

Effect of Repetitive Feedback on Residents' Communication Skills Improvement

Ali Labaf¹, Kazem Jamali¹, Mohammad Jalili²,
Hamid R Baradaran³, and Parisa Eizadi¹

¹ Department of Emergency Medicine, Imam Hospital, Tehran University of Medical Sciences, Tehran, Iran

² Department of Emergency Medicine, Center for Educational Research in Medical Sciences,
Tehran University of Medical Sciences, Tehran, Iran

³ Center for Educational Research in Medical Sciences, Iran University of Medical Sciences, Tehran, Iran

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Abstract- To evaluate the effect of frequent feedback on residents' communication skills as measured by a standardized checklist. Five medical students were recruited in order to assess twelve emergency medicine residents' communication skills during a one-year period. Students employed a modified checklist based on Calgary-Cambridge observation guide. The checklist was designed by faculty members of Tehran University of Medical Science, used for assessment of students' communication skills. 24 items from 71 items of observational guide were selected, considering study setting and objects. Every two months an expert faculty, based on descriptive results of observation, gave structured feedback to each resident during a 15-minute private session. Total mean score for baseline observation standing at 20.58 was increased significantly to 28.75 after feedbacks. Results markedly improved on "gathering information" (T1=5.5, T6=8.33, $P=0.001$), "building relationship" (T1=1.5, T6=4.25, $P<0.001$) and "closing the session" (T1=0.75, T6=2.5, $P=0.001$) and it mildly dropped on "understanding patients view" (T1=3, T6=2.33, $P=0.007$) and "providing structure" (T1=4.17, T6=4.00, $P=0.034$). Changes in result of "initiating the session" and "explanation and planning" dimensions are not statically significant ($P=0.159$, $P=0.415$ respectively). Frequent feedback provided by faculty member can improve residents' communication skills. Feedback can affect communication skills educational programs, and it can be more effective if it is combined with other educational methods.

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Introduction

One of the most fundamental clinical skills employed by clinicians to diagnose patients' problems is history taking. Taking a thorough history depends on functional physician-patient relationship which can be established through effective communication skills (1). Using communication skills effectively can benefit both doctors and their patients: Increased satisfaction, reduced anxiety, higher compliance and even better outcomes are documented advantages for the patient. Physicians will, in return, experience less difficulty with patient management and will face fewer medico-legal problems (2-4).

The importance of teaching communication skills in medical education cannot be overemphasized. It has

been well documented that education and practice can improve physician communication skills (1,5,6). As one of the six core competencies presented by Accreditation Council for Graduate Medical Education (ACGME) for post-graduate students in United States, communication skills training and assessment need to be incorporated in the curriculum of any clinical specialty (7). While most medical programs provide instruction on communication skills, concerns have been expressed about the way these skills can be taught (8). Various methods have been suggested for teaching communication skills. These include role modelling, using standardized patients, small group discussions and giving feedback (9-14).

Feedback is an informed, non-evaluative, assessment of behavior which is used to improve skills (15). Feedback is important in clinical education (14,16) and

Corresponding Author: P. Eizadi

Department of Emergency Medicine, Imam Hospital, Tehran University of Medical Sciences, Tehran, Iran
Tel: +98 914 4513500, Fax: +98 21 88964009, E-mail address: p_eizadi@yahoo.com

its role in medical education has been well documented (14,17-21). The effect of feedback on improving communication skills has also been studied (5,13,22,23). Two prior studies have evaluated the effect of providing

the data from patients' assessments on residents' communication skills(24,25). None of them; however, used an objective tool to assess the learners' communication skills either before or after the intervention. Furthermore, in neither study, specific components of an effective patient-physician communication were evaluated.

The purpose of the current study was to evaluate the effect of frequent feedback on residents' communication skills as measured by a standardized checklist based on the Calgary-Cambridge Observation Guide (26).

Materials and Methods

Our study was a pre-test, post-test designed study which evaluated feedback as an educational intervention. In this study the communication skills of Twelve PGY-1 (post graduated year-1) emergency medicine (EM) residents were observed over a one-year period. All Residents were informed about the nature of the study and presence of observers and informed consent was obtained. They all participated in one day communication skills workshop mainly based on the lecture and small group discussion at the beginning of this study.

