Original Article

Physician Empathy and Its Relation to Age, Gender, and Years of Experience

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Abstract

Background: Empathy is a necessary clinical skill; it is a key element of physician–patient relations which have a significant role in the effectiveness of health care, the physician must have the competence to understand the patient's situation, perspective, and feelings, and to act on that understanding in a helpful therapeutic way. A highly empathetic doctor is the dream of every patient. **Objective:** The objective of the study was to determine the level of empathy among physicians at Al-Yarmouk Teaching Hospital and to assess its relation to age, gender, and years of experience. **Subjects and Methods:** A cross-sectional study was conducted among 300 physicians working at Al-Yarmouk Teaching Hospital in Baghdad, Iraq; the data collection was from April 14 to August 14, 2023. The data were collected by a self-administered questionnaire which consists of sociodemographic variables and questions of the Jefferson Scale of Empathy health professional version. Data analysis was done using SPSS version 24. **Results:** Three hundred physicians participated in the study. The mean age was 31.66 ± 5.288 years, 46% males and 54% females. The mean years of experience were 6.89 ± 5.551 years, 62.7% people-oriented physicians and 37.3% were technology oriented the majority of the people oriented were females and the majority of technology oriented were males. The median score was 102.00 with an interquartile range of 20.75, no significant association was found with gender or medical discipline. The median empathy score of physicians who had <10 years' experience appeared to be significantly higher in comparison to other groups; ($P < 0.001$), and also in juniors and the age group of 25–35 years. **Conclusions:** Empathy scores of younger physicians with <10 years of experience were significantly higher than other physicians, indicating that there is empathy decline as the years of experience increase that could be attributed to numerous factors that need to be further evaluated.

Keywords: Age, Al-Yarmouk Teaching Hospital, gender, health care, physician empathy, years of experience

Introduction

The concept of empathy was first introduced in the mid-19th century. At the end of the 19th century, the psychologist Theodore Lipps described empathy as "feeling one's way into the experience of another" which played a crucial role in eliciting empathy.[1] Since then, multiple attempts to define empathy have occurred over the past century. Throughout history, the development and integration of this concept evolved along three different periods, until the end of the 1950s, the cognitive dimension was mostly prevalent, from 1960 onwards, there was an emphasis on the affective dimension, and since 1970, empathy has been defined in all its dimensions; that is, the behavioral aspect was included.[2] The definition varies depending on the discipline defining empathy,[3] which has been described in various ways, such as feelings of concern for others that create the motivation to help, experiencing emotions that match those of another individual, knowing what another is thinking or feeling, and even as blurring of the line between self and other.[1]

Empathy has been found to be affected by many factors such as age, gender, specialty, and years of experience. In one study, a systematic review was performed by choosing 29 articles most of which used the Jefferson Scale of Empathy. Based on the findings of these articles, sociodemographic factors (female gender, being married, being older, having siblings, and

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having children) are associated with higher levels of empathy. Professional experience (years of practice) and being in the final years of the course also contributed to higher levels of empathy.[4]

A study in Iraq on medical students in Erbil city that used the Jefferson Scale of Empathy student's version found that female students had significantly higher empathy levels than male students, and a significant decline in empathy scores was observed among male students according to academic year.[5] Furthermore, a number of studies suggest that empathy levels decline during residency years.[6]

Subjects and Methods

Study design and duration

The current study was conducted among physicians working at Al-Yarmouk Teaching Hospital across the wards of the hospital and consultation rooms, a cross-sectional study with analytical elements was conducted, and data were collected during the period (April–August 2023). The sample size was calculated according to the sample size calculator from a website[7], where from a population of 960 physicians, confidence interval is equal to 95%, margin of error is 5, and population proportion 50%; the estimated sample size was 275, which was increased to 300. The selection of the participants was by convenient sampling.

The data were collected by distributing the self-administered questionnaire and was filled out by the physicians; the questionnaire is the Jefferson Scale of Empathy. HP version, the validity of which proved by many studies, and it is widely used in medical research.[8]

Pilot study

The questionnaire was pretested by a pilot study on a sample of 20 physicians to assess the clarity of questions, cooperation of candidates, and to estimate the average time needed to fulfill the questionnaire. And then according to the results obtained, modifications to the questionnaire were done.

