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A study on effect of training communication skills on knowledge and attitudes of family physicians and patients satisfaction

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ABSTRACT

How the physician communicates with patient plays a major role in patient satisfaction, consequences of treatment, psychological effects, medical costs, clinical competence of physicians, and even complaints about physicians. The present research is an interventional study, which has been conducted to investigate effect of training communication skills on knowledge and attitudes of family physicians and patients' satisfaction. Sample group consists of 80 individuals among family physicians and patients. Physicians were chosen randomly, and divided into two intervention and control groups. By using questionnaire, knowledge and attitudes of family physicians and patients' satisfaction in both intervention and control groups were measured. Then, intervention group was attended in educational workshop of communication skills. After two months training, knowledge and attitudes of family and patients' satisfaction were remeasured. The results of tests with using t-tests via SPSS software were analyzed, and mentioned significant ($p < 0.05$). There was no significant difference on average scores of knowledge and attitudes of family physicians and patients' satisfaction in intervention and control groups before involvement of educational workshop. After intervention, there was a significant difference between intervention and control groups. Patients were more satisfied with female, less-experienced and young physicians. The results of this study indicated that training communication skills can have a significant effect on knowledge and attitudes of family physicians and patients' satisfaction. According to important role of patient-physician communication skills, necessity of developing education for patient-physician communication skills is confirmed in curriculum of Iranian medical students.

Key words: communication skills, knowledge, attitudes, family physicians, patients' satisfaction

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1. INTRODUCTION

Communication skills are called to a series of the person's abilities through which it can acquire an acceptable and informative behavior and a level of emotional relationships. This behavior is called an interpersonal skill which facilitates strengthening of relationships with other community members (1). In recent decade, world health organization has represented another definition for communication skills based on viewpoints of medical education experts, that is, communication skill is

an interactional process in which the messages are transferred through feelings, experiences and perceptions (2). Communication skills are a pillar of physicians' ability which helps them to do their responsibilities as well as possible (3). Regardless of academic knowledge of a physician, enjoying communication skills can be a very important factor in following-up the patient's problems. Modern medicine has provided a biological, mental and social approach for physician and has defined newer roles as five star physician (4). Among these roles, a particular

attention to observing rights of patients and improving quality of treatment causes a particular attention is paid to personality growth and communication skill of students in addition to attention to professional skill and knowledge in medical education (5). The results of studies indicate that effective communication with patients affects reduction of blood pressure, control of pain, reduction of anxiety and increase of patients' satisfaction; on the other hand, inattention to effective communication with patient can result in reduction of acquiring information from patient, mistake at diagnosis and treatment of disease, and event lack of providing true information to the patient in medical consultants (6). Physician-based approach is an approach which is used by physicians to acquire information from patients, so that the patients avoid expressing his disease or anxiety thoroughly to the physician. These patients do not thoroughly consider the medical program considered by physician. In average, patients seldom use their drugs and/or improperly use their drugs (7). In 70% cases, how the physicians communicate with patients and their treatment is the first reason for patients' complaint about physicians, where four major problems in these complaints can be inattention to patients, devaluing patients' views, providing incomplete information to patients and lack of understanding patients' views. Various studies indicate that patients' satisfaction level is low on how health care providers communicate with patients, indicating their poor communication skills (8). Medical education in least developed countries has been designed based on physician's academic evaluation and improvement, focusing on scientific content of communication. Yet, in developed countries, a section has been considered for improvement of communication skills in medical education, where these programs kept increasing in sake of complexity and quantity. Teaching patient-based communication skills in these countries which is an incentive for patient's involvement in treatment process is focused (9). Since 1985, various studies have shown that training communication skills can raise positive changes in patient-physician communication (10). Despite numerous studies in the context of importance of training communication skills to physicians in Iran and other countries and obtained results which all attribute to usefulness of these trainings, training communication skills has not been embedded in curriculum of Iran's medical students; further, a particular attention has not been paid to curriculum in physician's continuous educational programs. With retrospect to importance of this topic, this study was conducted to determine effect of training communication skills on knowledge and attitudes of family physicians and patients' satisfaction.

