DOI: 10.5961/jhes.2019.348

The Effect of "Communication Skills Course" Given to Faculty of Medicine on Face Recognition Test

Tıp Fakültesi Öğrencilerine Verilen İletişim Becerileri Dersinin Yüz Tanıma Testine Etkisi

Mehmet ÜZEL, Zennure ADIGÜZEL ŞAHİN, Selman DEMİRCİ, Gözde GÜLTEKİN, Özlem Serpil ÇAKMAKKAYA, Fatma Güler KAHRAMAN YILDIRIM

ABSTRACT

Successful physician-patient communication is very important in diagnosis and treatment processes. Understanding the facial reflections of emotions will contribute positively to this communication. To be able to manage doctor-patient communication well and to provide a good health care service, we think that medical faculty students and other health department students should be given communication skills training in their education life. The Facial Emotion Recognition Test was applied to 211 second grade students at Istanbul University-Cerrahpaşa, Cerrahpaşa Medical Faculty before and after communication skills lesson. Before the test, seven different emotional face expressions (happy, surprised, fearful, sad, angry, disgusted and neutral) were introduced and 49 photos with facial expressions from different people were showed to each participant. Participants were asked to recognize facial emotion expressions. Pre-lesson, the highest mean accuracy rate of recognized facial emotion was "happy" while the lowest was "fear". The participants recognized "sad" and "fearful" emotions more accurately after the lesson. "Sad" and "fearful" emotions give information about some feelings of the patient. And being able to understand these feelings by the physicians make a good background for a good physician-doctor communication. Therefore, it is important to get communication skills training in terms of health care. Taking this education as a student can be quite effective.

Keywords: Communication skills, Medical education, Face recognation, Physician-patient communication

ÖZ

Başarılı doktor-hasta iletişimi tanı ve tedavide çok önemlidir. Duyguların yüzdeki yansımalarının anlaşılması bu iletişime olumlu yönde

Üzel M., Adıgüzel Şahin Z., Demirci S., Gültekin G., Çakmakkaya ÖS., & Kahraman Yıldırım FG., (2019). The effects of "communication skills course" given to faculty of medicine on face recognition test. *Journal of Higher Education and Science/Yükseköğretim ve Bilim Dergisi, 9*(3), 488-491. https://doi.org/10.5961/jhes.2019.348

Mehmet ÜZEL
ORCID ID: 0000-0002-7184-4900
Istanbul University - Cerrahpaşa, Cerrahpaşa Faculty of Medicine, Department of Anatomy, Istanbul, Turkey
İstanbul Üniversitesi – Cerrahpaşa, Cerrahpaşa Tıp Fakültesi, Anatomi Anabilim Dalı, İstanbul, Türkiye

Zennure ADIGÜZEL ŞAHİN (✉)
ORCID ID: 0000-0002-4878-9587
Istanbul University - Cerrahpaşa, Cerrahpaşa Faculty of Medicine, Department of Anatomy, Istanbul, Turkey
İstanbul Üniversitesi – Cerrahpaşa, Cerrahpaşa Tıp Fakültesi, Anatomi Anabilim Dalı, İstanbul, Türkiye
dr.zas9012@gmail.com

Selman DEMİRCİ
ORCID ID: 0000-0002-4345-4737
Istanbul University - Cerrahpaşa, Cerrahpaşa Faculty of Medicine, Department of Anatomy, Istanbul, Turkey
İstanbul Üniversitesi – Cerrahpaşa, Cerrahpaşa Tıp Fakültesi, Anatomi Anabilim Dalı, İstanbul, Türkiye

Gözde GÜLTEKİN
ORCID ID: 0000-0002-0198-8618
Keşan State Hospital, Department of Psychiatry, Edirne, Turkey
Keşan Devlet Hastanesi, Psikiyatri Kliniği, Edirne, Türkiye

Özlem Serpil ÇAKMAKKAYA
ORCID ID: 0000-0002-3945-1875
Istanbul University - Cerrahpaşa, Cerrahpaşa Faculty of Medicine, Department of Medical Education, Istanbul, Turkey
İstanbul Üniversitesi – Cerrahpaşa, Cerrahpaşa Tıp Fakültesi, Tıp Eğitimi Anabilim Dalı, İstanbul, Türkiye

Fatma Güler KAHRAMAN YILDIRIM
ORCID ID: 0000-0003-2384-2107
Istanbul University - Cerrahpaşa, Cerrahpaşa Faculty of Medicine, Department of Anatomy, Istanbul, Turkey
İstanbul Üniversitesi – Cerrahpaşa, Cerrahpaşa Tıp Fakültesi, Anatomi Anabilim Dalı, İstanbul, Türkiye

