



# The Relationship between Communication Skills and Error Reporting by Nurses in Iranian Social Security Organization Hospitals in Isfahan, Iran

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Available online at: [www.isca.in](http://www.isca.in), [www.isca.me](http://www.isca.me)

Received 25<sup>th</sup> January 2014, revised 1<sup>st</sup> May 2014, accepted 16<sup>th</sup> December 2014

## Abstract

Nowadays, clinical errors are one of the serious problems of the health system and a threat for the patients' safety. Different aspects of the patient safety including communication skills, group works and disclosing clinical errors have been considered by the policy-makers today. In this study, 248 nurses employed in three hospitals of Isfahan Province Social Security Organization served as the participants and the communication skill score of each one was calculated on three verbal skill, listening and feedback dimensions. Total clinical errors reported by the nurses within three domains including Near-Miss errors, No-Harm errors and Adverse Event were determined and the effect of communication skill score on the rate of reporting clinical errors was studied. This study provides a basis for setting preventive strategies for clinical errors.

**Keywords:** Clinical error, communication skill, nurse, patient safety, reporting error.

## Introduction

Health provision, preservation and promotion of the community people through presenting appropriate health and treatment services are among governments' duties. Hence, paying attention to the quality in treatment centers giving sanitary services is an important and necessary matter<sup>1</sup>.

The quality of care is composed of different elements; Quagly et al. have referred to the components of proficiency, availability, effectiveness, being on time, safety, conformity and so on<sup>2</sup>. As the patients may suffer from the complications and hurt resulted from the process of presenting the care in centers providing services, among the mentioned elements, the patient safety is of a special importance<sup>3,4</sup>.

Hospital errors are regarded as serious problems in public health and threats for the patients' safety<sup>5</sup>. As stated by the specialists, in hospitals and care institutes in America, around 98000 cases of mortality occur annually as the result of medical errors<sup>6</sup>.

Similar statistics in Canada and England indicate high occurrences of medical errors in these countries<sup>7</sup>. Incidence of these errors not only causes the mortality and disability but also imposes heavy expenses on the health section<sup>8</sup>.

In Iran, no consistent statistic is available about medical errors, but it seems that the rate of these errors is high with respect to the increased referred files of people's complaints against the physicians<sup>9</sup>.

Early diagnosis of the danger is a key for preventing the patient

hurt and the initial way of lowering medical errors is early diagnosis of its background causes for their occurrence, so this important fact is only possible through finding clinical errors and reporting them by a treatment group<sup>10,11</sup>. Nurses have a key role in preserving the patients' security. It is the nurses who help to make a change in the quality and manner of service provision to promote preservation of patient security and to create a valuable information resource for preventing medical mistakes in the future through cooperating with nursing administrators using the information obtained from the observation of obvious and secret (hidden) errors<sup>12,13</sup>.

The result of most surveys show that the rate of error reporting among the nurses is very lower than the real rate. It is indicated that nurses are unwilling about reporting errors. Unfortunately, only 6% of the errors are reported as well-documented of which only 5% of the events are reported by nurses<sup>14</sup>.

Some studies have shown that making a communication with treatment team in this case is one of the obstacles of reporting the errors. In fact, making an appropriate communication with a treatment team lowers the errors and increases reporting<sup>15</sup>. On the other hand, the results of similar studies indicate the lack of communication skills appropriately among the treatment group.

In this study, the relationship between communication skills within three verbal, listening and feedback spans and the number of reporting the errors by the nurses employed in hospitals under the authority of Isfahan province Social Security Organization were studied.

## Methodology

The nurses are potential witnesses of error occurrence in hospitals and by disclosing error could prevent from the occurrence again. This study tries to figure out the extent to which nurse's communication skills affect their reporting of clinical errors.

The present survey is an analytical and cross-applied study conducted in three hospitals under the authority of Isfahan Province Social Security Organization (Fateme Zahra, Dr. Gharazi and Dr. Shariati ) in Iran in spring 2013. The results of this study are emanate from a quantitative analysis and may be usable in the system of health and remedy.