Statistical analysis

The Statistical Package for the Social Sciences (SPSS) version 24 (SPSS Inc., Chicago, IL, USA) was used to analyze the data; data were represented by descriptive and inferential statistics (frequency percentage, median, and interquartile range [IQR]) as they showed a nonnormal distribution. Kruskal–Wallis test, Mann–Whitney test, and Pearson's Chi-square-test were used for group frequency comparison, and the level of significance was set at < 0.05.

Results

A total of 300 physicians were included in the study with a mean age of 31.66 ± 5.288 years (ranging between 25 and 59). The most common age group was 25–35 years 255 (85%). There were 138 (46.0%) males and 162 (54.0%) females. Years of experience were <10 years among 248 (82.7%), 10–20 years among 39 (13%), and >20 years among 13 (4.3%), with a mean of 6.89 ± 5.551 years (ranging between 1 and 36 years). The titles of physicians were junior 64 (21.3%), resident 188 (62.7%), and specialist 48 (16.0%) [Table 1].

There were 148 (62.7%) people-oriented physicians and 88 (37.3%) technology oriented, as shown in Figure 1.

Most people-oriented physicians were females 91 (61.5%), while most technology-oriented physicians were males 61 (69.3%); with significant difference [$P < 0.001$, Table 2].

Better behavioral orientation of physician's empathy for patients (strongly agree) was most commonly for questions (My patients feel better when I understand their feelings [45.3%], and also for the question (My understanding of my patients' feelings gives them a sense of validation that is therapeutic in its own right).

Poor behavioral orientation of physician's empathy for patients was mostly for questions (I do not allow myself to be touched by intense emotional relationships between my patients and their family members [16.7%] answered strongly agree. While for question (I do not enjoy reading non medical literature and the arts) 10.0% of the answers was strongly agree) [Table 3].

The empathy score was nonnormally distributed. The median was 102.00 with an IQR of 20.75; the median empathy score was significantly higher among physicians within the age group of 25–35 years in comparison to others ($P < 0.001$).

There was no significant difference between males and females according to the median empathy score [$P = 0.31$, Table 4].

The median empathy score of physicians who had <10 years' experience appeared to be significantly higher in comparison to other years of experience; $P < 0.001$.

Furthermore, the median empathy score of junior physicians was significantly higher in comparison to other job titles [$P < 0.001$, Table 5].

Table 1: Characteristic features of the participants at Al-Yarmouk Teaching Hospital

Features	*n*=300; 100%, *n* (%)
Age group (years), mean	31.66±5.288
25–35	255 (85.0)
36–46	42 (14.0)
≥47	3 (1.0)
Gender	
Male	138 (46.0)
Female	162 (54.0)
Years of experience, mean	6.89±5.551
<10	248 (82.7)
10–20	39 (13.0)
>20	13 (4.3)
Job title	
Junior	64 (21.3)
Resident	188 (62.7)
Specialist	48 (16.0)

There was no significant difference between physicians' branches according to the empathy score [$P = 0.83$, Table 6].

Discussion

Empathy is an important factor in the doctor–patient relationship. Although many studies assessing empathy have been done in many countries, little is known about it in Iraq.

A total of 300 physicians participated in the study, and the most common age group was (25–35); hence, residents were

Table 2: Discipline distribution according to the gender ($n = 236$)

Branch	Gender		*P**
	Male ($n = 118$), *n* (%)	Female ($n = 118$), *n* (%)	
People oriented	57 (38.5)	91 (61.5)	<0.001
Technology oriented	61 (69.3)	27 (30.7)	

