

## Effect of nurse-patient communication on anxiety, depression and stress level of emergency ward patients

Mahmoudi H.\* *MSc*, Ebadi A.<sup>1</sup> *PhD*, Salimi S. H.<sup>2</sup> *PhD*, Najafi Mehri S.<sup>1</sup> *MSc*,  
Mokhtari Nouri J.<sup>1</sup> *MSc*, Shokrollahi F.<sup>1</sup> *BSc*

\*"Behavioral Sciences Research Center" & "Faculty of Nursing", Baqiyatallah University of Medical Sciences, Tehran, Iran;

<sup>1</sup>Faculty of Nursing, Baqiyatallah University of Medical Sciences, Tehran, Iran;

<sup>2</sup>Exercise Physiology Research Center, Baqiyatallah University of Medical Sciences, Tehran, Iran

### Abstract

**Aims:** Nurse-patient interaction is very important in health-treatment systems, especially emergency wards. This study investigated the effectiveness of nurse-patient communication in reducing emotional states (stress, anxiety and depression) in emergency department patients.

**Methods:** This quasi-experimental study was performed in one of Tehran's emergency wards during May to December 2008. The study population were all patients who admitted at the emergency department and stayed for at least 3 hours. Two study and control groups (each containing 150 patients) were selected by available sampling method. Experimental group patients were cared by nurses trained about how to communicate with patients and control group nurses were not under such training. To collect data, demographic and 21-questioned depression, anxiety and stress scale questionnaire were used. Data was analyzed by using SPSS 13 software and Chi square, Man-Whitney and independent t tests.

**Results:** 20.7% of control patients had severe depression, 24.6% had severe anxiety and 41.3% had severe stress. In the experimental group, 22.1% of patients had severe depression, 20.3% had severe anxiety and 35.6% had severe stress. Differences were not significant between two groups in any field ( $p>0.05$ ).

**Conclusion:** Generally, stress, anxiety and depression level is high in emergency patients. Implementation of "to communicate effectively with patients" protocol by nurses does not significantly reduce depression, stress and anxiety of patients.

**Keywords:** Depression, Anxiety, Stress, Emergency Ward, Effective Communication

### Introduction

Emergency department is one of the most important parts of the hospital. Patients who are referring to this ward are physically in a critical condition so the main task of medical and nursing staff is to attend their situation at the earlier convenience with a high quality [1]. Often, patients' first experience of hospital relates to the emergency department. Since emergency patients need immediate and particular care, understanding patients' problems in emergency wards is essential [2].

With regard to the fact that approximately 28% of the clients of the emergency department are hospitalized in various units of the hospital, the emergency department should be viewed as the source of hospital life [3, 4, 5]. Performing medical emergency services is the most important aspect of patients' treatment and since it can lead to saving people's lives, it has a great and undeniable value. Because the highest and most serious reference of patients is to the hospital emergency ward, the way of delivering services in this part will be a symbol of the whole status of the hospital. The quality of providing services in

emergency room is also important in the formal evaluation of hospital and evaluation of other hospital wards depends on gaining the required limit in the hospital emergency department. In other words, a highly equipped and modern hospital that lacks an efficient emergency department will be considered as lacking the needed requirements [6]. Establishing relationship needs special skill in some situations. Those who suffer from mental and neurological involvement, gradually lose their patience when exposed to unfavorable environmental factors. Therefore, a nurse who has the management capabilities makes the environment suitable for performance through being aware of stressors. None of the management aspects play role, as much as communication in the progress or falling of an organization. Communication is one of the key roles of the nurses. Some scientists consider the organization essentially a communication network and believe that the survival of organizations depends on the quality of their communication networks; specially communication is of special importance in health care organizations in which inappropriate communication can lead to death and disability of patients due to the

\* Correspondence; Email: hm1864@gmail.com

criticality of work environment, the great number of staffs and units and complexity of affairs. [7, 8].

