

# Does Caring for Trauma Patients Admitted to Emergency Departments Need Advanced Communication Skills? A Quasi-Experimental Study of Nurses' Communication Audit

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## Abstract

**Background:** Communication increases awareness of patient problems, productivity and job satisfaction, improving decision-making in patient discharge and transfer, and reducing hospital stay duration, medical costs, and nurses' stress and burnout.

**Objectives:** This study aimed to audit the communication of nurses with trauma patients in the emergency department.

**Methods:** This quasi-experimental study was conducted at the Baqiyatallah University of Medical Sciences in 2018. The data collection tool was a valid and reliable checklist for nurses' communication skills with trauma patients with 3 subscales and 31 items. Before the intervention, 35 nurses who were randomly selected were evaluated based on the communication checklist, and then the collected data was analyzed. Based on the results and the assessment of weaknesses, the necessary training was provided to the nurses. After the intervention, the participants' communication skills were analyzed using the same checklist and the results were compared. Descriptive statistics and parametric tests such as paired T-test were used to analyze the data.

**Results:** The means age of participants was 39.5±9.3 years, and the majority of them were males. The mean scores of communication status before and after intervention were (10.00±3.29) and (26.26±2.30), respectively, among the 35 participating nurses. There was a significant difference between pre-and post-intervention ( $p < 0/001$ ) in terms of total communication skills scores, indicating the effectiveness of the intervention.

**Conclusion:** The audit of nurses' communications with patients in the emergency department as well as training based on the improvement of weaknesses may be effective in improving nurses' communication skills, and this may promote the level of communication skills, behavioral changes, and positive effects on the clinical situation of trauma patients.

**Keywords:** Communication, Nurses, Patients, Audit, Emergency Department.

## Introduction

The emergency department is one of the most important parts of the hospital to which many patients are referred. Providing effective services at appropriate times in this ward is possible in the shadow of efficient and effective performance (1). Often, the patient's first experience with the hospital relates to the emergency department. Because emergency patients need immediate and specific care, understanding their issues is essential to ensure satisfaction with the care and treatment system (2).

In such an environment, nurses must be equipped with a variety of abilities and skills, including skills to deal with critical situations. Communication is one of the central concepts in nursing and an important part of nursing

intervention. Some nursing experts consider the ability to communicate appropriately as the core of all nursing care. In order to establish communication, nurses must be aware of its psychological and social principles (3). The main goal of communication is to provide comfort and strengthen a feeling of trust and safety in patients (4). The type of communication between emergency care providers and the patient and his/her family can affect the level of their concern and the overall outcome of emergency care. If caregivers are aware of these factors, better quality care is usually provided, and communication and interaction will emerge in a spirit of mutual respect (5).

The American Nurses' Association (ANA) is committed to setting six standards for the establishment and maintenance

of healthcare facilities, one of which is communication skills. The association announces that just as nurses are skilled in other clinical skills, they should also have sufficient communication skills (6).

Research results indicate that nurses regard their communications with patients as part of nursing care, but they have little knowledge of the importance of establishing communication, and they do not establish appropriate and proper communication with patients (7).

The length of time nurses spend communicating with patients is very low (8). Studies conducted in IRAN on the communication between nurses and patients suggest that there is a problem in this regard. Research results indicate weak communication skills between nurses and patients (9).

Nurses' communication skills can be helped by designing and conducting a training program for nurses (10). Nurses should be able to communicate effectively so that they can be informed of their patients' needs, understand which nursing practices are appropriate for the patient, and know how these actions should be changed when needed to improve patient health (11). This is only possible when nurses have enough information in the field of communication. Lack of adequate knowledge about effective communication can lead to failure to provide care services. The final cause of most complaints, discontent, and violations of the care and treatment environment is communication errors and a lack of effective communication (12). To enable nurses to provide caring services professionally, it is necessary to evaluate correctly, and an effective communication has to be established for evaluation. The nurse plays key roles with the patient and his/her family due to continuous day-to-day communication (13). Effective communication increases awareness of patient issues and problems; improves decision-making in patient discharge and transfer; reduces length of hospital stay, health care costs, stress and burnout; and increases productivity and job satisfaction (14).

Nurses' communication barriers include the use of medical terms, the sudden discontinuation of communication with the patient and addressing other issues due to high workload, non-friendly behavior with the patient, inadequate explanation of the treatment method, and the use of long sentences without clear meaning (15).

