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Patient-rated physicians' empathy and its determinants in Riyadh, Saudi Arabia

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Abstract:

BACKGROUND: Patients' perception of their physician's empathy influences their compliance with treatment and the resulting quality of life. We aimed to measure the patient-rated empathy of physicians and to determine patient-level factors associated with it.

MATERIALS AND METHODS: This hospital-based cross-sectional study enrolled adult (≥ 18 years) patients attending the outpatient clinics of the departments of family medicine, internal medicine, and surgery. We measured patients' rating of their physician's empathy using the Jefferson Scale of Patient's Perception of Physician Empathy questionnaire. Data were analyzed using SPSS v 23.0; categorical variables were presented as frequencies and percentages, and all quantitative variables were presented as mean and SD. Associations were explored by Chi-square test and Student's *t*-test. Regression analysis was performed to identify factors significantly associated with the empathy score; $P < 0.05$ was considered statistically significant.

RESULTS: Of a total of 390 patients with a mean (standard deviation [SD]) age of 40.5 (13.6) years, 189 (48.5%) were male. The mean (SD) total patient-rated physician empathy score was 26.6 (6.0). Multilevel linear regression modeling revealed that having a health professional in the family, suffering from an acute illness (as compared to chronic illness), consulting a physician recommended by relatives/friends, trusting the physicians' expertise, shorter (< 10 min) waiting time, and perceived adequate consultation time were associated with higher empathy ratings.

CONCLUSIONS: Patients' perception of physicians' empathy is indispensable for the success of a clinical consultation. It is influenced by patient-level social and clinical factors. On-the-job physician training in empathy, effective monitoring, and feedback mechanisms should be an integral component of the quality control of hospital services.

Keywords:

Patient satisfaction, patient rated, physician empathy, Saudi Arabia

Introduction

Empathy is a complex, broad, multidimensional concept comprising four components – the emotive (the ability to imagine patients' emotions), cognitive (the intellectual ability to identify and understand patients' emotions), moral (the internal motivation to empathize), and behavioral (the ability to convey

the understanding of those emotions back to the patient).^[1,2] Physician's empathy is fundamental to patient-doctor relationship.^[3] An empathetic encounter with the physician can have several benefits, such as better reporting of symptoms, improved diagnostic accuracy, increased patient participation in the diagnostic process, improved patient satisfaction, better ability to cope with the prescribed treatment, reduced depression, and improved quality of life. A higher level of empathy has also

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been found to be significantly associated with less clinical burnout of physicians.^[4-7]

Empathy expressed by a physician in a physician–patient encounter can be viewed from three perspectives – the physician, the patient, and a third person. Patients' perception of physician empathy is influenced by physician's characteristics such as age, gender, years of experience, academic performance, emotions and emotional control, personal experiences, feelings and attitudes toward patients, and academic and clinical experiences.^[8-10] Apart from these, many patient-level factors such as sociodemographic, illness, and consultation-related characteristics also affect their perception. Understanding how and why certain types of patients rate some physicians can be of great importance in planning effective health-care services.

Of the different ways of measuring physician empathy, patients' viewpoint is the most important in terms of maximizing successful clinical outcomes. It is also important to understand patients' expectations from their physicians and the factors that influence their perception because the literature shows that physicians' self-assessment of empathy may not always correlate with patients' assessment.^[11] This knowledge can then be utilized to train physicians and improve the quality of health services to produce better health outcomes.

With this aim, the current study was conducted to measure patient-rated physicians' empathy and determine the various factors associated with a higher rating at a tertiary care governmental hospital in Riyadh, Saudi Arabia.

Materials and Methods

A hospital-based cross-sectional study was conducted at the Family Medicine, Internal Medicine, and Surgery outpatient clinics (outpatient department [OPD]) of King Saud Medical City in Riyadh, Saudi Arabia, from September to December 2018. The study hospital caters to a large section of Riyadh's population from diverse socioeconomic backgrounds. Adult patients (18 years old and above) who attended these three clinics were invited to participate in the study. Severely ill patients and patients incapable of giving valid consent due to mental health issues were excluded from the study.