Studies show that permanent stress can increase the risk of peptic ulcers, mental disorders, myocardial infarction and other health problems with time [9]. Anxiety is a vague concept of the fear and worry. People, who are anxious, are those who are uncertain and worried about the future. Anxiety is one of the most common and important reactions against the disease. Studies show that patients consider the fear of death and relapsing of the disease as the main reason of anxiety [10]. Depression is a loss or pervasive decline of mood accompanied by sense of sadness and inability to experience pleasure. Depression is the individual's reaction against the pressures of life and a mental disorder that affects thought, feeling, behavior and physical performance [10, 11, 12, 13]. Another dimension that has caused more interest in studying of the emotional states is the relationship between these disorders and function [14]. Decrease of emotional states actually improves the performance [15]. Furthermore, depression, anxiety and stress may accompany with irrelevant thinking, the interruption associated with lack of understanding of the words' meanings, panic, distraction and one or more other physical symptoms [16]. Higher levels of anxiety increase the risk of sudden death up to three times [17]. In addition, the study of complications and methods of coping with depression, anxiety and stress in some environments is of more importance. Among these environments are military environments, nuclear facilities and emergencies [18, 19]. Suikkala and Leino-Kylpy, found in a case study that the rate of studies has increased in the field of communications. To communicate with patients is a part of nursing education, an introduction to caring, a factor in professional progress, and a factor of patient's improvement and ultimately a factor in improvement of nursing students' social character [20]. Giving good messages to patients in psychiatric wards can reduce stress, anxiety and aggression [21]. According to Kate C and Taneal W, communication is introduced as one of the care pillars of emergency. Also in that study, the other aspects of care such as creating a special place for patients who need more time in emergency room, paying attention to culture and mental-social state of patients, pain relief and infection control have been mentioned. In this study it is shown that the effective communication between nurses and patients and their relatives increase the patients and their companions' satisfaction. Thus, in the emergency department, a special attention should be paid to effective

communication of nurses with patients, companions and other care providers [22].

Can the implementation of an appropriate communication pattern by nurses cause changes in patient's emotional state? With regard to the importance of emergency department, existence of emotional states in this part, the importance of communication in the critical environment and the few studies done in this field, this study was conducted to determine the effect of the implementation of effective communication of nurses dealing with patients on the level of stress, anxiety and depression in patients admitted in the emergency ward.

### Methods

This quasi-experimental study was conducted from May to December, 2008 in emergency department of a hospital in Tehran. Study participants were all patients referred to the emergency department who were monitored and hospitalized more than 3 hours after taking initial measures. Questionnaires were completed with presence of an interviewer in all shifts except for night shift (morning and afternoon) and were collected at the same time.

Before beginning of the study, the condition of patients referred to the hospital's emergency department within the 8 consecutive months leading to the beginning of the study was evaluated in terms of number, disease type, hospitalization duration, etc. by referring to the hospital's archive. Results of the study all implied the homogeneity of patients at different times; so research samples were selected in two consecutive 3-month intervals by available sampling method. During the first three months, nurses who took care of patients received no treatment. In this period 150 patients were considered as the control group. Between two 3-month intervals, nurses received some instructions concerning communicative techniques and care protocol based on effective communication with patients and became familiar with communication methods and effective interaction with patients and gained needed skills in two four hours sessions. Trained nurses took care of 150 selected patients in the second three-month period. The executive protocol of nurses' effective communication with patients (instructed to nurses) were extracted from reliable references and confirmed by psychologist consultants, which contained the following steps:

1. After introducing yourself, tell the patients that your conversation is an essential part of nursing care and

induce the feeling that he is not alone; 2. Sit down near the patient calmly and without any hurry; welcome the patients and provide an opportunity for patients to ask their questions and talk about their concerns (creating a private atmosphere); 3. By touching patient's hands and massaging his shoulder show him that you are interested in helping and caring him; 4. Visit patients repeatedly, especially in situations that the anxiety level is high; 5. Support their families and friends by hearing them, talking about where they were in emergency ward during the patient hospitalization, the location of parking, elevator, wash room, phone, etc. Tell all this information calmly; 6. Don't use incomprehensible terms; 7. Adjust your expression level with patient literacy level; 8. Prioritize the trainings and tell important facts first; 9. familiarize the patient with emergency ward, policies, laws and procedures; 10. Visit Patients' family members and friends; 11. Do not give false assurance to the patient's family; 12. Give the guiding paper to the patient or her companion; 13. A fixed nurse should take care of the patient; 14. Repeat the important and key information for the patient; 15. Use teaching aids; 16. Ask about patients' problems; 17. Give the opportunity of decision making to patients [23, 24, 25, 26].