Studies have shown that personal issues such as fatigue and economic concerns of nurses have detrimental effects on nurses' ability to communicate effectively (16). Most nurses

work in multiple shifts, leaving them feeling tired and impatient, and this affects the quality of their communication with their patients (17).

To improve the performance of the health system, tools are needed to ensure that health services are provided on the basis of the latest and most valid knowledge and with the best possible quality. One of the most effective tools in this field is clinical audit, a systematic and evidence-based approach to ensuring that the quality of health services is continuously improved. Clinical audit involves a process aimed at improving the quality of care and services provided to patients and improving their results by systematically reviewing existing conditions, the compliance of these conditions with clear standards, and intervening and making changes (18).

The steps of a clinical audit include selecting the subject of the audit, examining the existing status, setting standards, designing and performing corrective intervention, re-auditing the effectiveness of the intervention, and reporting activities (19).

Communication has the high sensitivity and importance for the patient and the care provider can be one of the most valuable subjects for clinical auditing. In order to utilize the results of clinical audits to promote communication between nurses and patients and their families, continuing education programs should be included in clinical processes to familiarize nurses with innovations in human communication and its importance, and to give greater attention to communication in nursing (20).

## Objectives

Considering the central role professional communication plays in the field of nursing, the necessity of addressing this phenomenon is felt deeply in Iran. Therefore, the current study was conducted with the following question in mind: Does caring for trauma patients admitted to emergency departments need advanced communication skills?

## Materials and Methods

**Settings and Ethical Consideration:** This quasi-experimental study was conducted in Baqiyatallah Hospital in 2018. After obtaining permission from the Research Deputy and Ethics Committee of Baqiyatallah University of Medical Sciences with code number IR.BMSU.REC.1397.046 and obtaining consent from the authorities of the research environment (Baqiyatallah

Hospital), nurses in the emergency department who met the inclusion criteria were entered into the study using the census method.

**Participants:** Written consent was received from the participants after explaining the study process and objectives. The inclusion criteria for participants included: having at least six months of work experience, having not participated previously in a similar study, having not completed any study-related training courses in the past year, and being willing to participate in the study.

**Sample size:** The sample size was calculated by considering the ( $\alpha = 0.05\%$ ), ( $10\% = \beta$ ) and 90% power using Altman's nomogram based on the standard deviation. The sample size in each group was determined to be 35 participants, and their communications through two groups were audited before and after intervention. Participants were recruited to the study consecutively using the random method (21).

**Procedures:** In the first step, the status of nurses' communication in the emergency department was evaluated and compared with the defined standards (contact checklist). Then, the weaknesses in effective communication were identified, and the necessary interventions were designed and implemented to correct those weaknesses. The intervention in this study was 15 sessions of a training course over a period of one month and two weeks. Topics related to communication skills, including the basic concepts of communication, types of communication, components and process of communication, effective communication features, factors affecting communication, the basis of nurse communication with the patient, the steps of communication between the nurse and the patient, barriers to communication, and space and ethics in communication with patient were presented. The sessions were conducted by a trained nurse who was an expert on communication skills. The training was done in partnership with the nurses and discussions were held with them.

Finally, after the corrective actions and intervention had been performed, a re-audit of nurses' communication with patients in the emergency department was performed. Nurses' communication with patients was assessed using a standardized checklist (22).

**Checklist:** The checklist for nurses' communication skills with patients has 3 subscales and 31 items. The items in this

checklist included ten items regarding the start of communication, 15 items regarding interactive skills and six items regarding ending communication. Answers to the items were scored as yes = 1 and no = 0. To calculate the score for each subscale of the checklist, the scores for all sub-items were combined. Then, the scores for all checklist items were combined to calculate the overall score of the checklist. The score range for this checklist was 0 to 31. Higher scores on this checklist indicate greater quality communication between nurses and patients, and lower scores indicate low quality communication between nurses and patients. The validity of the research tool was verified by the content validity method, and its reliability was tested by the test-retest method (within a two-week interval). Spearman's test results for communication skills were 0.85 and the Cronbach's alpha coefficient was 0.85, which indicates the desirable reliability of the research tool. There were many interfering factors and confounding variables that could affect communication in the emergency department, but considering the fact that the study was designed before and after, and the participants were evaluated before and after the intervention in the same environment; therefore, the effect of confounding variables was minimized in this study.

