

# An Evaluation of Communication Skills Training Results in the Context of Gender

## İletişim Becerileri Eğitim Sonuçlarını Cinsiyet Bağlamında Bir Değerlendirme

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### Abstract

**Aim:** Medical students who graduate from medical school are expected to be competent in professional Practices, Professional values and approaches, and professional and individual development. Within the scope of professional values and approaches, which are one of these three basic competence areas, a physician who graduated from the faculty of medicine is required to be competent in communication skills. It is recommended to have communication skills training and practices in the medical education curriculum in this context. Communication skills training has been one of the basic courses of medical

education in recent years. However, in the context of gender, communication skills training outcomes are ignored in medical education. This study was designed to examine the differences in the attainment of communication skills training in the context of gender.

**Methods:** This study was designed as a pretest-posttest intervention study to evaluate the capacity of communication skills training to develop communication and empathy skills in medical students and to investigate whether there is a gender difference in this capacity. Before and after the training, students were asked to fill out the Communication Skills Attitude Scale and the Empathic Tendency Scale. 121 medical faculty 3rd-year students who fully participated in the communication skills training and filled out the scales used in the study were included in the study.

**Results:** Of the 121 students with a mean age of 20.6±1.2 years, 47.9% (n=58) were male and 52.1% (n=63) were female. There was a significant

difference between the mean values of the empathic tendency scale total score, communication skills attitude scale total and sub-dimension scores measured in students before and after the education ( $p<0.001$   $p=0.002$   $p<0.001$   $p<0.001$ , respectively). It was observed that the differences between the total score values of the empathic tendency scale measured at two different times according to gender were significantly different from each other ( $p<0.001$ ). The amount of change (increase) in the total score value of the empathic tendency scale observed in men was significantly higher than the value measured in women.

**Conclusions:** The results of the study show that communication skills training improves the communication and empathy skills of physician candidates. Another important point in our study is that this training should be repeated longitudinally in future lessons. Our results show that male physician candidates are open to improving their communication and empathy skills. The fact that male students

### Keywords:

Communication Skills,  
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### Anahtar sözcükler:

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benefit from training more than female students in our research suggests that all kinds of opportunities, including gender, should be evaluated while creating a training plan.

## Özet

**Amaç:** Tıp fakültesinden mezun olan tıp öğrencilerinin mesleki uygulamalar, mesleki değerler ve yaklaşımlar ile mesleki ve bireysel gelişim alanlarında yetkin olması beklenmektedir. Bu üç temel yetkinlik alanından biri olan mesleki değerler ve yaklaşımlar kapsamında tıp fakültesinden mezun olan bir hekimin iletişim becerilerinde yetkin olması istenmektedir. Bu bağlamda tıp eğitimi müfredatında iletişim becerileri eğitimi ve uygulamalarının olması tavsiye edilmektedir. İletişim becerileri eğitimi son yıllarda tıp eğitiminin temel derslerinden biri olmuştur. Ancak cinsiyet bağlamında, tıp eğitiminde iletişim becerileri eğitimi çıktıları göz ardı edilmektedir. Bu çalışma, iletişim becerileri eğitiminin cinsiyet bağlamında kazanım farklılıkları incelemek için tasarlanmıştır.

**Yöntem:** Bu çalışma, bir iletişim becerileri eğitiminin tıp öğrencilerinde iletişim ve empati becerilerini geliştirme kapasitesini değerlendirmek ve bu kapasitede cinsiyet açısından farklılık olup olmadığını araştırmak amacıyla öntest-sontest müdahale çalışması olarak tasarlanmıştır. Eğitim öncesi ve sonrasında öğrencilerden İletişim Becerileri Tutum Ölçeği ve Empatik Eğilim Ölçeği'ni doldurmaları istenmiştir. Çalışmaya iletişim becerileri eğitimi dersine tam katılım sağlayan ve çalışmada kullanılan ölçekleri eksiksiz dolduran tıp fakültesi 3. sınıf öğrencilerinden 121 öğrenci dahil edilmiştir.

