

ORIGINAL ARTICLE

Empathic Communication in Doctor-Patient Relationships: Essential Instruction for Medical Students

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ABSTRACT

Physicians' empathy towards patients is a fundamental aspect of therapy that can help with diagnosis and treatment procedures. We designed this study to evaluate and compare the empathy scores and related factors in medical students, interns, and residents. In this cross-sectional study, a total of 215 medical students responded to the JSPE questionnaire. In addition, the participants were anonymously monitored as to their actual levels of empathy at work. The results were analyzed by the SPSS-20 software. Analysis showed that students had a mean empathy score of 98.08, which was lower than those in other countries. The empathy score increased by the increase in their educational years; but this increase was not significant ($p=0.001$). Empathy was higher in females and also in married students. The observed empathy was much lower than what the participants had stated. Discussion: In general, medical students in Arak University of Medical Sciences had low empathy level. Therefore we recommend using empathy courses. It seems that we need to design better tools for assessing empathy.

Keywords; Empathy, Patient Satisfaction, Medical Education

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INTRODUCTION

Interpersonal and communication skills are considered as a major index of competence for medical students, residents and physicians [1-5]. Empathy, the ability to effectively grasp patients' emotional needs in the context of patient care, is considered to be associated with improved health outcomes [6-10]. It is the basic component of treatment structure in patient-centred systems. "Empathy" has been described as: understanding the feelings and experiences of other people by putting oneself in their places. Also it is one of the important character qualities in medical skills, and it is the basic component of treatment structure in patient-centred systems. "Empathy" has been described as: understanding the feelings and experiences of other people by putting oneself in their places. It begins by age 1 and is completed by 9 to 10 years of age [11-16].

Several studies have shown that developing empathy results in active participation of the patient in the treatment process and increases the rate of improvement. It has been found that, in situations where there is little empathy, treatment results are usually worse [17-27]. In a systematic review concerning interventions to improve communication between physicians and patients, increased recovery of patients in more than 50% (28). The quality of the data acquired during history-taking and physical examination by doctors can be improved by using empathy; since 60-80% of medical diagnoses and treatment

decisions are based on the results of history-taking, increased levels of empathy can help in improving the diagnostic process [29-33].

Higher empathy scores were associated with better ratings of clinical competence and student's female gender [24, 25]. Numerous studies have shown that empathy increases physicians' job satisfaction and self-confidence [31-34]. It has been reported that poor physician-patient relationships are associated with more medical errors, and increased empathy reduces medical complaints and malpractice claims [35-36]. The JSPE is undoubtedly the most widely used measure of empathy in the context of patient care and has been translated into 25 languages [11]. Many studies have evaluated and confirmed the validity of the Jefferson Scale of Physician Empathy [12, 35, 37, 38]. This study performed in one of the most crowded hospitals in Iran. So, students encountered difficulties such as long hours of hard working, long demanding shifts, fatigue and lack of concentration at work. On other hand, researchers have questioned whether during the academic year, their obduracy has been developed. Therefore, the indices such as empathy and ethics were designed. Given the importance of empathy in the diagnosis, treatment, and prognosis of diseases, this study designed to evaluate and compare the empathy scores and related factors in medical students, interns, and residents.

MATERIAL AND METHODS

In this cross-sectional study performed on 215 of medical students, interns, and residents. Inclusion criteria were all the attending residents, interns, and medical students of in Iran-Arak University of Medical Sciences (centre of Iran) who cooperated and completed the questionnaires. And the students who did not agree to contribute in the study were excluded. The rate of empathy with patients among medical students measured by The Jefferson Scale of Physician Empathy (JSPE)[39] (The JSE is a scale developed by Hojat et al. to assess empathy of medical school students (JSE-S) and physicians and health professionals (JSE-HP)) [40]. Additionally, demographic information such as age, sex, level of education, marital status, and field of study was also collected. Incorrectly or incompletely filled questionnaires were excluded.

The JSPE is a self-administrated 20-item scale designed to measure empathy in the context of patient care and doctor-patient relationship [6, 12]. The questionnaire takes 5 minutes to complete. Students rate their level of empathy for each item on the JSPE from 1 (strongly disagree) to 7 (strongly agree), with higher scores indicating higher levels of empathy. The empathy score varies from a minimum of 20 to a maximum of 140. In this study, to evaluate participants' actual empathy at work the executive physician of the project anonymously monitored their levels of empathy and responded to 10 selected questions from the Jefferson questionnaire (questions 1-2-4-5-7-8-12-14-16-18). Statistical analysis was performed using SPSS20 (SPSS Inc., Chicago, IL, USA) and $p < 0.05$ was considered statistically significant.