Five medical students were recruited in order to assess EM residents' communication skills. These students had participated in an educational communication skills course before starting observation. Inter-rater agreement between these students was achieved by observing physicians' interview with standardized patients and discussing the results with expert faculty. Students employed a modified checklist based on Calgary-Cambridge observation guide consisted of 25 items pertaining to six dimensions including initiating session, gathering information, understanding patient's view, providing structure, building relationship, explanation and planning and closing the session. The checklist was designed by faculty members of Tehran University of Medical Science, used for assessment of students' communication skills. 25 items from 71 items of observational guide were selected, considering study setting and objects. Response to each item could be a score of 0, 1, or 2. Students used a guide to complete checklists. They discussed the guide with a faculty member in 3 sessions before starting observation so that

conditions in which residents were going to be scored 2, 1 or 0 were defined clearly. These sessions include group discussions and evaluating PGY2 residents' interviews with simulated patients.

Raters observed resident's interviews in the fast track of emergency department of Imam Khomeini Hospital affiliated to Tehran University of Medical Sciences. During observation students separately completed one checklist for every interview. Each resident was observed at least three times over a two-month period. At the end of the study, all residents were observed by all students. Result of these observations has been analyzed every two months and descriptive analysis of the result introduced to an expert faculty, who gave structured feedback to each resident during a 15-minute private session. At the end of the study total summation of 12 residents' scores in each item was considered as score of that item. Therefore, the score of each item ranges from 0 to 24. All of the results were analyzed by Repeated Measurement ANOVA Test to assess the changes in residents' communication skills in every item of the checklist over time.

Results

All 12 residents agreed to participate in the study, and none of them dropped off during the study. All participants were male. The average age of participants was 33 years.

Total mean score for baseline observation was 20.58 from 32 scores; total maximum score for all questions, and after 5 feedbacks final mean score was 28.75 from 32 which shows a positive effect of feedback ($P=0.002$).

Result also demonstrated that feedback had positive effect on "gathering information" ($T1=5.5$, $T6=8.33$, $P=0.001$), "building relationship" ($T1$ mean score: 1.5, $T6=4.25$, $P<0.001$) and "closing the session" ($T1=0.75$, $T6=2.5$, $P=0.001$). Result highlighted no positive effect on "understanding patients view" ($T1=3$, $T6=2.33$, $P=0.007$) and "providing structure" ($T1: 4.17$, $T6:4.00$, $p: 0.034$). Changes in result of "initiating the session" and "explanation and planning" dimensions are not significant ($P=0.159$, $P=0.415$ respectively). Table 1 illustrated analysis of each question.

Final scores ($T6$) show improvement in most skills: includes items 1-9, 12, 15-19, 21-25. However, in items "Explores patient's ideas and concerns" ($T1=17$, $T6=15$, $P<0.001$) and "Picks up verbal and non-verbal cues"($T1=19$, $T6=13$, $P=0.009$) there is no improvement. Also final scores of "Uses transitional statements," "Structures interview in a logical sequence"

and "Gives sufficient and appropriate information" show drop after receiving feedback but they are not

statistically significant ($P>0.05$). Figure 1 shows changes in mean score of each dimension during study.