We sampled patients clustered around thirty physicians (ten each from the above mentioned OPDs). The number of patients sampled under each physician was calculated on the following assumptions. An assumed population standard deviation (SD) of 2.5 obtained from a previous study,^[12] a confidence level of 95%, an acceptable error of 2, and a nonresponse rate

of 20%. The sample size so derived was multiplied by a design effect of 1.5 to account for the clustering, giving us the final sample size of 390 (13 patients interviewed for every physician). These patients were enrolled in a consecutive manner outside each physician's clinic (exit interview) till the required size was achieved.

The Arabic version of the 5-point Likert-type Jefferson Scale of Patient's Perception of Physician Empathy (JSPPPE) questionnaire was used to score the patient's rating of the empathy of the physician consulted. This scale had been validated in previous studies and therefore, deemed appropriate for this study.^[13,14] The first author of this paper with another bilingual colleague translated the English scale into Arabic. This Arabic version was then re-translated into English by two different bilingual experts who were not familiar with the original English version. The author's team then compared the two English versions for validity and observed no inconsistencies. Along with the JSPPPE, a patient's questionnaire including sociodemographic details such as age, gender, nationality, educational level, income, and questions related to their clinical history was also administered. Patients were approached as they exited the clinic and asked to participate, and their eligibility was checked by the study staff. After the objectives of the study were explained to the patients, a written informed consent was obtained from them, and they were then asked to complete the self-administered questionnaire.

Data were captured electronically using Epicollect 5 software (Imperial College, London, UK) and were analyzed using SPSS v 23.0 (SPSS Inc., IBM, Armonk, New York, USA). Descriptive analysis was performed: all categorical variables were presented as frequencies and percentages, and all quantitative variables were presented as mean and SD. Associations were explored by Chi-square test and Student's *t*-test. Regression analysis using multilevel general linear method with random intercepts for the consulting physicians around whom the patients were clustered was performed to identify factors significantly associated with the empathy score. The variables to be entered in the model were decided on the basis of $P < 0.2$ in the bivariate analysis. $P < 0.05$ was considered to be statistically significant in the final model.

Ethical approval had been obtained from the Institutional Review Board, and informed written consent was taken from all participants in the study.

Results

The summary measures of the individual items and the total score of the JSPPPE scale are given in Table 1. Of a total of 390 patients who participated in the study,

189 (48.5%) were male. Their mean age (SD) was 40.5 (13.6) years (range: 18–98 years). Three hundred and twenty-nine patients (84.4%) were Saudi nationals, 263 (67.4%) were currently married, and 202 (51.8%) were employed, 48 (23.8%) of whom work in the health sector [Table 2]. The mean (SD) total patient-rated physician's empathy score

was 26.6 (6.0) (range of 5.0–35.0). Of the five questions on the JSPPE scale, patients rated their physician highest on whether their doctor was an “understanding doctor” (6.24 ± 1.1) and lowest on their doctor's concern for them and their family (4.75 ± 1.8) [Table 1].

Table 1: Summary measures of the Jefferson scale of patient's perception of physician empathy in adults attending outpatient clinics in a tertiary care hospital in Riyadh (n=390)

	Mean±SD
Can view things from my perspective	5.7±1.3
Asks about what is happening in my daily life	4.8±1.8
Seems concerned about me and my family	4.8±1.8
Understands my emotions, feelings, and concerns	5.1±1.7
Is an understanding doctor	6.2±1.1
Total empathy score rated by client	26.6±6.0

Higher score indicates higher empathy. SD=Standard deviation

In the bivariate analysis, it was observed that patients who were more than 40 years of age rated their physician significantly higher than younger patients ($P = 0.04$). Patients who were currently married ($P = 0.001$), those with college degrees ($P = 0.008$), and those who had a higher monthly family income (>10,000 SR and above) ($P = 0.04$) rated their physicians higher on empathy than their counterparts [Table 2]. Patients who had a health professional in their family ($P = 0.003$), who had an acute illness (as compared to those with a chronic illness) ($P = 0.008$), whose doctor was recommended by friends/relatives ($P = 0.01$), who trusted their doctors ($P < 0.001$), who understood

Table 2: Factors (sociodemographic) associated with patient-rated physician empathy by characteristics of adults attending outpatient clinics in a tertiary care hospital in Riyadh (n=390)