RESULTS

In total, 215 (76.5%) of medical students, interns, and residents were interviewed with the Jefferson Scale of Physician Empathy questionnaire. There were 98 medical students (45.6%), 52 interns (24.2%), and 65 residents (30.3%). Overall, 121 participants were female (56.28%) and 94 were male (43.72%), also 133 participants (61.86%) were single. Their mean age was 27.05 ± 5.25 years and the range was between 21 to 44 years. In this study, the mean total score of empathy was 98.08 ± 12.83 , with the lowest score at 63 and the highest at 132. The lowest average empathy score was seen in the fourth year residents (86.33) and the highest was in the second year residents (100.59). Average scores of empathy in medical students, interns, and residents were similar. So there was no significant difference between the students' levels (Table 1). As well as the empathy score of residents, according to the education years and field of study, was not statistically different (Table 2). Female students had a higher mean empathy score (99.8) while it was 95.87 in male students, which was significantly different ($p = 0.026$). The results shows a significant difference between the empathy average score for single students (96.32) and married students (100.95) ($p = 0.006$). Question 21 of the Jefferson questionnaire, designed to determine the impact of the training classes on increasing empathy that the majority of the participants (67.4%) agreed.

Table1: Comparison of empathy score of residents, interns and medical students in Iran-Arak University of Medical Sciences

Degree	Frequency (%)	Standard deviation \pm Average	Highest score	Lowest score	p-value
Medical Student	(45.58%)98	97.48 \pm 13.6	132	66	0.685
Intern	(24.18%)52	97.79 \pm 14.6	123	63	
Resident	(30.23%)65	99.23 \pm 9.88	118	73	

Table2: Comparison of students response to empathy questionnaire and supervisor's observed empathy score in Iran-Arak University of Medical Sciences

Questions		Agree	No Idea	Disagree	p-value
1. physician information about patients feelings and their relatives has no effect on patient treatment or surgery improvement	Physician	(28.4%)61	(12.1%)26	(59.5%)128	0.11
	Supervisor	(27%)58	(9.3%)20	(39.1%)84	
2. I understand the feelings of the patients, the patients feel better	Physician	(94.9%)204	(4.2%)9	(0.9%)2	0.001
	Supervisor	(55.8%)120	(15.3%)33	(4.2%)9	
4. Movement and appearance of patients as well as verbal communication with them, is an important factor in the relationship between patient and physician.	Physician	(80.5%)173	(11.6%)25	(7.9%)17	0.002
	Supervisor	(50.2%)108	(14%)30	(11.2%)24	
5. humor can leads to better outcomes	Physician	(63.3%)136	(19.5%)42	(17.2%)37	0.015
	Supervisor	(31.8%)82	(19.1%)41	(18.1%)39	
7. During the interview and physical examination attention to their emotions is not important	Physician	(8.8%)19	(2.8%)6	(88.4%)190	0.037
	Supervisor	(9.3%)20	(5.6%)12	(60.5%)130	
8. my attention to the patients personal experience has no treatment effect	Physician	(24.2%)52	(19.5%)42	(56.3%)121	0.128
	Supervisor	(23.3%)50	(14.9%)32	(37.2%)80	
12. Asking patients about their personal lives, does not help in understanding their physical problems	Physician	(18.1%)39	(11.6%)25	(70.2%)151	0.197
	Supervisor	(14.9%)32	(13%)28	(47.4%)102	
14. Emotions does not play a role in the treatment	Physician	(11.6%)25	(7.9%)17	(80.5%)173	0.02
	Supervisor	(12.6%)27	(10.2%)22	(52.6%)113	
16. One of the most important components to communicate with patients is understanding his/her emotional states and their families	Physician	(75.8%)163	(11.6%)25	(12.6%)27	0.001
	Supervisor	(37.2%)80	(21.4%)46	(16.7%)36	
18. Physicians should not let the emotional ties between the patient and his family, effect on their professional decisions.	Physician	(9.87)189	(6.5%)14	(5.6%)12	0.052
	Supervisor	(70.7%)152	(2.8%)6	(1.9%)4	

The results of participants' self-reported responses were compared with anonymous monitoring of their actual empathy at work (Table 3). From the perspective of the anonymous observer, the perception of patients' feelings of empathy was much lower than what was stated by the same participants. Although, in the conducted survey, the physicians believed in effect of humor, verbal communication, and empathy in patient's improvement, the observed scores regarding physicians' humor, verbal communication, and attention to understanding the emotions of the patients and their families were much lower than what they had stated in the questionnaires.