**Data Analysis:** Data was analyzed using SPSS software version 22. The Kolmogorov-Smirnov test was used to ensure normal distribution of quantitative data. Parametric tests such as paired t-test were used for variables with normal distribution.

## Results

The participants consisted of 23 men (65.7%) and 12 women (34.3%), most of whom were married and had a bachelor's degree (Table-1).

**Table-1.** Non parametric demographic characteristics of nurses

Variable	Variable status	Number (%)
<b>Sex</b>	Man	23 (65.7)
	Female	12 (34.3)
<b>Marital status</b>	Married	32 (91.4)
	Single	3 (8.6)
<b>Education Level</b>	Bachelor's degree	35 (100)
<b>Total</b>		35 (100)

Nurses were at least 28 years old and a maximum of 52 years old with an average age of 39.5 years and a standard deviation

of 9.26 years; 8.9% with a standard deviation of 7.29 had work experience in the emergency department (Table-2). About half of the nurses were in official employment and nearly the same number were contracted (Table-3).

**Table-2.** Parametric demographic characteristics of nurses

Variable	M±SD
Age	39.5 ±9.26
Nursing experience (years)	12.00 ±8.65
Emergency nursing experience (years)	8.94 ±7.12
Nursing work hours	157.85 ±50.64
Work hours of Overtime	62.42 ±73.11

**Table-3.** Nurses' employment status

Type of employment	Number (%)
Official	15 (42.9)
Overtime	6 (17.1)
Contractual	14 (40)
Total	35 (100)

A comparison of the mean of communication status and the results of the paired t-test before and after intervention showed a significant difference ( $p < 0.001$ ), indicating the effectiveness of the intervention (Table-4).

A comparison of the mean of the start of communication and the results of the paired t-test before and after the intervention showed a significant difference ( $p < 0.001$ ), indicating the effectiveness of the intervention (Table-5).

A comparison of the mean of interactive communication skills and the results of the paired t-test before and after intervention showed a significant difference ( $p < 0.001$ ), indicating the effectiveness of the intervention (Table-6).

A comparison of the average termination of communication and the results of the paired t-test before and after intervention showed a significant difference ( $p < 0.001$ ), indicating the effectiveness of the intervention (Table-7).

## Discussion

The results of the research showed that the overall status of the communication of nurses in the emergency department was poor. In a study of the challenges to communication conducted by Emadzadeh et al., communication skills of the nurse with the patient were reported as 43.3% (24). The study of Torabizadeh et al. evaluated professional communication between nurses and physicians (25), and Barati's studied

communication skills among medical professionals in Bahar city, Hamedan province; their results showed that the status of communication skills was not at a suitable level (26).

The results of the study by Alujeh et al. showed that most students (85%) were weak in communication skills (27). The results of Soltanian et al. on nursing students showed that the level of communication performance between nursing students and their patients was relatively modest (21). Mullan and Kothe concluded that nurses had poor skills in communicating with patients and treatment groups (28). Contrary to these results, Ryan et al. in Ireland reported good communication skills in the majority of medical and nursing students (29).

It seems that differences in the studied groups and the tools used can explain the discrepancy in results. Overall, the results show that the weakness of nurses' communication with patients relates to a weakness in nursing education. Skills labs are very simple environments compared with clinical settings, while students need real situations to overcome different issues. A review of the nursing education curriculum shows that communication skills training is not considered individually. Thus, learning in a student's life is a direct and empirical model of trainers and often from the behavior of personnel. As a result, the students are not expected to be able to communicate effectively with their patients, and they act poorly in diagnosing and promoting the patient's problems. The weakness of communication skills is not limited to students, but also exists in nurses working in healthcare facilities. The main reason for this is the lack of knowledge and awareness of nurses in communicating with patients.

In the second step of the study, the extent of the difference between the existing situation and the standards was determined. The results obtained before the intervention in different communication domains were examined. The findings in the steps of this study indicated that nurses had very weak communication skills. This finding is consistent with the results of Sabzevari et al. (22).

The lack of nursing staff, the weakness of communication skills, a large number of patients, multiple shifts, organizational policies, and personal issues such as fatigue, impatience and economic concerns were the important inhibiting factors reported in relation to communication between nurses and patients.

