

Attitude of Dental Students of Shahid Beheshti University of Medical Sciences towards the Doctor-Patient Communication Skills Course

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Objectives Establishment of effective communication between the clinician and patient is essential in order to increase patients' satisfaction and achieve better treatment outcomes. These skills have been less investigated among dental students. The current study assessed the attitude of 5th semester dental students towards communication skills learning at Shahid Beheshti University of Medical Sciences in Iran during 2017-2018.

Methods In this quasi-experimental study, 40 dental students filled out the Communication Skills Attitude Scale (CSAS) with three domains of needs, operation, and application as self-declaration at two time points before and after passing the course of "dentist-patient communication skills. Data were analyzed using paired t-test, independent t-test, and Wilcoxon signed rank test.

Results A significant positive change occurred in students' attitude in general ($P < 0.001$). An improvement in their attitude was observed in domains of needs ($P < 0.001$), operation ($P = 0.002$), and application ($P < 0.001$) after passing the course in comparison with baseline. After passing the course, male students showed a significant positive attitude in domains of needs ($P < 0.001$), operation ($P = 0.011$), and application ($P < 0.003$). But the only positive change in female students' attitude was observed in the domain of application ($P = 0.004$). The positive attitude change in males was significantly higher than that in females in all domains ($P = 0.023$). A significant positive change was observed in the attitude of 21-year-old students in comparison with other age groups ($P = 0.002$).

Conclusion The results showed positive change in both male and female students' attitude after passing the academic course of dentist-patient communication skills.

Keywords Attitude; Communication; Education, Dental; Patients; Program Evaluation

Introduction

Communication skills are among the basic components in clinical practice, the training of which is very important at all levels of medical education. Teaching these skills as part of dental curriculum leads to an increase in dental clinicians' ability to understand the patients' needs and obviate them. In 2008, the American Dental Education Association included the communication and interpersonal skills as one of the six major competencies of general dentists. In this regard, professional organizations and certifying agencies are the most important centers supporting this type of education in medicine and dentistry.¹

Trust is the most significant factor in any relationship. Successful communication is based on trust, which makes the dentist-patient interaction easier and can help manage the patients' dental fear and stress.¹ In this regard, trust can be built by ensuring the patients regarding the confidentiality of their personal information, respectful treatment of patients, unconditional acceptance of patients, and honest treatment with no racial or cultural discrimination. This is why patients have more confidence in dentists who are able to communicate better and provide compassionate care. Among the factors effective in building trust, three factors of morals, communication, and patient participation in decision-making are the most effective parameters.² Another advantage of building trust is better acceptance of dental

treatments by patients and reduction of formal complaints. Thus, improvement of dentists' communication skills through listening skills, gathering information, interacting with patients, and professional approaches, is an important priority.²

Iwanow et al.³, compared attitudes towards communication skills between Polish and Swiss medical and paramedical students, and showed that 98.5% had a positive attitude towards learning it and 72% believed that good communication skills with patients was highly important in learning medicine. Also, Yashoda and Puranik⁴ highlighted the need to add communication skills course to dental curriculum.

Despite the importance of communication skills in dentistry, only limited amount of training regarding such skills is provided to students, and it seems that the competency of dentists and dental students in this regard is not enough, although necessary.⁵ The dentist-patient communication skills course was recently formally included in dental curriculum of universities in Iran, but dental students' attitude towards this course has not yet been evaluated. As dental students' attitude towards their education may vary across cultures, exploration of this topic in diverse environments is warranted. Therefore, in this study, the attitude of dental students of Shahid Beheshti University of Medical Sciences toward dentist-patient communication skills course was investigated.

Methods and Materials

This project was approved by the ethics committee of Shahid Beheshti University of Medical Sciences (IR.SBMU.RIDF.REC.1394.141). In this quasi-experimental study, 80 questionnaires were filled out by a group of 40 dental students at two time points: before and immediately after passing the course.

The questionnaire consisted of two parts: the first part included demographic information including age and gender, and the second part included the students' attitudes toward learning communication skills in three fields as follows:

“Needs”: questions 1, 2, 3, 4, 18, 19, 21, 24 and 26

“Operation”: questions 6, 7, 8, 11, 12, 13, 15, 17, 20, 22 and 23

“Application”: questions 5, 9, 10, 14, 16 and 25 (Appendix)

All 26 items had five-point Likert scale answer choices as follows:

1 = strongly disagree; 2 = disagree; 3 = have no opinion; 4 = agree; 5 = strongly agree.