Characteristics	Number (%)	Empathy score mean±SD	P-Value
Age category (years)			
18-40	206 (52.8)	25.99±5.89	0.04
>40	184 (47.2)	27.24±6.10	
Sex			
Female	201 (51.5)	26.15±6.31	0.14
Male	189 (48.5)	27.04±5.66	
Marital status			
Currently married	263 (67.4)	27.13±5.90	0.01
Never married	87 (22.3)	25.05±6.27	
Divorced/widowed/separated	40 (10.3)	26.33±5.73	
Nationality			
Non-Saudi	61 (15.6)	26.62±6.52	0.95
Saudi	329 (84.4)	26.57±5.93	
Educational level			
Can read and write	21 (5.4)	24.52±4.86	0.08
Any school certificate	202 (51.8)	26.78±5.89	
Any college degree	128 (32.8)	27.10±6.07	
Technical training others	39 (10.0)	24.92±6.71	
Employment status			
Employed	202 (51.8)	26.90±6.23	0.34
Retired	22 (5.6)	27.86±5.45	
Student	28 (7.2)	25.43±3.80	
Unemployed	138 (35.4)	26.14±6.13	
Employment in the health sector			
No	342 (87.7)	26.49±5.95	0.41
Yes	48 (12.3)	27.25±6.50	
Total family income (SR)			
<3000	72 (18.5)	25.49±6.72	0.04
3000-5000	62 (15.9)	25.63±6.15	
5000-7000	76 (19.5)	26.25±4.99	
7000-10,000	75 (19.2)	26.53±6.12	
10,000-15,000	65 (16.7)	28.03±6.11	
>15000	40 (10.3)	28.37±5.38	

P value is from Student's t-test/ANOVA test, $P < 0.05$ is statistically significant, higher score means more empathetic. SD=Standard deviation

Table 3: Factors (consultation and illness) associated with patient-rated physician empathy by characteristics among adults attending outpatient clinics in a tertiary care hospital in Riyadh (n=390)

Characteristics	Number (%)	Empathy score mean±SD	P-Value
Any health professional in the family			
No	288 (73.8)	26.03±5.97	0.003
Yes	102 (26.2)	28.12±5.89	
Type of illness			
Acute illness	70 (17.9)	28.30±6.53	0.008
Chronic disease	320 (82.1)	26.20±5.84	
Consulted this doctor before			
No	233 (59.7)	26.57±6.16	0.95
Yes	157 (40.3)	26.60±5.81	
First visit to this doctor for the current illness			
No	174 (44.6)	26.63±5.32	0.89
Yes	216 (55.4)	26.54±6.53	
Consulted another doctor for the current illness			
No	164 (42.1)	27.13±6.46	0.12
Yes	226 (57.9)	26.18±5.66	
Doctor was recommended by relatives, friends or other doctors			
No	347 (89.0)	26.32±6.03	0.01
Yes	43 (11.0)	28.67±5.52	
Trust in doctor's expertise			
No	15 (3.8)	14.67±5.90	<0.001
Yes	375 (96.2)	27.06±5.51	
Have relatives following up with this doctor			
No	364 (93.3)	26.58±6.01	0.99
Yes	26 (6.7)	26.58±6.26	
Understood the doctor's language			
No	13 (3.3)	21.23±7.76	0.001
Yes	377 (96.7)	26.76±5.87	
Waiting time before consultation (min)			
<10	128 (32.8)	28.19±5.79	<0.001
10-30	152 (39.0)	26.20±5.61	
>30	110 (28.2)	25.23±6.43	
Consultation time (min)			
<10	228 (58.5)	26.25±6.32	0.19
10-30	153 (39.2)	26.90±5.63	
>30	9 (2.3)	29.56±3.09	
Perceived adequacy of consultation time			
No	24 (6.2)	18.79±7.51	<0.001
Yes	366 (93.8)	27.09±5.55	
Would recommend this doctor to others			
No	64 (16.4)	21.11±7.03	<0.001
Yes	326 (83.6)	27.65±5.17	

P value is from Student's *t*-test/ANOVA test, *P*<0.05 is statistically significant. SD=Standard deviation

their doctor's language (*P* = 0.001), who had shorter waiting times (*P* < 0.001), and who thought that the consultation time was adequate (*P* < 0.001) gave a significantly higher empathy score. However, the actual duration of the consultation time did not influence the rating. Furthermore, patients who gave a higher score also stated that they would recommend their doctor to others (*P* < 0.001) [Table 3].

