

# Patient Safety Situation from the Nurses Viewpoints in an Educational Hospital

Arash Khalili<sup>1</sup>, Farzan Azodi<sup>2</sup>, Parviz Azodi<sup>3</sup>, Maryam Daryaei Motlagh<sup>4</sup>, Zahra Sedighi<sup>5</sup>, Faezeh Jahanpour<sup>6\*</sup>

1. Mother and Child Care Research Center, Hamadan University of Medical Sciences, Hamadan, Iran.

2. Medical Student, students Research Committee of Bushehr University of Medical Sciences, Bushehr, Iran.

3- Paramedical faculty, Department Of Anesthesia, Bushehr University of Medical Sciences, Bushehr, Iran.

4. Khalije Fars Hospital, Bushehr University of Medical Sciences, Bushehr, Iran.

5. Khalije Fars Hospital, Bushehr University of Medical Sciences, Bushehr, Iran.

6. Associate Professor, Department Of Nursing, Bushehr University of Medical Sciences, Bushehr, Iran.

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## Abstract:

Application of ergonomic recommendations can certainly be helpful in enhancing patient safety. The aim of this research is to evaluate the Situation of patient safety by nurses in Bushehr Persian Gulf Martyrs educational hospital in 2016. The study was descriptive- analytical and the studied populations were all nurses in Bushehr Persian Gulf Martyrs hospital, where 384 nurses were selected by census sampling method. The data collection instrument was a two-part questionnaire consisting of demographic information and Specific patient safety questions, whose reliability and validity had already been confirmed in previous studies. Statistical tests of Chi-Square and independent t-test, analysis was performed. The mean score of patient safety was obtained as 60 (SD: 1.26), suggesting medium level of patient safety in Bushehr Persian Gulf Martyrs hospital. A total of 49.8% of the participants believed that in the hospital, decisions are made by qualified people. There was a significant relationship between gender and following patient safety ( $P=0.000$ ). However, no significant relationship was seen between experience background and patient safety. There was also a significant relationship between job interest and following patient safety ( $P=0.035$ ). The situation of patient safety in this hospital is medium and further attempts are needed to enhance the level of patient safety.

**Key Words:** Ergonomics, Patient Safety, Nurses.

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## INTRODUCTION:

Ergonomics is application of maximum safety, provision of welfare of employees and patients, improvement of health status, and workplace satisfaction [1]. Patient safety, random incidents and guaranteeing patient safety include founding functional systems and processes to minimize the probability of development of errors and maximize the probability of solving them in case of incidence, which are all ergonomic solutions in work [2]. As today healthcare structure has become very complex, cares are provided in high pressure environments very rapidly, in which a wide range of technology exists and its application requires personal decisions and judgments by the healthcare employees on a daily basis, whereby application of ergonomics is a great solution in this regard [2]. If ergonomics is not followed in the workplace, jobs do not proceed very well. Sometimes unintentional injuries are occurred to the patient during clinical surgical operations or in response to clinical diagnoses [3]. In recent years, the extent of understanding the significance of patient safety has increased around the world and some advances have been achieved so far. However, there remains a long way to achieving sufficient patient care and stopping additional problems for them during their hospitalization period in healthcare centers. It is estimated that in developed countries, per every 10 patients hospitalized in health care centers, one will be afflicted by different injuries. The developed injury can include a series of errors or improper therapeutic measures or being infected with nosocomial infections. Proper service provision to the patients and achieving patient health are the cornerstones of all

healthcare centers [4]. Commemoration of days such as the international solidarity day for patient safety is an opportunity to promote knowledge about the risks of injuries and infective diseases transmitted in healthcare centers and the healthcare staff and authorities of healthcare are requested to do their best to mitigate these risks [5]. Different hospital wards can be a site for incidence of errors and risky events, where application of and following an index called ergonomics can prevent these risks [6]. At least 50% of medical and healthcare equipment in developing countries are either not used or used very infrequently. Most equipment is not employed due to deficit in skills and inadequate training. The result is that diagnostic measures or therapeutic methods cannot be performed properly and with a high quality [7]. Incorrect diagnosis or improper therapeutic measures are dangerous for patients' health and safety and may bring about serious risks and even death. The economic benefit of improving patient safety is undeniable. Various studies have shown that the financial cost of long-term hospitalization of patients, the judicial cost of complaints, nosocomial infections, loss of income on the part of patients, disability, and huge therapeutic costs amount to around 6-29 billion per year in some counties [8]. Various studies in medical centers indicate high incidence of medical errors and distance between the quality of healthcare including pharmaceutical errors, post-surgery complications and infections, inadequate cancer screening etc. with standards [9]. In 1999, American Medical Institute published a report called "human is fallible, so come and let's make a safer system" and claimed that annually 98000 people die due to