Received/*Geliş Tarihi* : 27.05.2019
Accepted/*Kabul Tarihi* : 02.07.2019

katkı sağlayacaktır. Doktor-hasta iletişimini iyi yönetebilmek ve iyi bir sağlık hizmeti sunabilmek için tıp fakültesi öğrencilerine ve sağlık alanındaki diğer bölüm öğrencilerine eğitim hayatlarında iletişim becerileri eğitimi verilmesi gerektiğini düşünmekteyiz. Bu düşünce çerçevesinde İstanbul Üniversitesi-Cerrahpaşa, Cerrahpaşa Tıp Fakültesi'ndeki 211 ikinci sınıf öğrencisine iletişim becerileri dersi öncesi ve sonrasında Yüz Duygusu Tanıma Testi uygulandı. Testten önce yedi farklı duygusal yüz ifadesi (mutlu, şaşırmış, korkmuş, üzgün, kızgın, iğrenmiş ve nötr) tanıtıldı ve her katılımcıya farklı insanlara ait yüz ifadeleri olan 49 fotoğraf gösterildi. Katılımcılardan yüzlerdeki duyguları tanımaları istendi. Ders öncesi tanınan duygulardan ortalama doğruluk oranı en yüksek olan "mutlu" iken en düşük olan "korkmuş" idi. Katılımcılar dersten sonra ise "üzgün" ve "korkmuş" duyguları daha doğru tanıdı. "Üzgün" ve "korkmuş" ifadeler, hastanın bazı duyguları hakkında bilgi vericidir ve bu duyguların doktorlar tarafından anlaşılabilmesi, iyi bir doktor-hasta iletişimine zemin hazırlar. İşte bu yüzden sağlık hizmeti verilen alanlarda iletişim becerileri eğitimi almak önemlidir. Bu eğitimi öğrenciyken almak oldukça etkili olabilir.

Anahtar Sözcükler: İletişim becerileri, Tıp eğitimi, Yüz tanıma, Doktor-hasta iletişimi

INTRODUCTION

Communicating is a social need of every human being. Good communication is important in getting and / or giving health care as much as it is important in social life. This is why DiMatteo's good patient-doctor relationship facilitates more effective health care delivery, as emphasized by DiMatteo, "The best tool on the way to treatment is good patient-doctor communication" (Hargie, Dickson, Boohan, & Hughes, 1998). The physician is one of the most educated and interchangeable factors related to communication skills, with numerous factors that can influence patient-doctor communication (Kleinman, 2008). While communication is divided into verbal and non-verbal, face expressions are important in nonverbal communication. Patient's anatomical structures on the face can give information about the patient's character (Kosif, 2018). Also, The patient's facial expressions, states and movements, speech and tonalities can help the doctor in understanding the patient's complaints. Therefore, doctors should be trained to know the patient's feelings correctly and learn how to manage the situation in the face of difficult speech. If doctors are already trained to be able to acquire or develop these skills while they are medical faculty students, the yield on health care services will surely be higher.

Medical faculty second grade students are given training in communication skills in practical hands (short sketches, games and theoretical knowledge) in groups of 25 students. In this study, students who received this test were compared with their pre-test and post-test results by applying the test of recognition of their emotions from the face expression. It was researched whether the given communication skills training contributed to the ability to understand the feelings of the person who is important in communication.

METHODS

Participants

The study was conducted with medicine students attended communication skills lesson from Medical Faculty between April - October 2017. The communication skills lessons are taught by instructors who have taken courses in this area. In these lessons, theoretical knowledge about communication skills is explained and the lessons are practiced (short sketches and games) (Sullivan, Maagarick, Bergthold, & McInthosh, 1995). All participants were mentally healthy. Three hundred twelve students were asked to participate to the study. Upon giving written informed consent anonymously, all students were performed the test although 101 students were not completed the test procedure so were eliminated. Totally, test group included 211 students. The study was approved by the local ethics committee.

Communication Skills Lesson

The lessons are interactive and taught role plays with using effects of vocal and facial emotions on meaning. Also importance of verbal and non-verbal communication is emphasized. The effects of word tones on the meaning of the word, the different meanings of different face expressions, the different meanings, the importance of nonverbal communication, the exaggeration of personality in communication are taught with the short sketches. These are given from lecturers who were well-trained about these issues.

Procedure

The Facial Emotion Recognition Test was performed two times as before and after the three-hour lesson while without giving any feedback. The test was constructed using a set of photographs from Ekman and Friesen's book "Pictures of Facial Affect" (Ekman & Friesen, 1976). The test included the photos of four male and four female models (a total of 56 photos) with happy, surprised, fearful, sad, angry, disgusted and neutral facial expressions. All photos were shown to each participant and participants were asked to recognize facial emotion expressions. At first, we had a trial session, which was composed of the first seven photos and included each emotional facial expression that was presented in the same order for each participant. A total of 49 photos were used for the data analyses in the study. All participants were tested individually in a classroom.

