding and perception of patient safety in healthcare organizations is safety culture. Patient safety culture is values, beliefs and norms of management and employees of health care organizations about what is important in a healthcare organizations, for example what is expected about members of an organization, what attitudes are appropriate and which one are inappropriate, and in relation to patient safety, which processes and mechanisms should be encouraged and which one should be rejected. According to the literature review on predictors of a positive patient safety culture in health care organizations (especially hospitals), including communication and information exchange, based on a mutual trust of good information , the emphasize is on the importance of patient safety, organizational learning, management and leadership commitment, and a non-punitive approach towards error report.

2-MATERIALS AND METHODS

2-1-Statistical Universe

Statistical universe of this research includes six hospitals in which 207 people, in total, have been participated in the survey and opinion poll.

2-2-Sampling Method and Determining Sample Size

Sampling method in this study is random sampling. I.e. All members of a defined universe have an equal chance of being selected. Of course the main goal of selecting sample and data collection is the ability of generalizing obtained results by taking into account the size of error to a more extended universe. The present paper is a survey descriptive study.

Table 1: Universe and statistical sample of this study

Hospitals	Managers	administrator	Matron	Supervisor	Head nurse	Total
A		1	1	20	52	74
B		1	1	12	21	35
C		1	1	12	20	34
D		1	1	7	13	22
E		1	1	6	13	21
F		1	1	6	13	21
Total		6	6	63	132	207

2-3-Questionnaire

After conducted surveys, a questionnaire consisted of 18 questions was designed that the relationship between questions in HSOPS standardized questionnaire and each hypothesis has been demonstrated in Table 2.

Table 2- Research variables and related questions in the questionnaire

Row	Variable	Number of questions
1	patient transfer culture	4
2	medical errors report	3
3	teamwork culture	4

2-4-Reliability

In the present study, to evaluate reliability of questionnaire Cronbach's Coefficient Alpha has been used. To evaluate its validity, 25 questionnaires have been distributed among the members of sample. As table 3 shows, the calculated coefficient alpha for each question is over 0.7, and this shows high reliability of each question, and does not justify deleting any of these questions.

Table 3- Results of the research reliability of the questionnaire

The reliability of total questions	
Alpha Cranach	Number of questions
0.981	18

3-Data Analysis

In this research, the variable of patient safety culture has been investigated. The purpose of descriptive - objective study is real and regular descriptions of features of a reality, and tries to report what is, without interference or subjective inference, therefore, research is descriptive, and has been analyzed in both level of descriptive and inferential.

3- 1 - Descriptive Methods

Descriptive statistics indices which have been used in this study are the mean, frequency, percentage frequency.

To better description of sample universe pie chart and frequency distribution tables were used.

3-2- Inferential Analysis Methods

Inferential methods that have been used in this study are the internal consistency coefficient (Cronbach's alpha) to determine significance, and to determine the validity of total test, Kolmogorov - Smirnov (KS) and independent t test.

Patient Safety Ratings:

Figure 1 shows the frequency and percentage of respondents according to patient safety ratings.

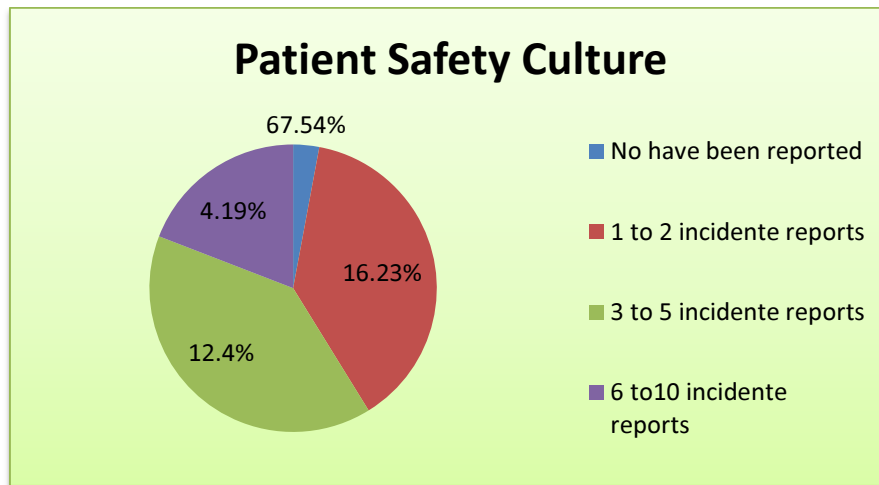


Figure 1- Distribution by safety rating

Report of Event:

Figure 2 shows the frequency and percentage of respondents according to the number of reported incident.

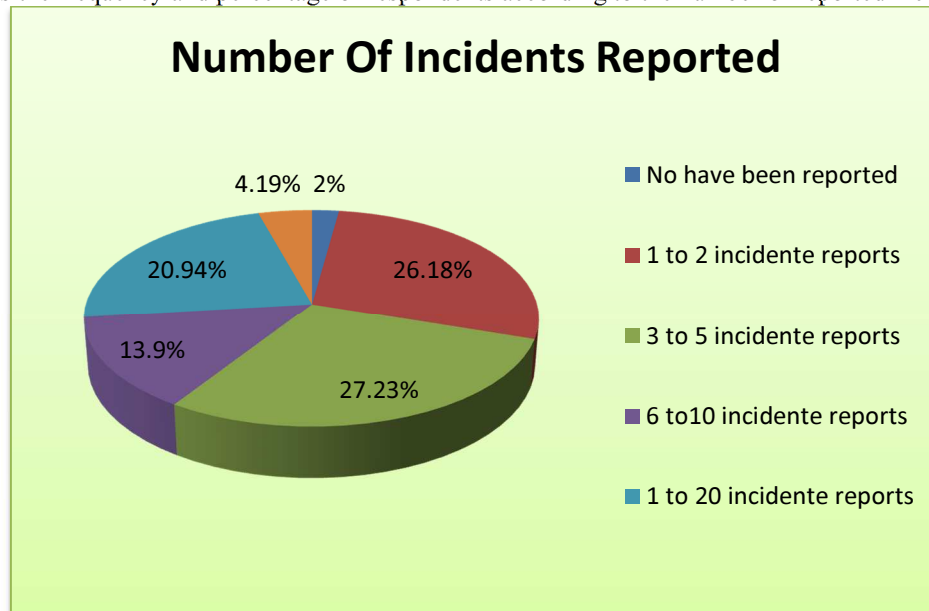


Figure 2- respondents according to report separation

In this study, data were analyzed and hypotheses were tested according to the statistical methods in SPSS 21 software. In this regard, each dimension separately at the first step were tested by Kolmogorov-Smirnov test (KS) (see appendix) that showed that data are not normally distributed, which this indicates that while n sample is greater than 30 non-parametric methods can be used, so even if distribution are not normal, parametric methods can be used. In order to evaluate significance of each variable, t parametric test, and Friedman nonparametric tests can be used.

Table 4- Kolmogorov-Smirnov test K- S

	Patient transfer culture	Medical errors report	Teamwork culture
N	191	191	191
Normal Parameters ^{ab}	Mean	3.7644	3.5969
	Std. Deviation	.58781	.90017
Most Extreme Differences	Absolute	.130	.123
	Positive	.129	.066
	Negative	-.130	-.123
Kolmogorov-Smirnov Z		1.800	1.702
Asymp. Sig. (2-tailed)		.003	.006

3-3- Universe Means Test

Mean and standard deviation indices of patient safety culture variable are illustrated in table 4.

To evaluate research question that is proposed to safety culture, the amount significance is less than 0.05. As well as to other variables, such as safety culture, and medical errors report, and patient transfer the amount significance is less than 0.05; in addition, it can be concluded that there is significant difference between the mean of these variables and the figure of 3. By referring to columns and taking into account their sign, one find that the mean of every five variables of patient safety culture is more than 3. two last column show lower and upper limit of 95 percent confidence interval for the mean of each variable; Since lower and upper limit of variables are positive, the mean is greater than test value; as a result, the status of variables are in an appropriate level. And by comparing, the variables of patient transfer culture is more important in aspect of significance, and then the variable of medical errors and ultimately teamwork culture should be considered according to managers' perspective.