Table3. Comparison of empathy scores of residents in Iran-Arak University of Medical Sciences according to their fields of study

Resident Field	Standard deviation ±Average	Highest score	Lowest score	Frequency (percent)
Internal Medicine	93.31±11.35	112	73	(24.6%)16
General Surgery	98.53±8.65	107	84	(23.1%)15
Obstetrics & Gynecology	102±9.95	114	85	(15.4%)10
Pediatrics	100.62±6.43	114	92	(12.3%)8
Anesthesia	107.83±9.78	118	90	(9.2%)6
Infectious Diseases	102.67±4.5	107	98	(4.6%)3
Psychiatric Diseases	108±2.82	110	106	(3.1%)2
Emergency Medicine	94±9.16	102	84	(4.6%)3
Neurosurgery	100.5±3.53	103	98	(3.1%)2

DISCUSSION

In this study, we found that empathy score among medical students almost increased by the increase in their educational years, as the fourth and fifth year students had the lowest empathy score but the second

and third year residents had the highest scores. However the lowest score related to the fourth year residents who may be due to the low number of respondents (only three responders). It also shows that empathy increased with higher educational levels among medical students. So medical students not only should learn both scientific concepts of medicine and communicate with patients but also must learn how to treat patients [41]. The mean of the total empathy score was 98.08, which was much lower than the same studies in other countries [12, 22, 25, 28, 36, 37, 38, 42-51]. Jabarifar and Khademalhosseini [15, 51] reported the lower average empathy score than ours. The lowest level of empathy in dental students was not expected because of the low stress and workload in the dental field. This might be due to the fact that the need to perform painful procedures might make dentists hide their feelings from the patients. The results of our study showed no significant difference in the empathy scores of interns, medical students, and residents. Our study and previous studies conducted in Iran like Shariat *et al*'s study on residents of the University of Medical Sciences [34], and Jabarifar *et al*'s study on dental students of the Isfahan Dental School [34], reported no significant change in empathy with increasing years of education; while studies in other countries showed medical students' empathy decreased with increasing years of education [3, 11, 35]. It seems that, education and working conditions in hospitals slightly decreased the students' empathy in Iran. According to sex, the empathy score was higher in women than in men, which was in accordance with previous studies [3, 11, 28, 35, 42, 45]. It might be based on a greater ability to empathize with the patient's experiences and feelings and spending more time on history taking.

The mean score of empathy for married participants was significantly higher than for singles. However Shariat's study [34], showed no difference in empathy between married and single residents. The difference in these studies could be attributable to inclusion of all levels of medical students in our study. In none of the countries, the relationship between empathy and marital status has been studied. Among the surgical fields of study, residents of OB/GYN (Obstetrics and gynaecology) had the highest level of empathy, given the higher levels of empathy in women (in Iran all the obstetrics and gynaecology residents are female). In Shariat's study [34] in nonsurgical fields, the psychology residents had the highest level of empathy. Empathy was lowest in internal medicine and emergency medicine residents, which might be due to the large number of critical patients they have to handle.

In an age efficient comparison, the age variable divided into two groups (less than 25 years and more than 25 years), then they were compared and showed no significant differences between the two groups. This result was consistent with the study of Shariat and also with Daniel Chen's [13, 34]. The positive response about the need for educational seminars to increase empathy, indicates the importance of empathy for improving their medical practices. The main distinction between our study and other studies was using intangible control on the participants. After filling out the questionnaires, we anonymously monitored all participants while they were interacting with the patients. The observed empathy was much lower than what they stated. This finding emphasizes on necessitates the use of a questionnaire tailored to the society's culture. On other hand, because of the large number of critically ill patients who admitted to the hospital, receiving treatment has a higher priority than sympathy. Therefore, probably the Jefferson questionnaire isn't a perfect tool to measure empathy; so we need more applicable tool to measure the empathy for medical students.

In general medical students in Arak University of Medical Sciences had low empathy level and this may be due to changes in medical educational systems and decrease of students' clinical interactions with patients. It seems that the pressure of working in educational hospitals, the lack of adequate training on how to communicate with patients, long working hours, time pressure, social factors, and the lack of suitable role models, has caused a drop in the empathy scores of clinical staff [26, 35, 52-55]. The main limitation of our study was the low number of residents in most fields that impeded us from uncovering statistically significant differences between various fields of study. As a cross-sectional study, the deduction about the trend of empathy through the years of study could also be unreliable, and a cohort study that follows the changes of empathy in medical students from enrolment to graduation might lead to interesting results.

CONCLUSION

This study showed that the average empathy score in medical students, Interns and residents who participated in the study is lower than other countries. In addition, empathy with patients is not significantly different among medical students. Also females and married students had a better empathy score compared with men and singles. Therefore, further detailed studies to determine the cause of low empathy score is recommended.

AUTHOR'S CONTRIBUTIONS

Ali Cyrus planned and carried out the study and edited the paper. Bahman Salehi and Bahman Sadeghi Sedeh edited the paper. Rana Vosoulie performed the study and distributed the questionnaire. Naziri Mahdyieh performed the statistical analysis and helped to draft the manuscript. All authors read and approved the final manuscript.

CONFLICT OF INTEREST

The author declares that they have no conflict of interest.

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