Table1. Residents' average score in every item during the study

Item	Baseline	F1	F2	F3	F4	F5	P-value	P-value (dimensions)
1 Greets patient	12	9	19	10	16	23	<0.001	
2 Introduces self	9	19	14	12	17	11	0.033	0.159
3 Demonstrates respect and interest	6	9	3	13	8	11	0.029	
4 Identifies the patient's problems	12	20	18	23	19	18	0.015	
5 Uses open and closed questioning technique	17	18	12	24	21	21	<0.0001	
6 Listens attentively	14	16	11	20	16	23	0.001	0.001
7 Facilitates patient's responses	14	17	9	23	17	23	0.003	
8 Uses easily understood questions and comments	17	20	21	22	18	22	0.366	
9 Establishes sequence of events	4	3	7	11	11	11	<0.001	
10 Explores patients ideas and concerns	17	10	10	21	19	15	<0.001	
11 Picks up verbal and non-verbal cues	19	10	13	21	17	13	0.009	0.007
12 Summarizes in the end	3	3	1	0	3	9	0.004	
13 Uses transitional statements	13	8	8	10	17	9	0.051	0.034
14 Structures interview in a logical sequence	16	14	6	11	16	10	0.089	
15 Attends to timing	18	19	15	19	21	20	0.248	
16 Demonstrates appropriate non-verbal behavior	3	9	9	14	15	16	<0.001	
17 writes in a manner that does not interfere with dialogue or rapport	2	7	8	3	4	11	0.002	<0.001
18 Accepts legitimacy of patient's views	2	7	10	15	6	12	<0.001	
19 Uses empathy and provides support	11	11	13	13	11	12	0.682	
20 Gives sufficient and appropriate information	7	11	8	8	5	6	0.143	
21 Helps to accurate recall and understanding	14	19	19	18	18	17	0.516	0.415
22 shares decision making	8	7	8	12	9	12	0.067	
23 Encourages patient to ask questions	4	4	8	12	9	10	0.001	
24 Summarizes session	3	7	2	6	10	8	0.005	0.001
25 Contracts with patient next steps	2	9	7	10	12	12	<0.001	
26 Total score	20.58	23.83	21.58	25.75	27.92	28.75	0.002	0.002

F (num): time of feedback

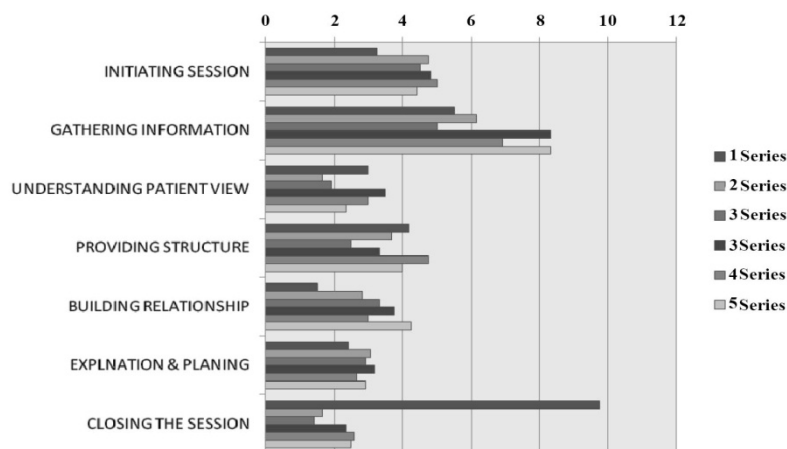


Figure 1. Residents mean scores during the study in each dimension

Discussion

In this study, we challenge the fact that serial feedbacks affect residents' communication skills. The main finding of the present study is that frequent feedbacks provided by faculty members can improve residents' communication skills. Result of this study also mentioned that in some aspects of communication skills of EM residents, including: understanding patient's view and providing structure, short educational course and frequent feedback of the faculty member induced no improvement. Other studies have shown similar results (15-18) Greco (27) mentioned that patients frequent feedbacks can result in improvement in physicians' interpersonal skills; however, Wensing (24) believed that physicians' behaviour in communicating with patients did not change after patients feedback.

Considering study findings, no improvement in skills can be explained by residents' attitude toward doctor centred approach in medical interviews. We hold educational background of physicians as a leading cause of such attitude. Patient-physician communication skills course is recently enrolled on Iran's medical schools. Most EM residents have been trained by traditional medical education methods which were mainly developed on the doctor centered basis. They established their routines for communicating with patients over years, based on doctor centered approach, and it seems that a short course of communication skills and feedback is not effective enough to change doctor's attitude towards medical interview.

Environmental factors might also clarify the fact that feedback seemed inefficient in communication skills enhancement. Barriers such as heavy working load, uncontrolled variables of working conditions in a busy emergency department and the time which is dedicated to interviews can affect the results. Physician concerns about the duration of interviews may lead to the elimination of some parts such as "exploring patients concerns," "explanation and planning," "organizing interview in a logical sequence."

This study indicates that the feedback can affect communication skills educational programs, and it can be more effective if it is combined with other educational methods such as small group discussions. However, barriers for implementation of feedback in clinical practice should be identified to enhance the power of feedback in changing behaviors, and regional educational programs should be provided for items

related to residents' attitude.

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