Statistical Analyses

The statistical analyses were performed using Statistical Package for Social Sciences (SPSS) version 22 for Windows. Descriptive analyses were presented using mean ± standard deviation for numeric values. The variables were investigated using Kolmogrov-Smirnov to determine whether or not they are normally distributed. Student-t test for normally distributed data and Mann–Whitney U test for non-normally distributed

Table 1: Comparison of Mean Accuracy Rate

Facial expressions	Pre-lesson accuracy mean±SD	Pre-lesson accuracy percentage	Post-lesson accuracy mean±SD	Post-lesson accuracy percentage	*p*
[a]Happy	6.95±0.26	99.28%	6.96±0.25	99.42%	0.701
[b]Sad	4.44±1.46	63.42%	4.92±1.57	70.28%	0.000*
[b]Fearful	3.77±1.55	53.85%	4.20±1.71	60.0%	0.003*
[a]Angry	5.60±1.29	80.0%	5.82±1.25	83.14%	0.085
[a]Suprised	6.32±0.98	90.28%	6.26±0.90	89.42%	0.536
[a]Disgusted	5.08±1.33	72.57%	5.18±1.32	74.0%	0.441
[a]Neutral	6.39±0.90	91.28%	6.45±0.91	92.14%	0.552

*[a] Student T test, [b] Mann Whitney U test, p<0.05 were accepted statistically significant, *p<0.05.*

data were performed. A 5% type-I error level was used to infer statistical significance.

RESULTS

Pre-lesson, the highest mean accuracy rate of recognized facial emotion was happy (99.28%) while the lowest accurately recognized facial expression was fear (53.85%). Pre-lesson, accuracy rate for sad emotion was 63.42%, angry emotion was 80.0%, suprised emotion was 90.28%, disgusted emotion was 72.57%, neutral emotion was 91.28%. Also post-lesson, the highest mean accuracy rate of recognized facial emotion was happy (99.42%) while the lowest accurately recognized facial expression was fear (60.0%). Post-lesson, accuracy rates for happy emotion was 99.42%, sad emotion was 70.28%, fear emotion was 60.0%, angry emotion was 83.14%, suprised emotion was 89.42%, disgusted emotion was 74.0% and neutral emotion was 92.14%. Participants recognized significantly more accurate sad (p=0.000) and fearful (p=0.003) emotions after lesson although there were no significant differences among mean accuracy rates in recognizing happy (p=0.701), angry (p=0.085), surprised (p=0.536), disgust (p=0.441) and neutral (p=0.552) facial emotion expressions between pre-lesson and post-lesson (Table 1).

DISCUSSION

Good communication between the patient and the doctor also increases patient trust. Previous studies indicate that patient and doctor satisfaction increases, medical errors and emotional stress are reduced when effective communication is established between the patient and the doctor (Price, Windish, Magaziner, & Cooper, 2008; Yu et al. 2017). Sometimes the correct understanding of emotions in patient-doctor communication can become the most important factor on the way to diagnosis and treatment (Riess & Kraft-Todd, 2014). The most reliable tool in recognizing emotions is face expressions (Leppanen, 2006). Emotions can affect person's behavior (Duclos et al., 1989). The facial expression can reflect both the emotions and the personality of the person (Mergl et al., 2006).

In this study, pre-lesson, the highest mean accuracy rate of recognized facial emotion was happy (99.28%) while the lowest accurately recognized facial expression was fear (53.85%). These results are similar with results of Gultekin et al. (2016) (99.14% / 47.71% respectively). Happiness is approved as a positive emotion. Recognition of happy faces was preserved even in patients with schizophrenia and euthymic bipolar disorder (Demirbuga et al., 2013; Demirel et al., 2014). Fear recognition is more difficult and has been reported to be frequently confused with surprised face expression in healthy people (Tse, Yan, Bond, Chan, & Tam, 2011; Ekman, 1999). It has also been observed that aggressive people attribute fear faces when they are presented with vague emotional faces (Weiss et al., 2006). In this study, it is seen that the rate of accurate recognition, even in the form of fear, which is an expression that is hard to recognize, has increased significantly after communication skills training. Also participants recognized sad emotion more accurately after lesson (Table 1). Recognizing these emotions may contribute to understanding the patient and arranging treatment. For example, there is sad expression on the face of a patient with pain. And, in the case of patients without knowledge of the disease, there is more fear expression. So, it is very important to know these expressions.

