

# Communication training and patient satisfaction: A randomized trial study from Mashhad, Iran

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**Background:** In many healthcare systems, client satisfaction has been considered as an important indicator of primary healthcare quality. Hence communication education might be leading to better quality of family planning services and higher client satisfaction. This study aimed to evaluate to what extent the communication skills training program could improve client satisfaction.

**Methods:** This was a randomized controlled trial undertaken in health centers of Mashhad University Medical Sciences, Mashhad, Iran from July to September 2004. Eligible participants were from two population targets, including healthcare providers and their clients. All 35 health centers were randomly divided into intervention ( $n = 17$ ) and control groups ( $n = 18$ ). The healthcare providers were working in intervention centers ( $n = 24$ ) not in control centers ( $n = 27$ ) received an additional communication skills training program in spite of routine education. Data regarding communication knowledge, attitude, and skills from healthcare providers and the satisfaction rate from the their clients ( $n = 47$  client for each group) were collected at two time points.

**Results:** This study showed that communication knowledge and skills of health workers improved significantly in the intervention group ( $P < 0.05$ ). Furthermore the score of client satisfaction was significantly improved in the intervention group after 1 month follow-up ( $p < 0.05$ ).

**Conclusion:** The communication skills training program is an effective intervention and may improve the satisfaction rate of clients.

**Keywords:** client satisfaction, communication training, attitude, skills, knowledge, Iran

## Introduction

In recent years, clients' perspectives regarding quality of health services (Andaleeb 2001) and subsequently their satisfaction with their health care has been considered as an important index for health service qualification (O'Connor et al 1994). Therefore, patient satisfaction has been considered as an important indicator of primary healthcare quality in many healthcare systems (Liu et al 2007). Low patient satisfaction is associated with lower trust in caregivers and greater chance of a change of health providers, resulting in less continuity of care (Liu et al 2007). Furthermore, low patient satisfaction is also correlated to a greater number of patient complaints and malpractice lawsuits (Stelfox et al 2005). Many studies argued that patient satisfaction is an important index because it causes health service receivers to use these services continuously and recommend them to others and also comply much more with healthcare providers' recommendations (Kane et al 1997; Freed et al 1998; Stumpf 2001).

It has been observed that various patient physician interaction styles have had different effects on patient satisfaction (Liu et al 2007). Moreover, complaints in health center settings are twice as likely to be related to communication problems as opposed to problems with medical skill. In addition, high patient involvement in healthcare have

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also been associated with higher trust and satisfaction (Liu et al 2007). These factors are all modifiable by physician or patients, whereby the physician should adapt to individual patient needs and the patient should choose a physician that can adequately fill these needs (Liu et al 2007).

It has been argued that effective communication between healthcare providers and patients is the most important factor for patient satisfaction which could result in better compliance with healthcare provider recommendations (Diperte et al 1999; Aldona et al 2001; Hughes 2003). It has been recently debated that despite high-tech facilities/equipment and eligible/qualified health staff, the main reason for noncompliance is a lack of intimate and effective communication between client and healthcare providers (Murthy 1999; Bakker et al 2001), which might be related to a lack of the required communication knowledge and skills (Razavi and Delvaux 1997). Therefore it is strongly recommended that health workers as well as medical students should be qualified in patient communication before graduating from their courses. Communication skills are now taught via different workshops and short training courses in different countries (Hughes 2003).

Teaching patient communication may lead to a better quality of family planning services and subsequently better healthcare services, which may result in higher patient satisfaction. This study aims to investigate the effects on patient satisfaction from teaching communication skills to family planning healthcare workers.

## Materials and methods

This was a randomized controlled trial with one month follow up undertaken in the health centers of Mashhad University Medical Sciences in Mashhad, Iran from July to September 2004. Eligible participants were from two population targets that included family planning healthcare providers and their clients. The selection criteria for healthcare providers were: age 20 years and over, having a two-year college education, working in the family planning unit of healthcare centers as a consultant for selecting a kind of an appropriate method of contraception, and living in Mashhad throughout the study. Healthcare providers were excluded from the study if they were not willing to participate in the study or they were not available at follow-up data collection. The selection criteria for clients were: literate and receiving family planning healthcare services from these centers. Researchers confirmed the inclusion and exclusion criteria through a complete check list of criteria before the participants were enrolled in the study. To participate, healthcare providers and clients had to be willing to comply with the entire study protocol.