Appendix						
1= Strongly disagree 2= disagree 3= no opinion 4= agree 5= strongly agree						
1	As a good doctor, I should have good communication skills.	1	2	3	4	5
2	I cannot understand the purpose of learning communication skills.	1	2	3	4	5
3	No one's medical degree has failed due to poor communication skills.	1	2	3	4	5
4	The importance of learning communication skills is only to enhance my medical knowledge.	1	2	3	4	5
5	Learning communication skills has helped or will help me respect patients.	1	2	3	4	5
6	I do not have the time to learn communication skills.	1	2	3	4	5
7	Learning communication skills is fun.	1	2	3	4	5
8	I do not want to attend a communication skills training session.	1	2	3	4	5
9	Learning communication skills has helped or will help me facilitate teamwork skills.	1	2	3	4	5
10	Learning communication skills has improved my ability to communicate with patients.	1	2	3	4	5
11	Teaching patient communication skills is simple and understandable at first, but then it becomes complicated.	1	2	3	4	5
12	Learning communication skills is entertaining.	1	2	3	4	5
13	Learning communication skills is too easy.	1	2	3	4	5
14	Learning communication skills has helped or will help me respect my colleagues.	1	2	3	4	5
15	I cannot trust the information given to me about patient communication skills by non-clinical professors.	1	2	3	4	5
16	Learning communication skills has helped or will help me to obtain patient's informed consent.	1	2	3	4	5
17	If “patient communication skills” is like a scientific subject, it will have a better picture.	1	2	3	4	5
18	I think using communication skills in medicine is a really good idea.	1	2	3	4	5
19	To become a doctor, I do not need communication skills.	1	2	3	4	5
20	It's hard for me to accept that I have a problem with communication skills.	1	2	3	4	5
21	I think learning “communication skills” is really useful in medicine.	1	2	3	4	5
22	During college, we learn some skills to pass the exams instead of the skills to communicate.	1	2	3	4	5
23	Learning communication skills is practicable unlike learning medicine.	1	2	3	4	5
24	It is seriously difficult for me to learn educational skills.	1	2	3	4	5
25	Communication skills are important because the ability to communicate is a lifelong skill.	1	2	3	4	5
26	Communication skills should be taught to psychiatric students, not medical students.	1	2	3	4	5

The data collection tool was the Communication Skills Attitude Scale (CSAS), a questionnaire designed by Rees, Sheard and Davies with 26 questions with 5-point Likert scale answer choices.⁶ Its reliability was ensured by calculating the Cronbach's alpha to be 0.80. The validity of the questionnaire was confirmed by two faculty members of Shahid Beheshti Dental School. The revisions required by them and their viewpoints were applied to the questionnaire, such that it became more comprehensible by students. Considering the use of reliable resources and the views of expert professors on this issue, the validity of the questionnaire was also confirmed.⁷⁻⁹ The validity and reliability of the questionnaire have been previously confirmed as well.¹⁰ The initial version of the CSAS questionnaire was translated to Persian using a backward-forward translation technique.¹¹ To do this, two faculty members of Shahid Beheshti Dental School translated the items from English to Farsi and then it was back-translated to English. The questions were reviewed during several sessions and the final translated version was prepared

after replacing the ambiguous words.

After making the necessary changes and compiling the information in the first session, the objectives of the questionnaire were explained to the students and the questionnaires were filled out by them after obtaining their written informed consent.

The course consisted of 17 three-hour sessions, including one hour of lecture-based theoretical class and 2 hours of practical workshop in the form of case-based scenarios, videos of simulated patients, class role-playing by students, and small-group discussions. In addition, between-session students' homework included reading a short text aloud, and interviewing the patients on a defined topic and videotaping it in order to have feedback from their mentor. Professors and mentors included dentists trained in continuing medical education courses and communication skills workshops. At the end of the training course, the questionnaire was completed by the students again.

The cumulative questionnaire scores in the domains of needs, operation and application were calculated before

and after passing the communication skills course by the students and also separately for male and female students according to their age. Paired t-test, independent t-test, and Wilcoxon test by SPSS version 23 were used to analyze the data. The significance level was considered at 0.05.

Results

In assessment of the demographic information of participating students, out of 40 students, 22 were females (55%), 18 were males (45%) and the mean age was 20.5 ± 0.712 years.