2. MATERIALS AND METHODS

The present research has been an intervention, which aimed to investigate effect of training communication skills on knowledge and attitudes of family physicians and

patients satisfaction. This study has been conducted as a comparison of two groups of family physicians: 1- the first group consists of the physicians who have been under intervention of communication skills training, 2- the second group has not been under communication skills training. To calculate sample size in two groups, the results of previous studies and sample size formula were used (equation 1).

$$n = \frac{2(z_{1-\alpha/2} + z_{1-\beta})^2}{\left(\frac{\mu_0 - \mu_1}{\sigma}\right)^2} \quad (1)$$

82 physicians among all interested physicians were selected using simple random sampling method. Then, these patients were categorized in two intervention and control groups with 41 members, using simple random sampling method. During the research, 5 physicians were removed from study, and finally 77 physicians including 39 physicians in intervention group and 38 physicians in control group went under study. Patients' satisfaction was evaluated through an interview with patients. Inclusion criteria: inclusion criteria include the family physicians attended in educational courses of communication skills previously and their patients entered into the study, if interested. Exclusion criteria: exclusion criteria include the physicians who have neglected from cooperation with Lorestan University of Medical Sciences due to some reasons, as well as the physicians who have not succeeded attending educational course of communication skills. Firstly, using reliable questionnaires, knowledge and attitudes of family physicians and patients' satisfaction were measured in both intervention and control groups. Aforementioned questionnaires using views of three professors and experts were validated, and reliability of these questionnaires using retest with Cronbach's alpha coefficient was determined about 0/78. Knowledge and attitudes questionnaires were filled by physicians, and satisfaction questionnaires were filled by well-experienced experts who had no information on aim of research via interview with patients. Physician awareness inventory consists of 12 questions, with the maximum score (11, 12). Physicians' attitude was evaluated via a questionnaire consisting of 10 questions. Patients' satisfaction using a questionnaire consisting of 20 questions was evaluated. These two questionnaires were scored based on 5-point Likert scale. Then, intervention group attended in 2-day workshop of communication skills. The framework for presentation at this workshop has been in form of Calgary-Cambridge guide (11). The workshop was represented in form of speech, work team, playing role, practical assignment and questions and answers. Two months after ending educational workshop, knowledge and attitudes of family and patients' satisfaction were remeasured. Data were entered into software SPSS-18. The results of tests using t-tests via software SPSS were examined, and all were mentioned significant ($p < 0.05$). To compare physicians' attitude and knowledge, paired t-test was used;

further, to compare patient's satisfaction, independent t-test was used

3. RESULTS AND DISCUSSION

In this study, 39 and 38 physicians in turn in intervention

and control groups were examined. 54% and 46% of physicians in turn were men and women. Mean of physicians' work experience and age in both intervention and control group using t-test were compared with each other, where the results of this test did not indicate a significant difference (Table 1).

Table 1 . Demographic characteristics of physicians under study

	Group	Mean	Standard deviation	p-value	t-value	df
Work experience	Intervention	5.03	5.47	0.642	0.467	75
	Control	5.66	6.39			
age	Intervention	32.69	7.494	0.832	0.213-	75
	Control	33.05	7.348			

Mean of physicians' knowledge scores in both intervention and control group before organizing educational course of communication skills using t-test were compared with each other, where the results of this test did not indicate a significant difference. Mean of physicians' attitude scores in both intervention and control group before organizing educational course of communication skills using t-test were compared with each other, where the results of this

test did not indicate a significant difference. Mean of physicians' knowledge and attitude scores in both intervention and control group after organizing educational course of communication skills using t-test were compared with each other, where a significant difference was reported (Table 2).

Table 2 . Comparing knowledge and attitude scores in intervention and control groups before and after intervention

	Test	Groups	Mean of score	Standard deviation	p-value	t-value	df
Before intervention	Knowledge	Intervention	6/62	1/941	0/529	0/633	75
		Control	6/32	2/207			
	Attitude	Intervention	34/05	5/414	0/858	0/180	75
		Control	33/84	4/756			
After intervention	Knowledge	Intervention	10/77	1/287	0/000	10/339	60/171
		Control	6/58	2/151			
	Attitude	Intervention	41/72	3/656	0/000	9/623	75
		Control	33/55	3/790			

Mean of physicians' knowledge and attitude scores in control group before and after intervention were compared with each other, where a significant difference was reported. Comparison of mean of physicians' knowledge and attitude scores in intervention group before and after

intervention using t-test were compared with each other, where p-value (0.000) indicated a significant difference (Table 3).