The research procedures were described, the purpose of the study was explained to healthcare providers and clients, and written consent was sought before any part of the study procedure was administered or any intervention was dispensed. All healthcare providers working in health centers ( $n = 51$ ) were randomly assigned at the outset to a control group (27 participants), who received just routine education regarding communication skills, and to an intervention group ( $n = 24$  participants), who received an educational program regarding communication skills and training in the format of a 2-day workshop in addition to routine education.

As usual, there are no formal education of patient communication skills in the format of workshop or teaching class for healthcare providers in health centers of Mashhad, but there are some educational recommendations for healthcare providers about how to communicate with their patients. These recommendations are given in monthly sessions by the head of health centers and highlighted in installed posters as routine education.

The educational program of communication skills training which applied as intervention in this study was very different. It was a 2-day workshop (10 hrs) divided into different sessions in which different communication skills were taught. After the workshop plan was introduced, there were four main sessions.

The first session was a 1-hour lecture about interpersonal communication skills.

The second was a 3-hour session (with a 15-minute break) regarding socio-emotional communication skills that were instructed and practiced through lecture, problem-solving, small group discussion, and role play. The skills emphasized in this session were about how to communicate with each patient according to his/her sociodemographic characteristics, values, and culture in order to attract his/her confidence through verbal and nonverbal communication.

The third was a 90-minute session regarding diagnostic communication skills and problem-solving that was taught through lecture, role play, and small group discussion. The materials emphasized were on how to listen to clients effectively and how to ask them diagnostic questions in order to direct them to express their feeling about problems and probable solutions.

The fourth was a 90-minute session regarding counseling skills taught and practiced through lecture, role play, and small group discussion. The skills taught were on how to educate and consult with client effectively and how to apply effective methods for consulting according to the perception of their clients regarding their problem.

A cluster sampling method was used to randomly allocate healthcare workers into two groups. To do this, firstly the healthcare centers which had family planning units ( $n = 35$ ) were randomly allocated to an intervention group (17 healthcare centers) and a control group (18 healthcare centers). Then the eligible healthcare providers were working in intervention centers ( $n = 24$  healthcare providers) and control centers ( $n = 27$  healthcare providers) were invited to the study. The median subject was 2 healthcare providers per each site within the range of 1–4.

Baseline data regarding demographic characteristics and also data regarding communication knowledge, attitude, and skills from both groups were collected at initial and at 1-month follow-up assessment. To investigate the patient satisfaction, 2 patient respondents per each healthcare provider chosen from all patients who had referred healthcare providers were randomly selected. Therefore, we had 48 patients for the intervention group and 54 patients for the control group. Among them, 1 individual from the intervention group and 6 individuals from the control group were not eligible so the study was conducted with 47 patients in each group. We did not have any patients lost to follow-up in this study.

To collect data, two different self-structured measurements were applied to healthcare workers and clients. The measurement for healthcare providers included 2 sections: basic demographic and items regarding the knowledge, attitude, and function the communication skills of family planning healthcare workers. The other one was for clients, which consisted of two sections of questions including sociodemographic and rate-of-satisfaction questions regarding the healthcare services they received. The outcomes assessed in follow-up assessment were the rates of knowledge, attitude, and skills of family planning healthcare workers regarding communication skills and also the satisfaction rates of clients regarding quality of healthcare services.

There were 11 items in the knowledge questionnaire (scale: 0 = NO, 1 = Yes). The total score of the knowledge questionnaire ranged from 0 to 11. The range of 0–3 was considered as weak, 4–7 as moderate, and 8–11 as good. The attitude questionnaire consisted of 14 items (scale: 1 = strongly disagree, 10 = strongly agree). The total score of the attitude questionnaire ranged within 14–140 in which the score of 14–56 was considered as weak, 57–98 as moderate, and 99–140 as good. The skill questionnaire consisted of 17 items (scale: 0 = NO, 1 = Yes). The total score of the skill questionnaire ranged from 0–17 in which the score of 0–5 was considered as weak, 6–11 as moderate, and 12–17 as good. The satisfaction questionnaire consisted of 14 items

(scale: 0 = disagree, 1 = I do not know, 2 = agree). The total score of the satisfaction questionnaire ranged from 0 to 28 in which the score of 0–8 was considered as weak, 9–18 as moderate, and 19–28 as good.