**Bulgular:** Yaş ortalaması  $20.6 \pm 1.2$  yıl olan 121 öğrencinin %47.9'u ( $n=58$ ) erkek, %52.1'i ( $n=63$ ) kızdı. Öğrencilerin eğitimden önce ve eğitimden sonra ölçülen empatik eğilim ölçeği toplam puanı, iletişim becerileri tutum ölçeği toplam puanı ve alt boyut puan ortalamaları arasında anlamlı bir fark bulunmuştur (sırasıyla  $p < 0,001$   $p = 0,002$   $p < 0,001$   $p < 0,001$ ). Cinsiyete göre iki farklı zamanda ölçülen empatik eğilim ölçeği toplam puan değerleri arasındaki farkların birbirinden anlamlı düzeyde farklı olduğu görüldü ( $p < 0,001$ ). Erkeklerde gözlenen empatik eğilim ölçeğinin toplam puan değerindeki değişim (artış) miktarı, kadınlarda ölçülen değerden anlamlı derecede yüksekti.

**Sonuç:** Çalışmanın sonuçları iletişim becerileri eğitiminin hekim adaylarının iletişim ve empati becerilerini geliştirdiğini göstermektedir. Çalışmamızda bir diğer önemli nokta da bu eğitimlerin ileriki derslerde boylamasına tekrarlanması gerektiğidir. Sonuçlarımız erkek öğrencilerin iletişim ve empati becerilerini geliştirmeye açık olduklarını göstermektedir. Araştırmamızda erkek öğrencilerin kız öğrencilere göre eğitimden daha fazla yararlanması, eğitim planı oluşturulurken cinsiyet dahil her türlü fırsatın değerlendirilmesi gerektiğini düşündürmektedir.

## INTRODUCTION

Since medicine is a profession that serves people, physicians must be competent in interpersonal communication as well as academic knowledge in order to practice their profession. It is known that a healthy interaction between the physician and the patient significantly affects the patient's compliance with treatment (1). In addition, it has been stated that the physician's being informative and explanatory to patients, increases patient satisfaction and safety (2). When considered within the scope of the work dynamics of health workers, it has been suggested that the most important reason for the increasing violence in recent years is the lack of doctor-patient

communication (3). The World Health Organization recommends supporting the development of communication skills of every medical student (4). Patient-physician communication skills modules targeting to transfer the gains of positive communication to physician candidates have been included in the medical education curriculum. Now, in many countries in the world, communication skills courses have become compulsory in medical education and have been developed with objective structured exams and feedback to measure the proficiency of students (5). The communication skills training mainly focuses on the development of empathy. In

communication skills training, physicians try to achieve empathic competency that needs to be developed in order to transfer adequate emotion and information to patients and their relatives (6).

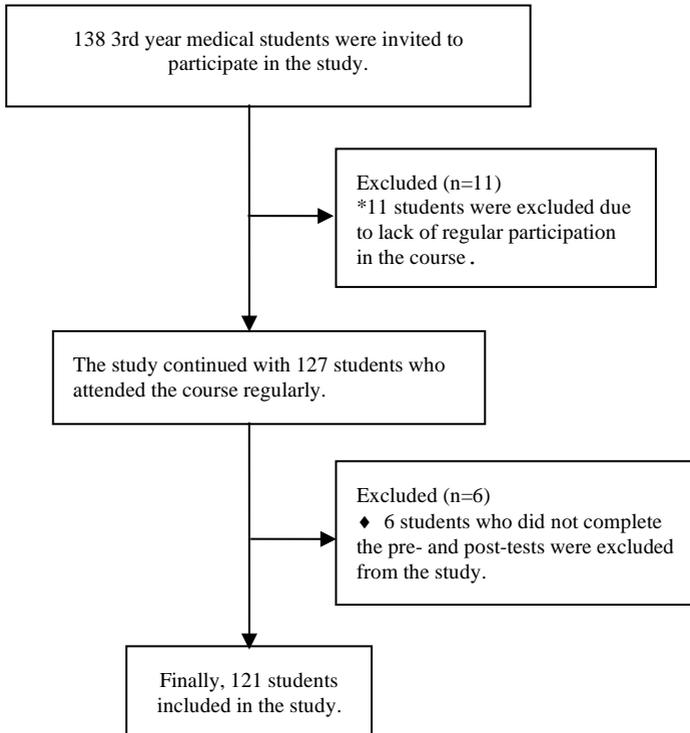
Another noteworthy point in studies evaluating communication skills in the health system is that female physicians have higher communication skills and empathic competency compared to male physicians (7). In this context, it is emphasized that, although gender is mostly ignored it is an important variable in doctor-patient communication (8). Communication and empathy skills may vary according to different cultures and regions. To the best of our knowledge; the effectiveness of a communication skills training in medical faculty has not been examined in the context of gender in our country. This study was designed to examine the differences in attainment of

communication skills training in the context of gender.