The reliability of the present study was ensured by a Cronbach's alpha=0.80, and the content validity of the questionnaire was approved based on the opinion of two faculty members of Shahid Beheshti Dental School (content validity ratio=99%).

According to the measures of central dispersion of the CSAS questionnaire scores, the students' attitude score significantly increased in the domains of needs ($P < 0.001$), operation ($P = 0.002$), and application ($P < 0.001$) after passing the course compared with baseline (Table 1).

Table 1- Mean CSAS scores in the three domains of needs, application, and operation before and after the course using paired t-test

Attitude	Stage	Mean	Std. deviation	P value
Needs	Before the course	28.27	2.96	<0.001
	After the course	30.37	2.08	
Operation	Before the course	24.45	3.48	0.002
	After the course	25.57	2.43	
Application	Before the course	37.35	3.81	<0.001
	After the course	41.25	3.49	

In terms of measures of central dispersion of the CSAS questionnaire scores based on gender before and after the course, in the area of needs ($P < 0.001$), operation ($P = 0.011$) and application ($P < 0.003$), there was a significant difference before and after the communication skills course among males; but in females, there was a significant difference only in the domain of application ($P = 0.004$, Table 2). The mean total CSAS score was 4.09 ± 9.94 in females and 12.11 ± 11.42 in males. This difference was statistically significant ($P = 0.023$).

The change in attitude after the course was significantly greater in males compared with females ($P < 0.025$).

Table 2- Mean CSAS scores of males and females in the three domains of needs, application, and operation before and after the course using paired t-test

Attitude	Stage	Men			Women		
		Mean	Std. deviation	P value	Mean	Std. deviation	P value
Needs	Before the course	27.44	2.85	<0.001	28.95	2.95	0.196
	After the course	31.00	2.08		29.86	1.98	
Operation	Before the course	23.33	3.88	0.011	25.36	2.90	0.91
	After the course	25.94	2.55		25.27	2.35	
Application	Before the course	36.50	4.70	0.003	37.86	2.86	0.004
	After the course	41.38	3.63		41.13	3.46	

Regarding the CSAS questionnaire scores in terms of total attitude before and after the course based on age, a significant positive change in attitude was observed in 21-year-olds ($P = 0.002$), but other age groups did not show a significant change (Table 3).

Table 3- Mean CSAS score before and after the intervention based on age using the Wilcoxon signed rank test

Attitude	Stage	Mean	SD	p- value
20 Y/O	Before the course	27.95	2.90	0.186
	After the course	28.86	2.05	
21 Y/O	Before the course	25.56	2.38	0.002
	After the course	28.36	2.88	
≥22 Y/O	Before the course	32.86	2.25	0.37
	After the course	31.23	3.18	

Discussion

Communication skills training is one of the subjects related to medical education that has been further emphasized and expanded in the recent years. In some advanced colleges and universities, communication skills courses are often offered to students before the beginning of clinical education. Due to the role of this skill in

improving the quality of care provided today, about 70% of American and Canadian dental schools offer training courses with a special focus on interpersonal communication skills.¹²

In the present study, dental students' attitudes toward the course of "dentist-patient communication skills" were assessed using the CSAS questionnaire before and immediately after passing the course.

Introducing the CSAS, Rees et al. stated that since this scale has been designed in three domains of needs, operation, and application, the content validity of the questionnaire is guaranteed. This questionnaire is also used as a reliable and appropriate tool to assess the students' attitude toward learning communication skills.⁶ According to the results of the present study, students had a significantly better attitude towards the communication skills after the course. Also in this study, males had a significantly better attitude towards the course than females. In this study, the questions were categorized into three domains of needs, operation, and application of communication skills, and a significant change was noted

in the mean score of CSAS in all three domains. Therefore, it can be said that the dentist-patient communication skills course in Shahid Beheshti Dental School was able to positively change the attitude of students in the domains of needs, operation, and application.

Yashoda and Puranik⁴ and Iwanow et al.³ showed that there was a need to teach communication skills as part of dental curriculum. In a study on dental students' attitude towards communication skills training, McKenzie¹³ showed that students who had a more positive attitude towards such training were more likely to demonstrate practical skills.

In a study on dental students' attitude towards learning communication skills in a Canadian university, Ayn et al.¹⁴ concluded that the attitude towards learning of such skills was desirable among students and that students were aware of the importance of communication skills for dental treatment and patient care. They showed that modifying the curriculum to include this course was useful for the faculty members to learn communication skills, which was consistent with the present results, although they did not examine different fields or the impact of gender.