The validity and reliability of questionnaires were evaluated through content validity and test–re-test method, respectively.

Since the categorized variables—both for continued and categorical data—in this study were compared between two groups and within each group in two time points (baseline and follow up), the chi square test was used.

## Results

All healthcare providers participated in this study were female. The mean age of the two groups of intervention and control were  $38 \pm 2.55$  and  $37 \pm 3.77$  years, respectively. The mean length of the healthcare provider employment records of the intervention and control group were  $20 \pm 2.45$  and  $21 \pm 3.35$  years, respectively. All healthcare providers had two years of college education and they worked in the family planning unit throughout the study.

In total, 94 clients participated in the study. There were 47 participants in each group. Table 1 shows the demographic characteristics of clients in each group. The different

**Table 1** Demographic characteristics of clients in each group

	Intervention (n = 47)	Control (n = 47)	P
	No. (%)	No. (%)	
<b>Age</b>			
15–24	19 (40)	15 (31.9)	0.48
25–34	24 (51.5)	25 (53.2)	
>34	4 (8.5)	7 (14.9)	
<b>Education</b>			
Primary	8 (17)	7 (14.9)	0.11
Secondary	11 (23.4)	16 (34)	
Diploma	24 (51.5)	20 (42.6)	
College education	4 (8.5)	4 (8.5)	
<b>Child numbers</b>			
1	24 (51.1)	24 (51.1)	0.62
2	18 (33.8)	16 (34)	
3	4 (8.5)	6 (12.8)	
≥4	1 (2.1)	1 (2.1)	
<b>The year under surveillance</b>			
0–4	43 (91.5)	37 (77.9)	0.12
5–9	3 (6.4)	8 (17.9)	
10–15	1 (2.1)	2 (4.2)	

rates of knowledge, attitude, and communication skill of healthcare providers in two groups at baseline and follow-up are shown in Table 2. As Table 2 indicates, the two groups were the same in terms of these variables before intervention ( $P > 0.05$ ). There were no significant improvements in scores of control group in terms of communication knowledge, attitude, and skill after 1 month follow-up, while in the intervention group, the scores of communication knowledge and skill were improved significantly ( $p < 0.05$ ).

The different rates of client satisfaction in two groups that received family planning services are shown in Table 3. According to this table, there were no significant differences between two groups before intervention ( $p > 0.05$ ), while after intervention the two groups were significantly different ( $p < 0.05$ ). Furthermore, the client satisfaction score was significantly improved in intervention group after 1 month follow-up ( $p < 0.05$ ), whereas in the control group there were no significant improvements ( $p > 0.05$ ).

As Table 3 shows, there were no differences between the two time-point assessments (baseline and follow-up) the in control group in terms of satisfaction score ( $P > 0.05$ ), which indicates no significant deterioration or improvement in scores among control group. Significantly in the intervention group, the satisfaction score improved significantly after one month follow-up compared with baseline ( $P < 0.05$ ). Thus these results reveal that the observed improvement in scores is due to intervention.

Moreover Table 3 shows that at baseline assessment 23 individuals (48.9%) in intervention group and 21 individuals in the control group (44.7%) rated their satisfaction as good, but after intervention, the rate of satisfaction increased up to 63.8% in the intervention group and decreased to the extent of 24% in the control group. Therefore the increased moderate satisfaction in control group compared with the intervention group was due to a decrease of satisfaction rates, which indicates the deterioration of satisfaction rates in the control group

## Discussion

In recent years, clients' perspectives regarding quality of healthcare services (Andaleeb 2001) and subsequently their satisfaction with these healthcare providers has been considered as an important index for health service qualification because it affects patients who continually use health services, who recommend them to others, and also much better patient compliance with healthcare providers recommendations (O'Connor et al 1994; Freed et al 1998; Stumpf 2001). Because of this perspective, teaching and assessing communication skills have recently become more visible in medical education and it has had effective consequences to improve the communication knowledge and skills of healthcare professionals (Makoul and Curry 2007). In this study it has been shown that teaching patient communication could significantly improve the knowledge