medical errors in the US [10]. Safety changes into a value and then a priority only when ergonomics is taken as a priority into account [11]. The results of the study by shayan et al in Hamedan indicated that there are various errors in different hospital wards both clear and latent, which can jeopardize patient safety [6]. Given the conditions observed in research conducted in other parts of the country and around the world regarding diminished level of patient safety in hospital and healthcare centers and considering the emphasis of Minister of Health regarding compliance with patient safety principles and incorporation of this point as accreditation of hospitals, this research measured the status of patient safety in Persian Gulf Martyrs Hospital in Bushehr for the first time. As a basic result, it gave the obtained results to the authorities of this hospital, so they can take all necessary measures to enhance patient safety level as much as possible.

#### MATERIALS AND METHODS:

In this descriptive-analytical study, the studied population consisted of nurses in the educational hospital of Bushehr Persian Gulf Martyrs and the sampling method was census. Nursing employees include study of those nurses who are in direct contact with patients and are not in charge of head-nursing jobs. The data collection instrument in this research has been a standardized questionnaire developed by Kadu et al, which was also used by Mohamad Sabahi Bigdeli et al. in a similar research in Kashan Town [12]. Following its translation, the validity of the questionnaire was confirmed by its validity and reliability method in the pilot study done by Sabahi Bigdeli et al. using Cronbach alpha test (0.89%). This questionnaire includes 20 questions and measures patient safety status across seven dimensions (educational opportunities, reporting, refreshment and attitude of nurses, nursing conditions, relation with physicians and relations among nurses). The items associated with these seven dimensions of patient safety situation as statements based on 5-option Likert scale evaluate current status in the viewpoint of the respondents. For Likert options (completely agree ...), a score of 1-5 was chosen. Completely agree received 5 and completely disagree received 0. The minimum sum of scores across the entire questions of the questionnaire was considered 20 and the maximum score was 100. A score between 20 and 46 represented poor safety status, 47-73 was medium, and 74-100 was regarded as a good status in following safety

status. The collected data was analyzed by SPSS software and using descriptive and inferential statistical tests including Chi-square and independent t-test.

#### FINDINGS:

The mean age of the subjects was 29 in this study. A total of 85.9% of the participants in this study were female. The mean working background years were 5 and 82.1% of the participants had job satisfaction. The mean patient safety score was obtained as 60, suggesting medium level of patient safety in this hospital. Therefore, safety status in this hospital has not been followed very well, and requires attempts of authorities in this regard. A total of 49.8% of the participants believed that in the hospital, decisions are made by qualified people. In the viewpoint of 50.7% of the subjects, the hierarchy of orders is applied with a special discipline in the patient safety plan. A total of 65.8% were concerned that if they had committed an error regarding patient safety, they would have faced disciplinary action by the university. Further, 72.2% stated that if they had committed an obvious error and colleagues become aware of that, they would feel ashamed and 39.1% believed that there is no point in discussing patient safety problems, as no one would take effect. A total of 45.9% stated that if they commit an egregious mistake, the director would think that they are incompetent. According to 37.6%, the employees who report the errors of others would be rejected by others. A total of 28.7% believed that if their colleagues find out that they have done something wrong, they would support them, but 45.6% had an opposite idea. A total of 34.2% felt that if they do an egregious mistake, they would lose their respect by their colleagues, but 38.9% opposed this. A total of 47.2% believed that if they report the accident associated with a safety, typically there would be a person seeking further information from them. A total of 52.3% believed that if they do an egregious mistake, they may lose their job and 66.3% believed that if they commit a serious accident to the patient, the management would investigate it. A total of 66.8% felt that when they commit a mistake, the treatment of others causes them to feel a sense of negligence. Further, 65.7% believed that they work in an atmosphere where patient safety is of high priority. A total of 66.7% were concerned with facing disciplinary action by the manager in case of incidence of an egregious mistake in the job.