Because patients were clustered around their consulting physicians, we performed a multilevel linear regression

analysis with random intercepts for the consulting physicians. We found that the presence of a health professional in the family (*b* = 1.44; 95% confidence interval [CI]: 0.33–2.54), an acute illness (*b* = 1.66; 95% CI: 0.24–3.07), a doctor recommended by relatives/friends (*b* = 3.04; 95% CI: 1.47–4.61), confidence in the doctor's expertise (*b* = 7.96; 95% CI: 5.38–10.53), waiting time before consultation of <10 min (*b* = 1.72; 95% CI: 0.46–2.98), and perceived adequate consultation time with their doctor (*b* = 6.27; 95% CI: 4.28–8.26) were the factors significantly associated with higher empathy scores. The

Table 4: Random intercepts model for factors associated with client-rated physician empathy among adults attending outpatient clinics in a tertiary care hospital in Riyadh (n=390)

	Coefficient	SE	Lower CI	Upper CI	P-Value
Age category (years)					
<40	Reference				
>40	1.15	0.59	-0.003	2.31	0.05
Marital status					
Currently married	Reference				
Never married	-0.55	0.65	-1.83	0.73	0.40
Divorced/widowed/separated	0.28	0.82	-1.32	1.88	0.73
Educational level					
Can read and write	Reference				
Any school degree	1.43	1.14	-0.81	3.66	0.21
Any college degree	1.29	1.28	-1.21	3.79	0.31
Technical training/others	-0.09	1.32	-2.68	2.50	0.95
Total family income (SR)					
<3000	Reference				
3000-5000	0.11	0.81	-1.48	1.71	0.89
5000-7000	0.24	0.81	-1.35	1.83	0.77
7000-10,000	-0.12	0.86	-1.80	1.57	0.89
10,000-15,000	1.32	0.87	-0.39	3.02	0.13
>15,000	0.95	1.03	-1.07	2.97	0.35
Any health professional in the family	1.44	0.56	0.33	2.54	0.01
Type of illness					
Chronic illness	Reference				
Acute illness	1.66	0.72	0.24	3.07	0.02
Doctor was recommended by relatives, friends, or other doctors	3.04	0.80	1.47	4.61	<0.0001
Trust in doctor's expertise	7.96	1.31	5.38	10.53	<0.0001
Understood the doctor's language	2.52	1.34	-0.11	5.14	0.06
Waiting time before consultation (min)					
>30	Reference				
10-30	0.55	0.61	-0.64	1.74	0.37
<10	1.72	0.64	0.46	2.98	0.01
Perceived consultation time as adequate	6.27	1.02	4.28	8.26	<0.0001
Constant	6.86	2.23	2.50	11.23	<0.0001

Wald χ^2 (19)=190.9, Log likelihood=-1154.8, $P<0.0001$, LR test versus linear model: χ^2 (01)=33.1, $P<0.0001$. SE=Standard error, CI=Confidence interval, LR=Likelihood ratio

overall model was statistically significant (Wald $\chi^2 = 190.9$, $P < 0.001$) and performed better (log likelihood ratio test: chi-bar square value = 33.1, $P < 0.001$) than a comparable linear regression model [Table 4].

Discussion

This questionnaire-based cross-sectional study of 390 patients presenting at the OPD clinics at a tertiary care hospital in Riyadh city, showed that the presence of a health-care professional in the family, suffering from an acute illness as opposed to a chronic illness, consulting a doctor recommended by someone, confidence in the doctor's expertise, shorter waiting time, and perceived adequate consultation time were associated with a perception of higher physician empathy. The credibility of our findings was enhanced by the fact that the use of a widely validated scale and the statistical analysis done to account for the clustering of patients around physicians led to more robust estimations.

The maximum score that patients could award their physician in the JSPPPE scale was 35. In our study, the average score of physicians was 26.6, indicating that patients perceived their physicians to be empathetic. Of the other studies conducted using the same scale, two studies reported a score higher than that of our study. A study on 535 outpatients of a teaching hospital in the United States reported a mean JSPPPE score of 29.6 ± 7.8 , and a study conducted on 945 outpatient patients at a multispecialty hospital in Brazil reported a score of 30.6 ± 5.6 .^[11,14] However, a study on 225 ambulatory patients in the United States reported a mean score of 23.8 ± 2.5 , which is lower than that reported in our study.^[15]

In the present study, patients assigned the lowest scores to the following items: "the doctor asks about what is happening in my daily life" and "the doctor seems concerned about me and my family." This was somewhat similar to the study by Borracci *et al.*,^[16] in

which the respondents scored their physicians lowest on the following items: “the doctor asks what is happening in my daily life” and “the doctor can view things from my perspective.” This is an important area in which physicians were found lacking empathy. In situations where patients and their immediate family members have to make a difficult healthcare-related decision, the physician should have a good understanding of the patient and his/her family to be able to effectively involve him/her in the decision-making and arrive at the best course of action for the patient.^[17] It may be necessary to provide training and direction to consulting physicians on this aspect of their interactions with patients to understand them in their microcosm.