Table 3. Comparison of mean of physicians' knowledge and attitude scores in intervention group before and after intervention

Test	Group	Knowledge before intervention	Knowledge after intervention	Difference of mean	Std error Mean	T	p-value
		Standard deviation± mean	Standard deviation± mean				
Knowledge	Intervention	6/62 ± 1/941	10/77 ± 1/287	-4/154	0/395	-10/520	0/000
	Control	6/32 ± 2/207	6/58 ± 2/151	-0/263	0/296	-0/888	0/380
Attitude	Intervention	34/05 ± 5/414	41/72 ± 3/656	-7/667	0/856	-8/953	0/000
	Control	33/84 ± 4/756	33/55 ± 3/790	-0/289	0/640	0/452	0/654

165 and 152 patients in turn in intervention and control

group were asked questions. Further, these patients were

asked questions after intervention. 24% and 76% of patients at first stage were in turn men and women. Average age of patients has been 32.2. 33% and 67% of the patients at second stage were men and women, respectively. Average age of these patients has been 33.5. Mean of patients' satisfaction scores in both groups before intervention using t-test were compared with each other,

where the results from this test did not indicate a significant difference between two groups. Yet, comparison of mean of patients' satisfaction scores in both groups after intervention showed a significant difference between two groups (Table 4).

Table 4 . Mean of patients' satisfaction scores in view of patients in two intervention and control groups before and after intervention

Study period	Group	Mean	Standard deviation	p-value	t-value	df
Before Intervention	Intervention	70/57	7/340	0/323	0/989	306
	Control	69/73	7/567			
After Intervention	Intervention	78/34	8/400	0/000	7/913	306
	Control	70/84	8/239			

After intervention: patients' satisfaction with female physicians has been significantly more than patients' satisfaction with male physicians ($p = 0/027$). There was an inverse significant relationship between patients' satisfaction and physicians' age ($p = 0/001$) and work experience ($p = 0/029$), where the patients were more satisfied with young and less-experienced physicians. In this study, physicians' knowledge after attending in educational course compared to control group has increased. According to studies by Zamani et al, Managheb et al, Attari fard et al, Moheb poor et al and others, physicians' knowledge had increased after physicians' attendance in educational courses (13-18); further attitude of physicians attended in educational workshop compared to control group had increased. These results are relevant with the studies by Managheb et al, Moheb poor et al and others, where on physicians' positive attitude had increased followed by performing educational intervention. In this study, physicians had a better performance by learning communication skills, and had more satisfied patients. Numerous evidences from studies in various countries indicated that patient-physician communication results in patients' satisfaction (13-17, 19). In recent years, numerous studies have been conducted in the context of patient-physician communication skills and its effect on result of interview on physician. An overview on the studies in the context of training communication skills to medical students and general physicians indicates successful communication skills training around the world (20-22). Unfortunately, although issue of communication skills has kept increasing in medical training around the world, this issue has been less paid attention in Iran. A study by Dr Managheb indicated that communication skills training can have a significant effect on knowledge, performance and attitudes of family physicians (14). Further, results of study by Anbari et al indicated improvement of medical students' knowledge and communication skill after training (19). In a study (2009) to determine effect of communication skills training on knowledge, self-efficacy and attitudes of primary health care physicians in Oman, it has been indicated that communication skills training improves

physicians' knowledge, changes their negative attitude and increases their ability in performing their particular duties (16). In another study to specify effect of educational programs for communication skills on residents of emergency medicine and patients' satisfaction in 2012 in Turkey, it has been indicated that educational programs of communication skills result in improvement of communication techniques in residents of emergency medicine, as well as reduction of patients' complaint about physicians (23). Patients evaluated female physicians' performance better, where this finding is relevant with the results of other studies (24-27). Further, a significant relationship existed between applying communication skills by physicians and physicians' age and work experience, where the patients evaluated less-experienced and younger physicians' performance better. On reduction of level of communication skills by increasing age and work experience of physicians, it can assume that the more the physicians get older, job fatigue in them increases, where this can affect physicians' communication skills. Results of this study indicated increasing family physicians' knowledge and attitude and patients' satisfaction after training communication skills. In this regard, given importance role of physicians' communication skills with patients, necessity of developing educational package for patient-physician communication skills and merging them in curriculum of Iran's medical students is emphasized. Furthermore, use of effective techniques in improving education level of these skills seems essential.

4. CONCLUSION

According to family physician program in Iran 's health system, since family physician as the first advocate for providing health care services and first-level of medical services for patients, it requires paying more attention to improvement of physicians' knowledge and skills at this area. The results of this study indicated increase of physicians' knowledge and attitude and patients' satisfaction after training communication skills. In this

regard, given importance role of physicians' communication skills with patients, necessity of developing educational package for patient-physician communication skills and merging them in curriculum of Iran's medical students is emphasized. Furthermore, use of effective techniques in improving education level of these skills seems essential.

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AUTHORS CONTRIBUTION

This work was carried out in collaboration among all authors.

CONFLICT OF INTEREST

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

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