**Table 1.** Comparison of the questions that had the maximum number of correct and incorrect responses regarding patient safety according to nurses

Question	Completely Correct	Completely Incorrect
When they commit an egregious mistake, they analyze it with their colleagues.	77.8	8.9
If they commit an egregious mistake and colleagues find it out, they feel ashamed.	72.2	20.2
The supervisor or manager of the hospital neglects patient safety problem that occurs frequently	22.7	55.5
They believed that if their colleagues find that they have made a mistake, they would support them.	28.7	45.6

According to 49.7%, if they have an egregious mistake, managers would not support them, but 23.9% believed that the manager would support them. A total of 22.7% believed that the supervisor or hospital manager neglects the patient safety problem which occurs frequently, but 55.5% had an opposite idea. A total of 63.7% believed that when they commit an egregious mistake, they ask others how to prevent it and 77.8% stated that when they commit an egregious mistake in their ward, they analyze it with other colleagues (Table 1). No significant difference was observed between working background and patient safety. There was, however, a significant difference between job interest and following patient safety ( $P=0.035$ ) as well as between gender and following patient safety ( $P=0.000$ ).

#### DISCUSSION:

The way safety of patients hospitalized in hospitals is done has changed into a global concern in healthcare and affects all healthcare sectors in developing or developed countries. Various studies and WHO reports have shown that across the world, on average 10% of patients hospitalized in healthcare centers are affected by an accident with different degrees and get harmed. However, 50% of the mentioned cases are preventable. Over 50% of the subjects believed that decisions in hospitals are made by those who are not qualified, which is in line with the study by Eftekhari et al [12] regarding measures and expectations of managers with respect to patient safety. This highlights the necessity of choosing qualified and competent managers in hospitals to enhance patient safety level and for comfort of nurses for presenting the best care services. A total of 72.2% stated that in case of development of a problem for the patient, such that it is a result of inconsideration and not following safety measures, they would feel ashamed, which can be a result of sense of responsibility and high work conscience. This was in line with the study by shayan et al on patient safety and medical errors in Hamedan [6]. In this study, 66.3% stated that in case of commitment of mistake, the hospital management would track it, which is in line with the study by Baghaei et al in 1390 in Urmia [14]. Fear from losing job affected patient safety in 50% of the nursing personnel in this study and participants stated that lack of job security affects the job quality of nursing and patient safety, in accordance with the study by Mahfouzpour et al. (2011). Only around 26% expressed that in case of incidence of problems in patient safety, hospital managers would support them, suggesting lack of trust between personnel and the managers, which in turn can cause disturbance in following patient safety principles by the personnel, which is incongruent with the study by Moghery et al regarding prioritization of nurses' needs. A total of 65% stated that the hospital atmosphere has been designed in a way that patient safety is a priority, which is in line with the study by Henrikson et al. In small hospitals, as pressure is less on the personnel and personnel feel secure, patient safety is followed more, but in large hospitals, this alters in another way. Investigating the overall status, it can be found that the safety status in Persian Gulf Martyrs Hospital is medium, which is in line with the studies by Mahmoudi rad et al (2013), Mahfouzpour et al (2015),

Sabahi-Baigdeli et al (2011) and Baghaei et al (2011). It is, however, incongruent with the results of Abdi et al, which in turn confirms the need for greater attempts for research in this regard [14, 21].

#### CONCLUSION:

The results obtained from this study suggest poor application of ergonomics in the working environment and safety status governing Bushehr Persian Gulf Martyrs Hospital, which is almost in line with the safety status governing the country's hospitals. Accordingly, a dire need is felt for promoting patient safety status elevation indices in this hospital, which is dependent on continuous planning, training, and declaring safety status indices for nursing personnel. The findings of this research suggest that leadership is a key and vital element in giving priority to patient safety. Further, constant monitoring and supervision of patient safety status indices by different nursing managers helps elevate this. The manner of responding to mistakes determines safety culture in a hospital. Therefore, managers should monitor personnel errors carefully and help in reducing these errors with proper treatment and planning, thereby enhancing patient safety status. Further, to promote and develop a desirable safety culture in a hospital, fear from being admonished in response to mistakes should be dispelled and open communication as well as constant learning should be implemented in the hospital.

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