## METHODS

### *Research Design and Sample Selection*

This study was designed as a pretest-posttest intervention study in order to evaluate the capacity of a communication skills training to develop communication and empathy skills in medical students and to explore whether there is a difference in this capacity in terms of gender. This study was conducted on the 3rd year students of our Medical Faculty. The sample of the study is consisted of the students who voluntarily filled out the questionnaire consisting of the Communication Skills Attitude Scale (CSAS) and the Empathic Tendency Scale (ETS) before and after the Communication Skills training (Figure 1).



**Figure 1.** The Study Design and Process

### ***Communication Skills Training Process***

First of all, a needs assessment was made for this module. The "Communication skills and patient-physician interview" training was developed by the Medical Education department of the Medical Faculty by using Kern's six-stage approach to curriculum development. The module was integrated into the undergraduate curriculum of the Medical Faculty. The main goal of the module is to develop empathy and communication skills in medical students.

It is stated that the communication skills training should be both dynamic and longitudinal and when the skills developed are not reinforced they extinguish (9). Therefore, the module has been designed as theoretical and then practical role-play applications for reinforcement purposes. This training consists of 8 hours of theoretical training and then 16 hours of role-play applications various scenarios. Patient-doctor communication scenarios were created for the role-play application. scenarios were inspired by real patient-doctor communication examples. Students took part in these scenarios used in the role-play application. At the end of each session, students' feedback was received and what could be done to improve communication was discussed. The titles of the module within the scope of the module include "Empathy and empathetic approach", "Languages used in communication", "Difficult Patient management", "Disclosure of bad news", and "Resistant patient management".

### ***Data Collection Tools***

The data in the study were obtained by "Empathic Tendency Scale (ETS)" and "Communication Skills Attitude Scale (CSAS)".

#### ***Empathic Tendency Scale (ETS)***

ETS is developed by Dökmen and consists of 20 questions (10). The highest score that can be

obtained from the scale is 100, and the lowest score is 20. Again, this scale is a 5-point Likert-type scale where 'totally agree' is scored 5 and 'totally contrary' is scored 1. Higher scores indicate higher empathic tendency as well.

#### ***Communication Skills Attitude Scale (CSAS)***

CSAS was developed by Rees, in 2001 (11). The scale consists of 26 items grouped under two subscales, each consisting of 13 items. The subscale 1 is called the positive PAS scale, where the items 4, 5, 7, 9, 10, 12, 14, 16, 18, 21, 22, 23 and 25 relate to positive attitudes toward communication skills and Subscale 2 is the negative NAS scale where items 1, 2, 3, 6, 8, 11, 13, 15, 17, 19, 20, 24 and 26, relate to negative attitudes toward communication skills. All items are answered on a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree).

#### ***Analysis***

The descriptive statistics are expressed as mean, standard deviation, minimum, maximum, and percentage where appropriate. Normality assumption of continuous quantitative variables were tested by using Lilliefors corrected Kolmogorov Smirnov test and Shapiro Wilk tests. The homogeneity of group variances was tested by using Levene and Box M tests. Dependent Samples t-test was used for in-group comparisons. Analysis of Variance in Repeated Measurements (post hoc Fisher LSD test) and Generalized Linear Modeling (post hoc Fisher LSD and Sidak tests) were used to compare the variables measured at different time periods according to socio-demographic characteristics. Binomial and Chi-square (post hoc Bonferroni test) tests were used for comparisons between ratios. Cronbach's alpha coefficients were calculated for the reliability analysis of each scale. SPSS 22 program and custom macros were used for statistical evaluations. A value of  $p < 0.05$  was considered statistically significant.

## RESULTS

A total of 121 students were included in the study. The mean age was  $20.6 \pm 1.2$  years and 47.9% (n=58) of the participants were male and 52.1% (n=63) were female. The distribution of males and females were similar in the study ( $p=0.716$ ). When the mean ETS, CSAS, Subscale 1, and Subscale 2 scores were

compared before and after the training, it was found that all scores significantly increased after the training ( $p < 0.001$ ,  $p = 0.002$ ,  $p < 0.001$ ,  $p < 0.001$ , respectively). The comparisons of the mean scores obtained from the scales and subscales before and after the training are shown in Table 1.