*Chi-square tests

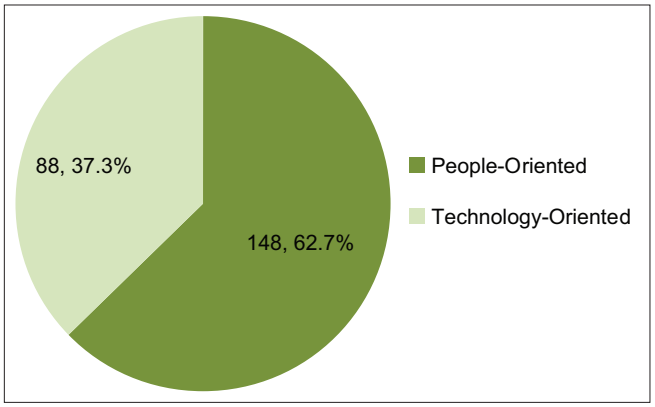

Figure 1: Discipline of physicians

Table 3: Distribution of physician's answers to the Jefferson scale

Questions	Strongly disagree, *n* (%)	Grade of response					Strongly agree
		1	2	3	4	5	
		n (%)	*n* (%)	*n* (%)	*n* (%)	*n* (%)	
My patients feel better when I understand their feelings	10 (3.3)	5 (1.7)	6 (2.0)	27 (9.0)	35 (11.7)	81 (27.0)	136 (45.3)
I consider understanding my patient's body language as important as verbal communication in physician–patient relationships	7 (2.3)	6 (2.0)	34 (11.3)	31 (10.3)	56 (18.7)	83 (27.7)	83 (27.7)
I have a good sense of humor, which I think contributes to a better clinical outcome	23 (7.7)	10 (3.3)	27 (9.0)	55 (18.3)	56 (18.7)	69 (23.0)	60 (20.0)
I try to imagine myself in my patient's shoes when providing care to them	16 (5.3)	5 (1.7)	30 (10.0)	36 (12.0)	36 (12.0)	59 (19.7)	118 (39.3)
My understanding of my patient's feelings gives them a sense of validation that is therapeutic in its own right	3 (1.0)	8 (2.7)	16 (5.3)	24 (8.0)	51 (17.0)	76 (25.3)	122 (40.7)
I try to understand what is going on in my patients' minds by paying attention to their nonverbal cues and body language	7 (2.3)	18 (6.0)	29 (9.7)	41 (13.7)	56 (18.7)	86 (28.7)	63 (21.0)
Empathy is a therapeutic skill without which my success as a physician would be limited	21 (7.0)	18 (6.0)	30 (10.0)	46 (15.3)	41 (13.7)	90 (30.0)	54 (18.0)
An important component of the relationship with my patient is my understanding of the emotional status of patients and their families	19 (6.3)	16 (5.3)	31 (10.3)	41 (13.7)	61 (20.3)	74 (24.7)	58 (19.3)
I try to think like my patients to render better care	10 (3.3)	16 (5.3)	43 (14.3)	63 (21.0)	43 (14.3)	66 (22.0)	59 (19.7)
I believe that empathy is an important therapeutic factor in medical treatment	8 (2.7)	14 (4.7)	8 (2.7)	44 (14.7)	57 (19.0)	79 (26.3)	90 (30.0)
My understanding of how my patients and their families feel is an irrelevant factor in medical treatment*	126 (42.0)	50 (16.7)	43 (14.3)	32 (10.7)	11 (3.7)	17 (5.7)	21 (7.0)
It is difficult for me to view things from my patient's perspective*	34 (11.3)	61 (20.3)	70 (23.3)	64 (21.3)	20 (6.7)	25 (8.3)	26 (8.7)
Because people are different, it is almost impossible for me to see things from my patient's perspectives*	33 (11.0)	50 (16.7)	68 (22.7)	78 (26.0)	28 (9.3)	19 (6.3)	24 (8.0)
I try not to pay attention to my patient's emotions in interviewing and history taking*	127 (42.3)	67 (22.3)	34 (11.3)	23 (7.7)	19 (6.3)	20 (6.7)	10 (3.3)
Attentiveness to my patient's personal experiences is irrelevant to treatment effectiveness*	78 (26.0)	57 (19.0)	64 (21.3)	31 (10.3)	22 (7.3)	28 (9.3)	20 (6.7)
Patient's illnesses can be cured only by medical treatment; therefore, affection ties to my patients cannot have a significant place in this endeavor*	78 (26.0)	66 (22.0)	71 (23.7)	32 (10.7)	18 (6.0)	29 (9.7)	6 (2.0)
I consider asking patients about what is happening in their lives as an unimportant factor in understanding their physical complaints*	66 (22.0)	66 (22.0)	40 (13.3)	52 (17.3)	30 (10.0)	33 (11.0)	13 (4.3)
I believe that emotion has no place in the treatment of medical illness*	108 (36.0)	55 (18.3)	46 (15.3)	30 (10.0)	14 (4.7)	30 (10.0)	17 (5.7)
I do not allow myself to be touched by intense emotional relationships between my patients and their family members*	7 (2.3)	19 (6.3)	36 (12.0)	80 (26.7)	34 (11.3)	74 (24.7)	50 (16.7)
I do not enjoy reading nonmedical literature and the arts*	101 (33.7)	54 (18.0)	35 (11.7)	32 (10.7)	22 (7.3)	26 (8.7)	30 (10.0)