Commonly, special training to identify patients' emotional cues is not in medical education curriculum. The importance of communication skills in medical education is emphasized not only by practitioners but also by researchers working to improve the education programs (Hargie et al., 1998; Kleinman, 2008). The place of communication skills education in medical education should be re-evaluated.

RESULTS

- As a professional requirement, communication skills training should be taken in the professions where people are frequently contacted.
- Communication skills training will be very useful in order to provide a better health service in a difficult and tiring profession.
- The fact that the first step of this education is given to the doctor candidates who have not yet started their career, raises awareness and we think it will be more beneficial.

REFERENCES

Demirbuga, S., Sahin, E., Ozver, I., Aliustaoglu, S., Kandemir, E., Varkal, M. D., Emul, M., & Ince, H. (2013). Facial emotion recognition in patients with violent schizophrenia. *Schizophrenia Research*, *144*, 142-145.

Demirel, H., Yesilbas, D., Ozver, I., Yuksek, E., Sahin, F., Aliustaoglu, S., & Emul, M. (2014). Psychopathy and facial emotion recognition ability in patients with bipolar affective disorder with or without delinquent behaviors. *Comprehensive Psychiatry*, *55*, 542-546.

Duclos, S. E., Laird, J. D., Schneider, E., Sexter, M., Stern, L., & Lighten, O. V.(1989). Emotion-specific effects of facial expressions and postures on emotional experience. *Journal of Personality and Social Psychology, 57*(1), 100-108.

Ekman, P. (1999). Facial expressions. In T. Dalgelish, & M. Power (Eds.) *Handbook of cognition and emotion.* New York: Wiley & Son.

Ekman, P., & Friesen, W. V. (1976) *Pictures of facial affect.* Palo Alto, CA: Consulting Psychologists Press.

Gultekin, G., Kincir, Z., Kurt, M., Catal, Y., Acil, A., Aydin, A., Ozcan, M., Busra, N., Delikkaya, B. N., Kacar, S., & Emul, M. (2016). Facial emotion recognition ability: psychiatry nurses versus nurses from other departments. *Clinical and Investigative Medicine, 39*, 61-65.

Hargie, O., Dickson, D., Boohan, M., Hughes, K. (1998). A survey of communication skills training in UK Schools of Medicine: present practices and prospective proposals. *Medical Education,* 32, 25-34.

Kleinman, A. (2008). Catastrophe and caregiving: The failure of medicine as an art. *Lancet*, *371*, 22–3.

Kosif, R., Dıramalı, M., Yılmaz, S. (2018). Investigation on the relationship between personal characteristics with lip, jaw and philtrum dimensions*. International Journal Of Research in Medical Sciences, 6*(9), 2911-2915.

Leppanen, J. M. (2006). Emotional information processing in mood disorders: A review of behavioral and neuroimaging findings. *Current Opinion in Psychiatry*. *19*, 34-9.

Price, E. G., Windish, D. M., Magaziner, J., Cooper, L. A. (2008). Assessing validity patient of standardized ratingsof medical students' communication behavior using The Roter interaction analysis system. *Patient Education and Counseling*. 70, 3-9.

Riess, H., Kraft-Todd, G. (2014). E.M.P.A.T.H.Y.: a tool to enhance nonverbal communication between clinicians and their patients. *Academic Medicine.* 89, 1108-12.

Mergl R., Vogel, M., Prässl, A., Graf, B., Karner, M., Mavrogiorgou, P., Hegerl, U., & Juckel, G. (2006). Facial expressions and personality: A kinematical investigation during an emotion induction experiment. *Neuropsychobiology*. 54, 114–119.

Sullivan, R., Maagarick, G., Bergthold, N., & McInthosh, N. (1995). *Clinical training skills for reproductive health personnel.* Baltimore, JHPIEGO Corporation.

Tse, W. S., Yan, L., Bond, A. J., Chan, R. C., & Tam, D. W. (2011). Facial emotion linked cooperation in patients with paranoid schizophrenia: a test on the Interpersonal Communication Model. *International Journal of Social Psychiatry, 57*, 509–517.

Weiss, E. M., Kohler, C. G., Nolan, K. A., Czobor P., Volavka J., Platt M. M. (2006). The relationship between history of violent and criminal behavior and recognition of facial expression of emotions in men with schizophrenia and schizoaffective disorder. *Aggressive Behaviour.* 32, 187-194.

Yu, M. X., Jiang, X. Y., Li, Y. J., Shen, Z. Y., Zhuang, S. Q., Gu, Y.F. (2017). Evaluation of medical record quality and communication skills among pediatric interns after standardized parent training history-taking in China. *Medical Teacher.* https://doi.org/10.1080/0142159X.2017.1395833