**Table-4.** Comparison of general communication before and after intervention

Overall score of communication skills (0-31)	Before intervention	After intervention	Paired t-test	Df	P
	M±SD	M±SD			
	10.00 ±3.29	26.62 ±2.30	T= - 22.92	34	P <0.001

**Table-5.** Comparison the status of the start of communication before and after intervention

Start communication skills Score (0-10)	Before intervention	After intervention	Paired t-test	Df	P
	M±SD	M±SD			
	5.22 ±2.52	9.88 ±0.32	T= - 10.83	34	P <0.001

**Table-6.** Comparison of interactive Communication skill status before and after intervention

Interactive Communication Skills Score (0-15)	Before intervention	After intervention	Paired t-test	Df	P
	M±SD	M±SD			
	4.14 ±2.57	13.02 ±1.96	T= - 18.39	34	P <0.001

**Table-7.** Comparison of the termination of the communication before and after intervention

Termination of the Communication Skills Score (0-6)	Before intervention	After intervention	Paired t-test	Df	P
	M±SD	M±SD			
	0.62 ±0.84	3.71 ±1.96	T= - 13.43	34	P <0.001

In the third step of the study, the appropriate intervention was implemented to improve the existing communication status. Training and re-education of effective communication were conducted with the face-to-face training method, pamphlets, and training in cyberspace. In Mohammadi's study, the lack of a continuing education program and training communication skills during college education were the most important barriers to communication and information transfer between nurses and patients (30).

The results of the study by Nickmanesh et al. showed that the average nurses' interaction index with patient was significantly higher in nurses who have passed communication skills training than untrained nurses. This result shows the effects of education on improving communication between nurses and patients (31). Similar results were obtained in studies by Norgaard (32) and Hausberg et al. (33). Bayne acknowledges that nurses' knowledge and awareness of effective communication skills is the key to using that skill (34).

Almost all of the studies that have been done in the field of knowledge, awareness, and the performance level of nursing staff, have shown that nurses' awareness and performance

improved after education intervention. Comparing this study with the mentioned studies shows that effective and comprehensive educational intervention using a standardized communication checklist and clinical audit process based on the systematic identification of nurses' weaknesses in communication with patients and resolving them can lead to more desirable results.

In line with the fourth objective, to determine the status of the communication of nurses after the intervention, the comparison of the means of communication before (10.0±3.29) and after intervention (26.62±2.30) revealed a significant difference ( $p<0.001$ ), indicating the effectiveness of the intervention. The 2015 study by Taheri et al., showed that, after communication skills training, the relationship between the nurse and the patient increased from the viewpoints both of nurses and patients compared to pre-training, indicating the effect of education on the improvement of communication between nurses and patients (35).

The results of the study by Soltanian et al. conducted at Hamadan University of Medical Sciences showed that before intervention, the mean score of communication skills of students in the experimental group was (4.78±2.37), but after

intervention, the mean score of communication skills ( $26.22 \pm 2.86$ ) was significantly higher ( $p < 0.001$ ) than that of the control group (21).

Research results from Xie et al. showed that students who were trained in communication skills through lectures had better communication skills than untrained students (36), while Salimi et al. did not find any meaningful relationship between the interpersonal communication skills training course and the communication skills of students (37).

Different educational environments and differences in teaching quality seem to be the reasons for this inconsistency.

In the researchers' view, training must start at the beginning; in other words, nurses must first obtain the necessary knowledge; then their beliefs will change; and then one can expect to see obvious behavior changes in the person's performance. Communication skills are acquired and through training. In the nursing profession especially, communication is an ethical, conscientious, and professional responsibility. Therefore, training in communication skills should be considered as a way to improve the level of knowledge and awareness of nurses, which will be impossible to achieve except through education.

One of the limitations of this study was the crowded situation in the emergency department, even though attempts were made to conduct the study at less busy times.

## Conclusions

Based on the results of this study, the audit of nurses' communications with patients in the emergency department improved their communication skills. Communication skills training for nurses can help them be more aware of the mistakes they make in their interactions with patients and improve their communication skills. Therefore, it is suggested that future studies compare the clinical audit assessment method with other active and effective training methods at different time periods.

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## Authors' Contribution

All authors pass the four criteria for authorship contribution based on the International Committee of

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## Conflict of Interests

The authors declared no potential conflict of interests with respect to the research, authorship, and/or publication of this article.

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