The study sample was selected according to the Cochran formula from the hospitals under study. Nurses with at least a year of work experience were chosen to take part in this study (N = 800). Then the questionnaires were distributed among the participants of the study (N = 248) with respect to the hospitals and their different wards and they were completed using the self-reported method. Of 280 distributed questionnaires, 248 questionnaires were returned (return coefficient was % 88.5).

To measure communication skill variable, a researcher-made questionnaire was applied using a standard method including 30 questions including 4 general sections (containing demographic information, verbal, listening and feedback skills on Linkert scale, with the following alternatives: never, seldom, sometimes, often and always). The questions of the questionnaire were compiled from different studies and with regard to the survey goals, as inspired by Berton and Queendom's standard questionnaires.

To get a scientific validity of the data gathering tools, the questionnaire validated by Delphi technique by 15 masters of

Islamic Azad University of Tehran's science and research branch and supervisors of the departments for studying the content quality. To study the questionnaire reliability, "Test-retest" method was applied and the result obtained from correlation coefficient of questions (Chronbachs alpha) was 0.0804 indicating a good reliability of the questionnaire questions.

In this study, in order to collect the data related to clinical errors variable, "Data Collection Form" designed based on the goals of conducted research and study was used. In this survey, software SPSS16 was used for the data analysis. Frequency, frequency percentage, mean, standard deviation and statistical calculations were applied to get demographic information and to determine the score of communication skills. Pearsons correlation test was also conducted to determine the degree of relationship between the nurses' communication skills and their number of reporting clinical errors.

## Results and Discussion

**Demographic Findings:** The demographic variable of survey including gender, age, background and education level of the participants is shown in table-1. The findings of this study show that the majority of the participants were female (64.2%), in the age group 33-42 years (45.9%), with 1-5 years of work experience (33.1%) and holding Bachelor's degree (56%).

**Communication skill on verbal span and number of reporting clinical errors:** Based on the score obtained from testing the nurse's verbal skills and the number of reporting clinical errors within three types of including Near-Miss errors, No-Harm errors and Adverse Event, Pearson correlation was calculated for the two variables of the study is shown in table-2.:

**Table-1**  
**Frequency distribution of sample group based on gender, age, background and education level variables**

Variable	Variable group	Frequency	Percentage (%)	variable	Variable group	Frequency	Percentage (%)
Gender	Male	89	35.8	Age	22-32	88	35.5
	Female	159	64.2		33-42	114	45.9
Education level	Under High school degree	21	8.4		43-52	46	18.6
	High school degree	42	17	Background	1-5	82	33.1
	Associates degree	25	10.1		6-10	40	16.1
	Bachelor	139	56.1		11-15	67	27
	Master of science	21	8.4		16-21	59	23.8

**Table-2**  
**Pearson test between communication skill on verbal span and number of reporting clinical errors**

Verbal Skill =28.11	Variable and Score	Number of reporting Near-Miss errors =214	Number of reporting No-Harm errors =200	Number of reporting Adverse Event errors =144	Number of reporting Clinical errors =558
	Test	R=0.332 P=0.039	R=0.360 P=0.025	R=0.235 P=0.150	R=0.420 P=0.008

Statistical analyses indicated the presence of a correlation between the verbal skill variables with the number of reporting the Near-Miss error, No-Harm errors and total number of reporting the clinical errors. However, increased verbal skill did not turn out to be effective in reporting adverse event errors, that is, on increasing the score of verbal skills, number of reporting these errors also won't increase.

It was found that no relationship exists between the nurses' verbal skills and the number of reporting Adverse Event errors, that is, on increasing the verbal skill score, number of reporting the errors from the type of Adverse Event errors won't change.

**Communication skill on listening skill span and number of reporting clinical errors:** In table-3, based on the score obtained from testing the nurse's listening skill and number of reporting the clinical errors within three types including Near-Miss errors, No-Harm errors and Adverse Event, Pearson correlation was measures for these two variables:

The results show that there is no correlation between the listening skill variables and number of reporting the clinical errors from the type of Near-Miss errors, No-Harm errors and Adverse Event and totally with reporting the clinical errors. That is, on increasing the listening skill scores, number of reporting the clinical errors won't change.