**Table 1.** Comparison of ETS, CSAS and Subscale Scores Before and After the Training

	Measurement Time	Mean	SD	Minimum	Maximum	Cronbach Alfa	P
ETS	Before	62.4	9.7	43.0	83.0	0.79	<b>&lt;0.001</b>
	After	65.3	8.2	48.0	83.0	0.72	
CSAS positive subscale	Before	53.3	11.5	25.0	71.0	0.92	<b>0.002</b>
	After	55.8	7.2	37.0	71.0	0.83	
CSAS negative subscale	Before	38.9	6.8	25.0	55.0	0.80	<b>&lt;0.001</b>
	After	41.0	6.0	29.0	53.0	0.81	
CSAS total score	Before	92.1	17.4	53.0	125.0	0.93	<b>&lt;0.001</b>
	After	96.8	11.7	72.0	121.0	0.87	

SD: Standard Deviation

When the mean total ETS scores of male and female students before and after the training were compared it was found that the difference (increase) between the mean total ETS score of the male students measured before and after the training was significantly higher compared to the female students ( $p < 0.001$ ). However, it was observed that the mean ETS scores of the female students were significantly higher compared to ETS scores of male students measured in both measurement times ( $p < 0.001$ ,  $p < 0.001$ ).

It was found that the difference between the mean CSAS positive sub-dimension score of the male students measured before and after the training was significantly higher. It was found

that Subscale 1 scores of the male students increased significantly after the training ( $p = 0.002$ ). However, the mean CSAS positive sub-dimension scores of the female students were significantly higher compared to the male students, in both measurement times ( $p < 0.00$ ,  $p < 0.001$ ).

It was determined that the mean CSAS negative sub-dimension scores of male and female students did not change significantly before and after the training ( $p = 0.283$ ). The comparisons of ETS, CSAS, Subscale1, and Subscale 2 scores of male and female students before and after the training are shown in table 2.

**Table 2.** Comparisons of ETS, CSAS, Subscale1, and Subscale 2 Scores of Male and Female Students Before and After the Training

	Gender	Measurement Time	Mean	SD	Minimum	Maximum
ETS	Male	Before	57.4	9.5	43.0	81.0
		After	62.1	8.5	48.0	83.0
	Female	Before	67.0	7.4	47.0	83.0
		After	68.2	6.8	48.0	82.0
CSAS Subscale 1	Male	Before	46.8	11.2	27.0	70.0
		After	52.7	6.5	37.0	70.0
	Female	Before	59.2	8.0	25.0	71.0
		After	58.6	6.7	37.0	71.0
CSAS Subscale 2	Male	Before	35.2	6.3	25.0	50.0
		After	38.0	5.5	29.0	51.0
	Female	Before	42.2	5.6	28.0	55.0
		After	43.8	5.1	32.0	53.0
CSAS Total score	Male	Before	82.0	16.3	56.0	112.0
		After	90.8	9.8	72.0	112.0
	Female	Before	101.4	12.7	53.0	125.0
		After	102.4	10.6	72.0	121.0

SD: Standard Deviation

We gathered the answers given by the students to the open-ended questions under 3 main themes. The first and most important theme is that after the training, students will be able to establish a more confident and structured approach when communicating with the patient. Male and female students made similar comments about the trust that developed after the training;

“I have experienced the way of talking to patients and appropriate patterns in the scenarios we use here. Now I am more confident on this matter.” (Female student).

“Honestly, I didn't think I would be very patient, but I can work better with these methods.” (Male student)

However, there were also concerns shared by both male and female students. These were anxiety about the real situation and fear of being inadequate in the face of the difficult patient;

“We think that everything is going well through scenarios in a safe environment at the moment, but in reality, communication with patients may not be that easy.” (Female student)

"I don't think empathy is something that can be developed. But we can learn some patterns for communication skills." (Male student)

"Obviously I have fears about coping with a difficult patient, I don't think these will work" (Female student)

Again, both female and male students demanded that this training be repeated, especially in clinical periods;

"We may not be so patient with patients during long and tired seizures. I think, these trainings should be repeated in the last year of the school, as well." (Female student).