**Table 2** Distribution of different level of knowledge, attitude, and skills of healthcare providers regarding communication

	Intervention (n = 24)		P	Control (n = 27)		P
	Baseline	Follow-up		Baseline	Follow-up	
<b>Communication knowledge</b>						
Weak	No. (%)	No. (%)		No. (%)	No. (%)	
	2 (8.3)	1 (4.2)		2 (7.4)	9 (33.3)	
Moderate	18 (75)	15 (62.5)		24 (88.9)	18 (66.7)	
Good	4 (16.7)	8 (33.3)		1 (3.7)	0 (0)	
			0.001			0.12
<b>Communication attitude</b>						
Weak	0 (0)	0 (0)		0 (0)	0 (0)	
Moderate	4 (16.7)	3 (12.5)		6 (22.2)	5 (18.5)	
Good	20 (83.3)	21 (87.5)		21 (78.8)	22 (81.5)	
			0.35			0.68
<b>Communication skill</b>						
Weak	3 (12.5)	3 (12.5)		5 (18.5)	7 (25.9)	
Moderate	16 (66.7)	8 (33.8)		19 (70.4)	18 (66.7)	
Good	5 (22.8)	13 (54.2)		3 (11.1)	2 (7.4)	
			0.02			0.11

**Table 3** Distribution of different level of client satisfaction in two groups at two time points.

	Intervention (n = 47)		Control (n = 47)		P
	Baseline	Follow-up	Baseline	Follow-up	
Patient satisfaction	No. (%)	No. (%)	No. (%)	No. (%)	<b>Baseline</b>
Weak	1 (2.1)	0 (0)	2 (4.3)	0 (0)	0.74
Moderate	23 (48.9)	17 (36.2)	24 (51.1)	31 (66)	<b>Follow-up</b>
Good	23 (48.9)	30 (63.8)	21 (44.7)	16 (24)	0.001
	P = 0.019		P = 0.67		

and communication skills of family healthcare workers, but it could not significantly improve the attitude scores of these healthcare workers. These results are similar to findings of other studies (Roter 1990; Bail et al 1997; Fallowfield et al 1998; Roter et al 1998). One possible reason for nonsignificantly improved attitude scores after intervention is that the two study groups had high attitude scores before intervention. It indicates that the majority of participants (more than 80%) in the control group as well as the intervention group believed that health providers should communicate with their clients in an effective and intimate manner before the patient communication education, so our study could not significantly differentiate the two groups in terms of attitude scores. These findings are supported by the literature (Brown et al 1999). However there are contrary results in another study (Andaleeb 2001).

Another finding of this study indicated that although nearly more than half of the clients in each group were somewhat satisfied with the communicative behaviors of the family healthcare workers before intervention, teaching communication skills improved the level of client satisfaction in the patients who were referred to healthcare providers of the intervention group. This finding highlights two points. Firstly, the base satisfaction rate of clients is not too bad. The reason may be that being satisfied is a subjective variable and many factors could influence patient satisfaction. Thus, the high satisfaction score of patients is not necessarily indicative of the optimum or high quality of healthcare. On the other hand, high client satisfaction may be due to the low expectations of clients or it could be even influenced by some kind of interviewers' manner. Therefore it is argued that one cannot assume higher quality of healthcare services are leading to higher satisfaction levels and/or low scores of satisfaction should not be considered as lower quality of health services, especially in countries where people are not well informed regarding healthcare quality standards. Other studies (Kols et al 1998; Abdel-Tawab and Roter 2002) support these

findings. The second point is that the satisfaction level of clients could be improved through better education of communication skills. It is because patient/provider communication skills education could improve knowledge and skills of family healthcare workers and enable them to communicate with their clients more effectively. Other studies (Roter 1990; Diperte et al 1999) have shown that communication skills education could improve client satisfaction. In similar research by Brown and colleagues (1999), contrary results were obtained.

However there were some limitations in our interventional study. The investigators assessed just patient "satisfaction" as outcome. They also did not apply other experience-based questionnaires. The authors acknowledge that it would be most helpful to apply these questionnaires in their future studies and that they would be able to explore perspectives of clients regarding their satisfaction with quality of health services.

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