Table 5- Means Test

	N	Mean	Std. Deviation	Std. Error Mean
patient transfer culture	191	191	.58781	.04253
medical errors report	191	191	.90017	.06513
teamwork culture	191	191	.87161	.06307

Table 6- Independent T test

	Test Value = 3				
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference
					Lower Upper
patient transfer culture	17.972	190	.000	.76440	.6805 .8483
medical errors report	9.164	190	.000	.59686	.4684 .7253
teamwork culture	11.685	190	.000	.73691	.6125 .8613

3-4-Friedman Test

The results of this test are two outputs. In the first one, tables 5 and 6, the sig has been less than 0.05 and show that the importance of these factors from managers, supervisors, and head nurses' point of view is not similar. In the second output, mean ranks are presented. According to significant differences between ranks, transfer culture, medical errors and teamwork, respectively, are in the first, second and third ranks.

Table 7- ranking variables

	Mean Rank
patient transfer culture	3.24
teamwork culture	3.12
medical errors report	2.97

4- CONCLUSION

Since this study trying to investigate and better identify variables in the current situation, will be categorized in the category of descriptive research. To investigate research questions, initially, Kolmogorov - Smirnov test was used, and then parametric and nonparametric tests have been used to analysis. The research statistical universe consisted of Shiraz hospitals, which were estimated about 313 that after distribution of questionnaires distributed,

191 completed one were returned. The main method of data collection in this study is applying questionnaire, which is one of the most common methods in field data collection, which will make possible data collection on a wide scale. The questionnaires, after collection, were coded and analyzed statistically.

The significance of each variable has been shown in tables 8 and 9. In analyzing hypotheses significant values of t (sig), by using analysis has a tail to all variables which are less than 5 percent, so one can conclude that there is a significant difference between the mean of these variables and the number of 3. By referring to column t , and taking into account their sign, one find that the mean of every five variables of patient safety culture is more than 3; and it is significant according to the amount of obtained sig.

Thus, according to Table 8, calculated sig for all questions is less than 0.05. Hence, it can be concluded that the status of patient safety culture variables IS significant, in other word, obtained mean can be considered as an estimated of society; In performed study by Abdi et al, dimension of teamwork within units has allocated the most scores to itself; however in present study, teamwork is in third place (according to table 9 it is after the exchanging information from managers' perspective and medical error reports). In the study of Baghaee et al, as present study the strength of safety culture has been teamwork within units; in the present study the strength of safety culture of field (Bodur & Filiz, 2008:348-355).

to ensure validity and reliability Italian version of Filiz and Bodur questionnaire has been recognized as exchanging information from managers' perspective; there is a study which has been carried out to determine patient safety culture and perception of patient safety in Turkish public hospitals in 2008; three dimensions of teamwork within wards, total perception of safety, and transferring patient in the hospital, and exchanging information related to him/her between units and wards has the score of 0.50 to 70 percent, and other dimensions has the score of less than 50 percent (Bodu & Filiz :2010:1-9).

In performed study by El-Jardali et al, 60 percent of respondents said that they have not completed any reports of Filiz and Bodur during the past 12 months (. El-Jardali et al:2010:386-95); this amount in the study was equal to 84 percent of health care personnel in investigated Public hospitals (Bodur & Filiz:2011).

The results of present study have shown that the amount of reported incidents, according to managers and supervisors is little, and is not in optimal level that is more than 50 percent, that it, per se, is the best one among three internal study, as in the study of Baghaee et al 26 percent believed that they didn't report an event in their unit work, and 44 percent stated that they had one or two reports. In above research just 8.4 percent believe that there is no report, while more than 50 percent believe they have been reported at least 3 to 20 reports; although this statistic is in mediate level, it needs a strategy to improvement.

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