"Currently, I am not treating patients. I would like to take this training again when I become a trainee doctor" (Male student).

## DISCUSSION

In this study, we evaluated the effectiveness of the newly implemented communication skills training in our medical school curriculum and examined the effectiveness of this training in the context of gender. The results of our study show that communication skills training in undergraduate medical education improves both empathic tendency and communication skills of students. In the study conducted by Bas-Sarmiento et al., it has been shown that the empathic tendency of the students can be improved with training and intervention and it is emphasized that students from all levels can acquire and develop good communication skills, regardless of their natural tendencies (12,13).

According to the feedback received from the open-ended questions in the study, some of the students stated that they had some fears about coping with difficult patients before the training, however this fear decreased after

exercising the scenarios and learned speech patterns in the training. Similarly, in a study by Wilkinson et al., it was reported that although some elements of the communication skills training program, such as role-playing, were stressful, students gained more self-confidence in coping with difficult situations (14). However, in our study, some students stated that the communication difficulties they will encounter in real life may be different from these scenarios, so their anxiety persisted despite the education.

Van der Vleuten et al. in their study, pointed out that communication skills are complex behavioral skills and stated that the best communication skills can be developed through practice and feedback in an experiential and authentic environment (15). In this context, it is recommended that the clinician educator should continue the communication and empathy training in every period by confronting the student with examples of the communication environment at every opportunity when clinical education is started (16). The lack of confrontation with the real situation, which is the lack of the communication skills module that we started in our faculty, is also a limitation of our study.

In our study the anxiety of encountering with real patients and their relatives, which the students expressed verbally, made us think that these lessons and observations should be continued in the next semesters. As a matter of fact, the demand for the continuation of the new communication workshop in the clinical period, which was stated by the students in our study, has guided us in terms of developing the program. We suggest that communication skills training should be added to the curriculum starting from the preclinical period and should be continued in the clinical period.

When the results of our study were evaluated in terms of empathy and communication skills in the context of gender, we observed that female students had higher empathy and communication skills compared to the male

students, before the training. It has been suggested in various studies that women have more positive attitudes towards communication skills and their empathic tendencies are higher than men (17). Dillessen et al., stated that male physicians use more instrumental contexts while giving information, whereas female physicians adopt a less dominant communication style (8). This explains why female physicians and female medical students have higher empathic and communication skills scores in our study and many other studies.

Another noteworthy result of our study was that at the end of communication skills training, male students achieved more empathy and communication skills compared to the female students. To the best of our knowledge, there is no other study showing that male students achieved more progress after communication skills training. This constitutes the strength of our study. It has been emphasized in the literature that the gender factor may affect medical outcomes in the interaction of physician and patient in the dynamics of the medical profession (8). Although it may be perceived as a reductionist approach, it is stated that the use of a gender-based education has the potential to significantly affect the provision of empathetic and humane care in medical care services (18).

Some social difficulties can be experienced by both patients and physicians, especially in the context of some sexual situations and medical problems (19-21). In a study conducted in primary care institution, it is stated that the fact that female doctors are more preferred by patients in preventive health services may create an imbalance between them and their male colleagues (22). Various scenarios can be prepared to facilitate the preference of male physicians in some special disease groups and medical conditions. This is also important in terms of the balance of the delivery of health services. The fact that healthcare system users consist of more female patients and that male

physicians provide less psychosocial counseling than female physicians, suggest that training male physicians in terms of communication skills is very important (23). Opportunities should be created for male physician candidates to benefit more functionally from communication skills training in pre-graduate education.

### ***Strengths and Limitations***

The strength of this study is that it is the first study to evaluate the effectiveness of communication skills training in medical education in the context of gender. However, our study also has some limitations. Since our study covers only one class, it cannot be generalized to all classes and other medical school students. In addition, the communication and empathy skills of the participants were not evaluated in the later periods. Communication and empathy skills of the students may change in the future.

### **CONCLUSIONS**

The results of our study show that communication skills training improves communication and empathy skills of physician candidates. Another important point in our study is that these trainings should be repeated longitudinally in future classes. Our results also show that male physician candidates are open to improving their communication and empathy skills. The fact that male students benefit from education more than female students in our research suggests that all kinds of opportunities, including gender, should be evaluated while creating an education plan.

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