**Communication skill on feedback skill span and number of reporting clinical errors:** In table-4, based on the scores obtained from testing the nurse's feedback skill and the number of reporting the clinical errors of Near-Miss errors, No-Harm

errors and Adverse Event errors, Pearson correlation was once again run for these two variables:

The results show that there is a significant positive relationship between the feedback skill variables and the number of reporting the Near-Miss errors, No-Harm errors and clinical errors. That is, on increasing the score of feedback skill, the number of reporting the Near-Miss errors, No-Harm errors and clinical errors will be increased. There is no relationship between the variables of feedback skill and the number of reporting Adverse Event errors. In other words, on increasing the score of feedback skill, number of reporting Adverse Event errors will not change.

**Nurse's communication skills and the number of reporting clinical errors:** In table-5, based on the score obtained from testing the nurses' communication skill and the number of reporting clinical errors within three types of the Near-Miss errors, No-Harm errors and Adverse Event errors, Pearson correlation was calculated:

The nurses' communicative scores mean (composed of three verbal, listening and feedback skill components) was 26.05. Applying the Pearson test, communicative skill variable has a direct relationship with the reporting the error and number of reporting the Near-Miss errors and No-Harm errors, but reporting adverse events has no relationship with increased communicative skills in nurses. Altogether, increased communicative skills in nurses could causes increased number of reporting clinical errors.

**Table-3**  
**Pearson test between communication skill on Listening span and number of reporting clinical errors**

Listening Skill =27.91	Variable and Score	Number of reporting Near-Miss errors = 214	Number of reporting No-Harm errors = 200	Number of reporting Adverse Event errors = 144	Number of reporting Clinical errors = 558
	Test	R=0.143 P=0.386	R=0.205 P=0.210	R=0.066 P=0.689	R=0.143 P=0.385

**Table-4**  
**Pearson test between communication skill on Feedback span and number of reporting clinical errors**

Feedback Skill =23,47	Variable and Score	Number of reporting Near-Miss errors =214	Number of reporting No-Harm errors =200	Number of reporting Adverse Event errors =144	Number of reporting Clinical errors =558
	Test	R=0.338 P=0.035	R=0.405 P=0.011	R=0.298 P=0.065	R=0.472 P=0.002

**Table-5**  
**Pearson test between communication skills and number of reporting clinical errors**

Communication Skills =26,05	Variable and Score	Number of reporting Near-Miss errors =214	Number of reporting No-Harm errors =200	Number of reporting Adverse Event errors =144	Number of reporting Clinical errors =558
	Test	R=0.397 P=0.012	R=0.474 P=0.002	R=0.300 P=0.064	R=0.535 P=0.001

**Discussion:** A variety of factors have been investigated and identified as being responsible for incidence and lack of reporting of the errors. Communication skills are one of the important factors addressed as the 11th factor among 23 causes of error incidence in Nasiripour's study. Clear, transparent, explicit, complete, and on time communications cause the promotion of the patient's safety in the process of treatment. According to him, one of the national objectives of the patient's safety in 2007 was the importance of communication among the treatment team<sup>16</sup>. A remarkable percentage of the errors occur due to the failure of communications in the health system<sup>17</sup>. The most important reason in 70% of the clinical errors reported during 1995-2003 is the failure of communications. Preventing clinical errors depends on their exact reporting.

On the other hand, creating effective communications has an inevitable role in occurring and reporting the error. Therefore, through promoting the communication skills among the treatment personnel, an effective step may be taken toward lowering the errors and increasing their reporting. Statistical analyses conducted showed that the variables of the feedback skills are effective in reporting the clinical errors. Evans et al. and Mardani Hamuleh et al. have considered the lack of a suitable feedback as the most important obstacle of reporting clinical errors<sup>18,19</sup>.

Also, Mayo et al. and Osborn et al. have stated different aspects of a suitable feedback including the fear of getting under blame, being labeled the tag of inefficiency and the reaction of the colleagues as the obstacles of reporting the errors<sup>20,21</sup>. Joolaei et al. and Ghalandarpour have stated the administrator's blame when reporting the error, fear of getting blame by the colleagues and lack of receiving training about the communicative skills of

personnel and administrators as the reasons of not reporting the errors by the personnel<sup>15,22</sup>.

