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Research article

EVALUATION OF RISK MANAGEMENT STATUS IN OPERATION ROOM OF NAMAZI HOSPITAL OF SHIRAZ CITY

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ABSTRACT

In this study, the awareness rate from risk management was examined in the personnel of operation room and anesthesia in Shiraz Namazi hospital. For performing this study, a questionnaire which was previously designed by Zaboli et.al in Tehran Bagheiatallah Hospital was used. This study sample content was 123 persons and data relating to the individuals' awareness rate from risk management and also demographic and job features were collected. Finding of this study showed that most participating people had a moderate awareness from risk management and awareness rate in women was more than men and by income increase people awareness increased. No significant relation was found between awareness and age, working experience and so on. Regarding lack of relation between working experience rate and type of job and age with risk management, holding some classes and training all personnel about risk management seems necessary.

Keywords: risk management, Shiraz Namazi hospital, surgery room.

INTRODUCTION

Risk is in fact the same threat due to an action or occurrence which undesirably influences organization ability in achieving its goals. In fact risk management includes identification, evaluation and control of incidental risks which potentially exist and in case of non-alteration in existing status might cause loss or unpleasant circumstances[1]. Now, a considerable percent of patients encountering with health systems especially hospitals suffer from complications and damages due to service presentation. Each incident, which is inconsistent with policies and procedures and also each unexpected event, which occurs in treatment process and causes harm to the patient, is treated as incident. Studies[2-4] have shown that almost from every 10 patients who are admitted in hospitals, one experiences an unpleasant incident that about half of them are preventable. Also, about one third of incidents mar the patient which could range from various forms of increasing the patient stay length to his death.

Risk management generally deals with reduction of unpleasant impacts of those internal or external events which deleteriously influence the organization activities. Risk management in the hospital should include a series of continuous and developing processes which are used throughout the hospital strategy and also notice all risks relating to past, present and future in a regular manner. Simultaneous with introduction of systemic thought in identifying and improving errors of health and treatment sector, using various methods of risk management have become prevalent in this sector. Risk management in the sector of healthcare, besides quality improvement, follows safety warranty for the patients. Risk management in hospitals could be a plan for reduction of occurrence and prevalence of preventable events. Moreover, safety in hospitals is significant both in economic and in human and moral aspect. According to the performed studies, only 21% of complaints about medical fault have been out of hospital and the remained 79% were related to errors which occur in the

hospital. Surgery room in respect of physical space, by having a space less than 4% of total hospital space and also with personnel less than 3% of total hospital personnel, has designated 35% of complaints to itself. Other studies show that the possibility of risk accession in surgery room is about 27% which has a high percent comparing other wards.

In other studies[5,6] , more than 50 types of risks have been identified , some example of which include objects left in the patient's body after surgery, medical errors, using insecure and defective equipment , non- recording of information or incorrect information record, wrong counting of surgery instruments and surgical gauze, burns, infection after surgery, non- observation of sterile condition for surgery, embolus and infarction after surgery, damage to a part or organ of the body, medicinal reactions, intubating errors, incorrect blood transfer, damage to the patient during surgery, surgery performance on wrong patient and deviation in the hospital policies which potentially harm the patient[7-9].

New technologies, on one hand, are creators of unknown and known risks in surgery room settings that this matter redoubles the significance of risk management in surgery room. Therefore, using a protocol for evaluating all medical equipment and also equipment inspection through checklists seems necessary for safety warranty. Many of these errors are preventable before happening. Non-observance of all mentioned cases causes accession of risks which are not only costly for the hospital and could lead to financial resources loss, but also expose the patients and surgery room personnel to risks and damage the hospital validity. For reduction or omission of events leading to complaints in hospitals, existence of an efficient and effective system of risk management is necessary for identifying defects and safety promotion and control systems should identify risks and financial losses. The organization of defense from U.S physicians emphasizes risk management as a means for reduction of penal lawsuits against physicians. Various studies indicate that with assumption of uniformity of individual abilities of each surgeon, risk management training has led to improvement of surgery results and these physicians have faced less legal complaints.

Regarding all mentioned cases relating to the existing problem and significance of perception of a management risk appropriate structure for reduction of potential risks and consequently increase of safety level of the patients, treatment centers personnel and especially training hospitals in respect of student presence face a great content of risks and errors[10]. Then, the scholars aim to identify the awareness personnel of Shiraz Namazi hospital surgery room personnel as the greatest sub-specialist center of the country south about risk management.

METERIALS AND METHODS

This study is a descriptive analytical study which is performed with cross- sectional and survey method. The study statistical population includes all surgery room personnel of Shiraz Namazi hospital and regarding the small statistical population, all attainable cases in this study will be questioned. The number of personnel of surgery room and Anesthesia ward of Shiraz Namazi hospital was equal to 145 persons that among them 123 persons answered the questionnaire questions and then answering rate was equal to 84%. For performing this survey study, a questionnaire is used which had been previously designed by Zaboli et.al for evaluating the rate of personnel awareness about risk management. This questionnaire has 6 variable whose first section is related to the personnel recognition rate from risk management and have 8 questions , the second section is related to risk management organizing status with 7 questions , third part of the questionnaire questions is related to policies and procedures status with 7 questions, fourth variable is related to risk training status with 8 questions , fifth part is related to risk management position with 6 questions and finally sixth section is related to supervision on evaluation analysis and risk control with 9 questions which were totally 45 questions in 5-option Likert scale (very high, high, moderate, low , very low). Using main components analysis method, the extent of each questionnaire variables was calculated and the individuals' awareness rate was assessed in 5 levels of very high, high, moderate, low and very low and its average and standard deviation were reported. Besides the mentioned questionnaire, some questions about the individual income rate, educations level, occupation type, age, gender, educational status, habitancy place and working ground in surgery room were asked from each person, so that the individuals' awareness rate to be evaluated based on these features using regression models. Sample collecting was double-blinded for observance of ethical issues and required licenses have

been obtained from Shiraz Medical Sciences University. Patterns estimation and statistical calculations were performed using STATA v13.1.