*Reversed scored questions

Table 4: Distribution of age and gender of the physicians by empathy score

Variables	Empathy score (102.00, IQR 20.75)		*P*
	Median	IQR	
Age group (years)			
25–35	105.00	94.00	<0.001*
36–46	92.50	70.00	
≥47	98.00	77.00	
Gender			
Male	102.50	93.00	0.31**
Female	100.00	86.00	

*Kruskal–Wallis test, **Mann–Whitney test. IQR: Interquartile range

Table 5: Distribution of years of experience and job title of the physicians by empathy score

Variables	Empathy score		*P**
	Median	IQR	
Years of experience			
<10	104.50	95.00	<0.001
10–20	92.00	70.00	
>20	93.00	77.00	
Job title			
Junior	111.50	103.50	<0.001
Resident	100.00	91.00	
Specialist	94.00	77.00	

*Kruskal–Wallis test. IQR: Interquartile range

Table 6: Distribution of physician's disciplines by empathy score (*n*=236)

Branch	Empathy score		*P**
	Median	IQR	
People oriented	99.00	87.50	0.83
Technology oriented	98.50	90.00	

*Mann–Whitney test. IQR: Interquartile range

the most common participants and the vast majority of the participants had <10 years of experience, as the physicians in this age group were more cooperative and willing to participate in the study and present for longer times of the day. This age group represented two-thirds of the population in this study and the sample was convenient contributed to them being the majority. This age group was most common in other studies conducted in teaching hospitals like Turkey.[9] Physicians of people-oriented specialties were the majority as they were more readily available in the wards and outpatient clinics in comparative to technology-oriented group mostly surgical branches were mostly in the operative rooms and less available in the wards. Most of the people-oriented specialties were females and most technology-oriented specialties were males with significant association this was seen in other studies[9,10] and a study in Erbil Iraq on medical students found that most females are planning to choose people-oriented specialties and most males planning to choose technology oriented.[5] This could be explained by females preferring specialties with frequent and continuous encounters with patients and preventive care and males prefer specialties that require more technical and procedural skills.

The overall median score among the studied sample was 102 with IQR of (20.75) close to the scores of studies India which was conducted during the COVID-19 crisis.[11] The answers of the physicians in this study showed better behavioral orientation in questions regarding the feelings of the patients and their families; strongly agree (my patients feel better when I understand their feelings, my understanding of my patients' feelings gives them a sense of validation that is therapeutic in its own right). And (strongly disagree) for I try not to pay attention to my patients' emotions in interviewing and history taking, my understanding of how my patients and their families feel is an irrelevant factor in medical treatment. Which is similar to studies in Saudi.[10]

The median empathy score was significantly higher among the age group 25–35 years); this significance was found in many studies but with difference in negative or positive association like as study in Iran that had the highest empathy score in 36–45 years old[12] but no significant association was found. This could be explained by these studies having a higher mean age than this study. A study in turkey with a mean age close to this study found empathy scores to be higher in the age group 29–39 years in internal medicine group and in the younger age group in surgical branches.[9]

When comparing years of experience, the highest median score was in those with <10 years of experience with a significant association, multiple other studies also found this association, a study in Iran found a positive association with increasing the years of experience,[12] and a study in Nigeria also found a positive association.[13] The study in Turkey with mean years of experience like the current study found that the highest empathy score was among the 6–10 years of experience which agrees with the current study.[9] A systematic review study that compared many studies on the effect of experience on empathy scores found that it was unclear whether empathy scores increases or decreases across the residency years.[14]

This decrease in empathy scores was more obvious when the results were matched according to the job titles with juniors having the highest scores then residents then specialists which disagrees with studies like in Nigeria.[13] This also could be partially attributed to the small number of specialists in this study and the different sample.