Atteya and Essam¹⁵ compared the attitudes of dental interns towards communication skills in two Egyptian dental schools using the CSAS. The questions were divided into positive and negative only in two domains, while in the present study, the questions were divided into three domains of needs, operation, and application, and it was one of the strengths of the present study. Lichtenstein et al.¹⁶ compared two dental schools in Germany regarding whether social and communication skills training would affect dental students' attitude toward learning communication skills, and showed that a long-term course on this topic increased the positive and decreased the negative attitude of the learners, which was consistent with the present results. However, they did not examine the effect of gender on communication skills.

A comparative study by Nourein et al.¹⁷ showed that demographic and education-related characteristics underpinned the medical students' positive attitude towards communication skills compared with dental students although medical and dental students showed no difference in self-rating their attitude towards communication skills. Al Muraikhi et al.¹⁸ showed that dentists had both positive and negative attitudes towards learning communication skills.

In the present study, assessment of the students' attitude toward communication skills course based on gender showed that this course could positively change the attitude in each of the domains of needs, operation, and application in males; but in females, only a positive change in attitude was observed in the application

domain. Also, the magnitude of change in the positive attitude of male students in general and separately in each domain was greater than that in females. Atteya et al. (15) showed that women generally had a more positive attitude than men, which contradicts with the results of the present study. Reasons for this difference include larger study population, level of education of the investigated students, selecting the participants from graduates and interns, higher mean age, and cultural effects. According to the literature, the effects of ethnic or racial background on attitude towards communication skills learning depend on the context, and it is important not to overgeneralize the findings.¹⁴

According to the results of the present study, the mean total attitude score positively changed after the course in 21-year-olds. This finding was similar to that of Shetty et al.,¹⁹ who stated that the attitude changed negatively with age in interns. One of the reasons for greater positive change in attitude of younger age group is their motivation to learn new topics. Communication skills training should be provided when the students are in the most receptive state, i.e., early in general or specialty course. Such trainings should also be repeated and emphasized in the following years as part of the educational curricula. In a study by Hannah et al.,²⁰ students tended to take communication skills courses before the third year and repeat them in the next years. Presenting this educational topic to dental students in the third year, when they have not yet entered the clinic and are more interested in such trainings, is one of the strengths of presenting this course at this time, and possibly helped in achieving positive results in the present study.

Another possible factor that has improved the students' attitudes towards such trainings is the impact of the presentation method. Croft et al.²¹ reviewed the results of a communication skills training course using role-playing at a dental school in the UK. The students enjoyed participating in the course and found it valuable. More than two-thirds of students considered role-playing communication skills training to be real. In a study by Hannah et al.,²⁰ students participated in a course on communication skills with simulated patients, patient-related scenarios, video interviews, and role-playing. They acknowledged that participating in the course had taught them new communication skills and techniques, and their interest in the subject as well as their confidence increased. Each session of clinical communication skills with the patient was held in Shahid Beheshti Dental School in the form of a one-hour lecture-based theoretical class and 2 hours of practical workshop in case-based scenarios, showing videos of patients, role-playing by students in the class (class role-play) and small-group discussions. The professors and mentors were dentists

who had received advanced medical education and had participated in the communication skills workshops. In addition, the students' assignments between the training sessions included reading a short text aloud, interviewing patients on a specific topic, and videotaping by other students. The students' strengths and weaknesses as feedback were given to them by the professor in written form. It seems that this teaching method was effective in improving the students' attitude in this study. However, since dental students should pass the communication skills course, they may pay more attention to this course, and the voluntary courses may be less successful.

The period of research was short in this study; therefore, the retention period of the taught topics in the communication skills course is not known. The question that remains is that whether the students will show the same score of attitude towards communication skills after a couple of years. In other words, it should be noted how the attitude of dental students who passed the communication skills learning course will be affected by

the passage of time. In order to assess the long-term efficacy of this course, further research regarding the knowledge retention in this respect is warranted.

Conclusion

In all three domains of needs, operation, and application before and after the dentist-patient communication skills course, the results showed a positive change in students' attitude and desire to learn the course. In this quasi-experimental study, the communication skills course was used as an educational intervention, and according to the results, the dental students' attitude towards the communication skills learning experienced a significant change after passing the course.

Conflict of Interest

No Conflict of Interest Declared ■

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