RESULTS

As it was said previously, numerical rates of each variable were determined using main components analysis method. The study findings showed that the weight of each question for variables was nearly similar and all questions were consistent.

Table 1 shows descriptive findings of this study. In this table, the awareness rate of each surgery room personnel towards the respective variable is distinctive and the percent of their awareness is also determined.

variable	very high	high	moderate	low	very low
the personnel recognition about risk management	7	38	41	23	13
	6.5%	30.1 %	33.6%	18.8 %	10.3 %
risk management organizing	6	40	33	33	10
	4.8%	32.7 %	27%	26.9 %	8.1%
policies and procedures	4	48	35	22	13
	3.2%	31%	36.8%	17.9 %	10.6 %
risk training	10	28	44	27	12
	8.1%	22.9 %	36%	22%	9.8%
risk management position	11	27	46	25	13
	8.9%	22%	37%	20.4 %	10.6 %
supervision on evaluation analysis and risk control	15	26	43	22	16
	12.1 %	21.2 %	32%	18%	13%

Table 2. shows the study descriptive findings about the study qualitative variables including the individuals' gender, habitancy place, education level and working field.

gender-male	49	40.1	official employment	63	51.6
gender-female	73	59.8	contractual employment	30	24.5
educations-associate diploma	31	25.4	experimental employment	29	23.7
educations-bachelor	87	71.3	surgery room technician	73	59.8
educations-master's degree	4	3.2	Anesthesia technician	49	40.2

As it is clear in the above table, 59.8% of the studied sample was women, 25.4% had associate diploma and less, 71.3% had bachelor's degree and the rest had master's degree. Moreover, 51.6% had been employed officially and 24.5% contractually and the rest were experimental. 59.8% of people were surgery room technicians and the rest were anesthesia technicians.

Table 3 shows the study findings about the study quantitative data. The studied sample average income was 15980000 Rials and their average age was 33.61 years. The studied sample had 9.85 years working experience.

variable	average	standard deviation
income	15980000	24460580
age	33.61	8.12
working experience	9.85	6.70

Table 4 shows the study findings about estimation of factors effective on people job awareness. In this estimation, a multivariate regression model was used that the results of the present questionnaire stand as dependent variables and demographic and job variables as independent variables.

variable	factor	standard deviation	p-value
age	-0.070	0.120	0.554

gender - female	1.891	0.913	0.041
working experience	0.0299	0.152	0.845
educations - bachelor	0.6367	1.061	0.550
educations-master	0.0459	2.499	0.985
income	0.0032	0.0019	0.089
contractual	1.481	1.057	0.164
experimental	-0.5539	1.408	0.695
constant factor	-4.923	4.290	0.254

As it is clear in the table, only two variables of being female in level of 5% and income variable in level of 10% have a significant relation with the individuals' awareness rate about risk management of surgery room. No significant relation was observed between the rest of variable s and awareness rate. The factor of being female variable was also positive and this means that the awareness rate about risk management in surgery room in women was higher than men. Also, by income increase, the people awareness rate increased.

DISCUSSION

The study findings showed that generally most personnel of surgery room had moderate awareness about risk management in the hospital. Findings of this study were similar to findings of Zaboli et.al[11]. in their study, they found the rate of people awareness about various components of risk management between 3 and 4. In the study of Zarezadeh et.al[12] which was performed in 2012 in Yazd Shahid Rahnemoon hospital, the calculated awareness rate from risk management was a smaller number and in various components was between 2 to 3. Habibi et.al in 2010[13] in their study examined risk management in radiology department of Isfahan city hospitals. In their study, they found that risk management status in the hospitals of this city is between moderate to weak. Also, the present study findings showed that women comparing men are more aware of risk management in the hospital. Also, in Zaboli [11] study, a significant difference was found between the awareness rate from risk management based on their gender. These studies findings showed that still people don't have enough awareness about risk management and the manner of dealing with it in the hospital. Surgery room is considered one of main wards of the hospital. Awareness about risk management and manner of dealing with it in the hospitals is very significant since the smallest fault and error in the hospital causes many risks, one of which could be the patients and service receivers' life loss. It is for this reason that in clinical governance great attention has been paid to risk management in the surgery room. There are various ways for improving the personnel awareness. Installing pamphlet in pavilions and personnel resting rooms could be helpful. Holding in-service courses of risk management and awarding certificate in this field is very important. Ministry of Health, Treatment and Medical Training may determine risk management as one of items of the hospitals accreditation. According to Habibi et.al[13] and others[14-16] the best way for improving risk management in hospitals is investment. By increasing the investment we could desirably improve risk management status in hospitals. Money payment could raise services quality very much and one of components of quality improvement is risk management in hospitals. This study has some limitations too. Its first limitation was its being cross-sectional, so that examining the awareness rate about risk management was not casually applicable over time. Also, regarding that the studied data were surveying, despite certainty towards the answers' confidentiality, the studied sample may not answer some questions.

CONCLUSION

For future studies, it is suggested that factors effective on risk management and risk management rate in hospitals and their surgery rooms to be examined.

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