Data gathering tools included a demographic questionnaire containing 10 questions and the depression, anxiety and stress scale containing 21 questions (DASS-21). This questionnaire was developed for the first time by Lavyband in 1995 and its validity has been confirmed to be acceptable at several internal [27, 28] and foreign [14, 16] studies with Chronbach's alpha coefficient 0.7 to 0.94. Points were determined based on the Likert four-option scale as follows: not at all, low, medium and high. The lowest score for each question was zero and the highest score was 3. In this tool, 7 questions were related to depression, 7 questions related to anxiety and 7 related to the study of stress and the highest score in each sub-group was 21. The score 0-4 was considered as normal, 5-11 average and more than 12 as severe. Before leaving the emergency room (hospital discharge or transfer to the ward), the researcher introduced himself to the participants of the study and told the purpose of the study and the way of completing the questionnaire and obtained their informed consent. Questionnaires were filled with presence of the interviewer and were collected at the same time. Questions were read for illiterate patients and their answers were marked on the questionnaire. In cases that the patient was not able to respond due to

poor general condition, he was excluded from the study.

**Table 1-** Relative frequency of some emergency patients' personal characteristics

Variables↓	Group→	Control	Test	Level of significance
<b>Residence location</b>	Tehran	68	62	0.99
	Other Towns	32	38	
<b>Insurance Type</b>	Armed forces	86	84.4	0.72
	Supplementary	5.3	2.4	
	Governmental	5.4	8	
	Without insurance	3.3	5.2	
<b>Education</b>	Illiterate	11	24	0.63
	Under diploma	69	51.5	
	BSc	18.7	24	
	Undergraduate	1.3	1.5	
<b>Marital status</b>	Married	78	82	0.22
	Single	22	18	
<b>Job</b>	Other	28.7	29	0.67
	Employee	2.7	1.3	
	Free	12.6	11.3	
	Retired	42	44.7	
	Unemployed	14	12.7	
<b>Monthly income (Tomans)</b>	Less than 200 thousand	56	69.4	0.17
	200-300	30	20	
	300-400	10	9.3	
	More than 400 thousand	4	1.3	
<b>Hospitalization history</b>	Have	44.7	42	0.34
	Don't have	55.3	58	
<b>The way of reference</b>	Alone	6	12.7	0.46
	With a companion	84.7	72.3	
	By EMS	9.3	15	

Data was analyzed by SPSS 13 software using descriptive statistics (frequency, percentage and mean) and inferential statistics (chi square test, Mann-Whitney and independent t-test).

## Results

Total average age of patients was  $52.96 \pm 21.42$  years old, that of control group was  $52.94 \pm 21.22$  years old and experimental group was  $52.97 \pm 21.69$  years old. The rest of demographic data are presented in Table 1. As it is obvious, both groups were similar in terms of demographic variables.

The rate of depression, anxiety and stress in control and experimental group is illustrated in table 2. However, the difference in the mean of depression, anxiety and stress in experimental and control groups was not significant, but for all variables the mean reduced in the experimental group (Table 3). There was no significant correlation between demographic variables and depression, anxiety and stress rate.