Lack of the hospitals administrators and authorities' knowledge about a suitable feedback in these cases causes disappointment and lack of mental security in reporting clinical errors. It seems that preparing a comprehensive and complete instructional program about communicative skills and professional criteria related to medical errors enables the physicians to report the errors with more tendency and higher reliability when they occur. The present study shows that between the listening skills variables and number of reporting clinical errors, no relationship may be found and by increasing the score of listening skill, the number of reporting clinical errors will not change. However, increased listening skill may be regarded as a preventive factor for clinical errors. Improving the listening skill in nurses and clinical personnel is effective in lowering the error, but it seems that an efficient listening and increasing the skills related to it in top and also middle administrators may encourage the personnel to report the happened errors. Reporting clinical errors by the personnel is a reliable and objective way to identify the cause of the error incidence and prevent their recurrence. Finally, increase in the scores of listening, verbal and suitable feedback skills -as communicative skills- show the increase in number of reporting the errors by the personnel.

Urib et al., Jones et al., Ogbimi et al., McCabe, Karow et al., Coeling et al. and De Meester have also addressed the communicative skills in their studies as effective factors on the rate of reporting the clinical errors. Having poor communicative skills makes a person unable to report the committed errors in a suitable manner and with no fear of consequences of reporting the error to the authorities and administrators. It also does not

bring about actions and necessary instructions that prevent the recurrence of these errors by the guilty person or other personnel are prevented<sup>23-29</sup>. Long's study also showed that some factors such as Workload, Procedural Injustice, Role Ambiguity, Physical Environment, Work Family Conflict can be effective in the level of stress in nurses and their work performance<sup>30</sup>. Therefore, an environment can be prepared to improve providing health care and make nurses sure that reporting clinical errors can be helpful in improvement of their performance and also organization's by recognizing and removing the negative and stressful factors and creating a quiet environment. A factor which can be effective in improving communications and reducing errors is using communication technologies of health care systems. These systems can reduce errors by controlling the quality of services and transferring correct information among employees. Also, encouraging the culture of patient safety in health care systems and staff commitment to provide the safety for patient can be effective in reducing errors and increasing occurred error reporting<sup>31</sup>. Nasiripour's study showed that nurses' participation in organizations can develop the culture of patient safety which in turn reduces clinical errors<sup>32</sup>.

## Conclusion

The occurrence of error in treatment processes due to the human factors is inevitable, but providing programs and plans to minimize or possibly eradicate these errors is very important. Communication is not only a system of information, but also an integral part of education and development<sup>33</sup>. It's also possible for organization to make a quick move from current situation to desired one with creation of a network connection and use of collective ideas<sup>34,35</sup>. Improving communicative skills causes increased cooperation, improved quality of patients' care, and lowered remedial errors. Effective communication and on time reporting of clinical errors may bring about discussion and study among the personnel and a group consultation for solving the problems. It also gives rise to an increased rate of nurses' cooperation in treatment decisions for the patients, prevention, expression, discovery and solving the potential reasons behind occurring clinical errors. Knowledge of error-inducing conditions is very important to identifying and eliminating the background causes clinical errors. The first step in lowering the errors of nurses is to provide the conditions in which any of the nursing personnel, in the case of making an error, is able to state his/her error and the reason of this event in order that the necessary planning be made to prevent its recurrence and that the damages imposed to the patient be also compensated. Therefore, enhancing the knowledge of administrators on the importance of reporting the clinical errors and identifying its barriers and constraints may be utilized to set the strategies for identifying the reason of their occurrence and eliminating them along with preventing the error and creating a safe environment for the patients.

The findings of the present study support and that there is a

relationship between the communicative skills of nursing teams and the number of clinical errors reported by them. Therefore, enhancing communicating skills through organizing the training courses and promoting the feedback capacities in the first phase and verbal skills in the second phase help to promote the status of reporting the clinical errors in health centers.

## Acknowledgements

We gratefully acknowledge the Tehran Islamic Azad University and Social Security Organization in Esfahan for their generous support.

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