Earlier studies using the JSPPE reported that males, elderly patients, the less educated, and public hospital attendants gave their physicians higher scores.^[16] Duberstein *et al.* reported that older patients gave higher ratings compared to younger patients.^[18] The mean score given by older patients in our study was also higher than that of their younger counterparts, but this finding was not statistically significant on the multilevel model. Patients who belong to the upper social classes or with higher total family income usually tend to give higher empathy rating because they have a more direct participatory consulting style, characterized by more questioning and more information-giving, leading to more discussions and greater socioemotional partnership with their doctors compared to patients who have lower monthly incomes.^[19]

Another finding was that patients who have family members working in health care gave better scores to their physicians. This could be because they have a better understanding of the role of their doctors and are liberal in their scoring. Further, as they have a better understanding of the field of medicine and the “system” of patient–doctor relationships, they understood their doctors’ shortcomings and were generally more lenient. This is similar to the situation in which doctors or nurses are patients.^[20]

Patients with acute and nondebilitating illnesses were found to give higher scores as they were less likely to suffer from psychological and emotional burnout compared to chronically ill patients who were more likely to be emotionally preoccupied with finding the means of coping with their illness. Patients with chronic illnesses who have lived with the condition for longer periods of time and have had many previous consultations have higher expectations from the physician and have less satisfaction with the expressed empathy. When patients have confidence in their doctors, they are more satisfied and their health outcomes are better.^[21] This is the reason why patients who trust their doctors rated

their physician’s empathy higher than patients who had no trust in them.

Shorter waiting times before seeing the doctor was found to be significantly associated with higher rating. It has previously been reported that a patient’s satisfaction is substantially reduced with longer waiting times (5 min or more).^[22] This could mean that a patient’s perception of physician empathy is also influenced by extraneous system-related factors. Moreover, patients rated their physician’s empathy higher if they perceived that adequate time had been spent with them. It is interesting to note that the patients’ perception that they had adequate consultation time with the doctor significantly influenced their rating. However, the actual length of time spent by the doctor with the patient was not significant. This finding is important because when physicians are trained for clinical practice, they should be informed that the absolute length of consultation time should be decided jointly by both parties rather than on the doctor’s assessment only.^[23] Attention to these factors is required for the successful execution of a physician–patient encounter and the achievement of optimal health outcomes for the patient.

One of the most important tasks of every physician, regardless of his/her specialty, is to communicate with patients and their relatives or other caregivers. Studies have reported that patients’ perceived empathy was significantly different from their expectations and was associated with their satisfaction with treatment and trust in their health-care providers.^[24] Physician’s communication skills and the establishment of good rapport were also strongly associated with patient satisfaction.^[25,26] Studies conducted in Saudi Arabia showed that patients rated their physicians high on privacy and being respected and the feeling that the staff understood their needs.^[27] Similar to other international studies, local studies have also shown significant differences between expectation and perception and their significant influence on patient satisfaction.^[28,29]

The main limitation of the study was that the hospital is run by the Ministry of Health and does not provide services for profit. Therefore, the results could be generalized only to similarly administered hospitals. Another limitation is that patients in the OPD setting only were assessed. The perception of empathy by inpatients or postsurgical patients who have had a longer interaction time with their physicians might be different from OPD patients.

Conclusions and recommendations

Physicians were rated higher on empathy by patients with family members in the health-care sector, patients with acute illness, those who saw physicians who had been

recommended, and those who had spent adequate time with the consultant. Here are a few recommendations resulting from the study: orientation of medical students on clinical empathy should be integral to the medical curriculum^[30] and on-the-job training of physicians is required to make them more responsive to the changing philosophies of physician–patient relationship and its impact on treatment outcomes. At the level of hospital administration, there should be routine empathy assessment through regular patient feedback mechanisms.

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Conflicts of interest

There are no conflicts of interest.

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