**Table 2-** Comparison of the overall prevalence of depression, anxiety and stress in experimental and control group

Group→ Variable↓	Control		Experimental		Level of significance	
	Number	Percent	Number	Percent		
Depression	Natural	55	36.7	60	40.3	0.11
	Average	64	42.7	57	37.6	
	Sever	31	20.7	33	22.1	
Anxiety	Natural	40	26.8	52	35.5	0.07
	Average	68	48.6	68	44.2	
	Sever	42	24.6	30	20.3	
Stress	Natural	37	24.7	28	18.8	0.88
	Average	51	34	69	45.6	
	Sever	62	41.3	53	35.6	

**Table 3)** Mean difference of depression, anxiety and stress in experimental and control group

Variable	Group	Number	Mean	SD	Level of significance
Depression	Control	150	7.11	5.1 5	0.39
	Experimental	150	6.59	5.2 3	
Anxiety	Control	150	8.24	5.4 8	0.11
	Experimental	150	7.24	5.2 1	
Stress	Control	150	9.64	5.7 6	0.95
	Experimental	150	9.60	5.8 6	

## Discussion

Prevalence of depression according to the results was so high in emergency patients, so that only 36.7% of control group subjects were suffering from normal depression. This rate was 40.3% in the experimental group who were cared by the trained nurses which showed a small but important improvement. In a study by Enshaehe et al. on frequency of depression and anxiety in patients with psoriasis, 69.9% of patients were depressed [29]. In Esfandearpoor and Afsharzadeh on frequency of depression in patients with vitiligo, 70% of patients were depressed [30]. The frequency of depression was reported 79.8% in hemodialysis patients according to the results of the Medanlou et al. study [31].

In the Angst and Dobler study, 456 normal individuals in the age group of 22 to 23 years old were evaluated in terms of depression and anxiety disorders. The rate of the single year prevalence of major and minor depression disorder and anxiety disorder was reported totally 16.4%. 36% of patients suffered from anxiety and 60% of them suffered from minor anxiety disorder and depression at the same time [32]. Considering the

frequency of moderate and severe depression in this study, 63.3% of the control and experimental group subjects and 59.7% of experimental group suffered from depression, which is approximately equivalent to the frequency of depression in other diseases. The frequency of depression in the patients referred to emergency room was approximately 10 percent, which can be because of the lack of conformity of illness in urgent patients compared to other patients. The comparison of depression mean in the control and experimental groups shows that the rate of depression has reduced in the experimental group, although this reduction is not significant. The issue that the reduction is not significant is perhaps due to the fact that all process owners have not been investigated in this study and only nurses received communicative techniques instructions.

According to the results of the present study, prevalence of anxiety in emergency patients was very high and even more than depression; so that only 26.8% of control group subjects were suffering from common anxiety. This value was 35.5% in the subjects of experimental group who were cared by trained nurses. According to the reference books 30.5% of women and 19.2% of men suffer from pathological depression in general population and of every four people almost one suffers from anxiety disorders. 25% of the patients referred to the anxiety disorders clinic suffer from one of the anxiety disorders [33]. The prevalence of anxiety in the study of Noorbala et al. have been reported 20.8% for older than 15-year-old urban and rural residents [34]. In the study of Bahreynian and Karamad on anxiety frequency in patients with various types of epilepsy, 44.9% of epileptic patients were anxious [35]. Moreover, the frequency of anxiety in patients with psoriasis has been reported 50.4% [29]. The average of depression prevalence in internal and surgical ward is 53.6% and the average of anxiety prevalence is 50.4% [36]. Comparison of the anxiety mean in experimental and control groups shows a reduction in anxiety rate in experimental group, but this reduction is not significant.

According to the present study, the prevalence of stress is more than depression and anxiety in emergency patients, so that only 24.7% of the subjects in the control group suffered from common depression. This rate was 18.8% in the experimental group patients who were supervised by trained nurses. In Zaheeraddin et al. study on frequency of stress in patients with asthma, 75% of patients suffered from moderate stress and 25% had severe stress [37]. Frequency of severe stress in experimental group

decreased compared to control group (35.6% vs. 41.3% respectively), but this decrease is not significant either.

### Conclusion

In general, the rate of stress, anxiety and depression is high in emergency patients. Implementation of "effective communication with patients" protocol by nurses does not cause a meaningful reduction in the rate of stress, anxiety and depression. One method of reducing emotional states is a proper communication of the process owners. In this study, the effect of proper communication of nurses was investigated, which did not show any significant effect on reduction of emotional states. Perhaps this effect will become significant by participation of other treatment team members.

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