When the median empathy score was matched for gender no significant difference in empathy score between males and females. This was found, this was the case in a few other studies like in India[11] where no significant association was found. while, a studyin Saudi[10] found higher empathy scores in women. On the other hand, a study that made a systemic review of numerous studies on the predictors of physician empathy found conflicted results regarding the effect of gender

on physician empathy.[14] This could be attributed to the difference in the mean age in the study population and sample size and the different circumstances that the questionnaire was filled.

This difference between the current study and other studies could be attributed to the different departments like physicians in obstetric and gynecological department were oriented to the the current study while the previously mentioned studies included it in the surgical branches, and also the different sample population.

Conclusions

It was concluded that the empathy scores were higher among physicians with <10 years of experience and among the youngest age. Juniors having the highest scores then residents then specialists. As well as current results indicate declining in empathy scores as the years of experience increases.

Ethical considerations

Data collection was started after obtaining the official approval from the scientific committee of AL-Kindy College of Medicine, Scientific Counsel of Iraqi board, and Al-Karkh Health Directorate Al-Yarmouk Teaching Hospital.

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Conflicts of interest

There are no conflicts of interest.

References

1. Riess H. The science of empathy. J Patient Exp 2017;4:74-7.
2. Moudatsou M, Stavropoulou A, Philalithis A, Koukouli S. The role of empathy in health and social care professionals. Healthcare (Basel) 2020;8:26.
3. Eby D. Empathy in general practice: Its meaning for patients and doctors. Br J Gen Pract 2018;68:412-3.
4. Maximiano-Barreto MA, Fabrício DM, Luchesi BM, Chagas MH. Factors associated with levels of empathy among students and professionals in the health field: A systematic review. Trends Psychiatry Psychother 2020;42:207-15.
5. Raof AM, Yassin BA. Measuring empathy levels among Kurdish medical students in Erbil city, Iraq: Cross-sectional study. Sultan Qaboos Univ Med J 2016;16:e62-7.
6. Gleichgerrcht E, Decety J. Empathy in clinical practice: How individual dispositions, gender, and experience moderate empathic concern, burnout, and emotional distress in physicians. PLoS One 2013;8:e61526.
7. Sample Size Calculator. Available from: https://www.calculator.net/sample-size-calculator.html?type=1&cl=95&ci=5&pp=50&ps=960&x= 63&y=25. [Last accessed on 2023 May 10].
8. Hojat M, Maxwell K, Carroll S, Cass J. Empathy Jefferson Scale User Guide; 2016. Available from: https://www.medicinanarrativa.eu/wp-content/uploads/2016/11/Empathy-Jefferson-Scale-USER-GUIDE.pdf. [Last accessed on 2023 May 18].
9. Korkut B, İnci H, Kalem P, Cindoruk D, Çelik E, Adahan D, *et al*. A comparison of empathy levels of physicians working in internal and surgical branches: A cross-sectional study. Arch Clin Psychiatry 2022;49:30-5.
10. AlSaif HI, Alenezi MN, Asiri M, Alshaibani KO, Alrasheed AA, Alsaad SM, *et al.* Empathy among Saudi residents at a tertiary academic center during the COVID-19 pandemic and its association with perceived stress. Medicina (Kaunas) 2022;58:1258.
11. Raja BA, Sriambika K, Khandhadiya K, Guru SC, Mahajan U. Physician empathy during crisis: A survey of doctors in COVID-19 pandemic (COPE study). Med J Armed Forces India 2022;80(3),335-45. [doi: 10.1016/j.mjafi. 2022.08.012].
12. Ali M, Korosh K. Physician empathy towards patients: A survey in Iranian teaching hospitals. Int J Hosp Res 2016;5:52-7.
13. Obimakinde AM, Iyoke UO, Ibiyo MJ, Emmanuel ON, Odefemi OF, Abiodun AH. Empathy assessment among medical doctors working at the University College Hospital Ibadan, Nigeria. J Mental Health Hum Behav 2021;26:109-16.
14. Pavlova A, Wang CX, Boggiss AL, O'Callaghan A, Consedine NS. Predictors of physician compassion, empathy, and related constructs: A systematic review. J Gen Intern Med 2022;37:900-11.