Level of Patient Empathy among medical students of Saudi Medical College: A Cross-sectional Survey

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Abstract

Introduction: Empathy is the ability of the physician to understand the patient's situation, perspective and feelings. It helps in the doctor-patient relationship, and may also benefit the doctor by enhancing job satisfaction, improving the clinical diagnosis and the management plan.

Subjects and methods: A cross sectional study conducted among 545 undergraduate medical students in Faculty of Medicine at Taif University. It took 6 months starting from September 2018 to February 2019. The assessment of empathy was done by using a validated questionnaire which was distributed through the students randomly. Data was analyzed using SPSS (version 21).

Results: Mean score of empathy was found to be 65.21±7. 24. Mean score of empathy was found to be better among male students (66.31±7.78) compared to female students (64.37±6.68). The difference between scores among male and female students was found to be statistically significant (T=3.09, p value<0.05). When mean empathy scores were compared among various academic years by ANOVA test, it was not found to be statistically significant.

Conclusion: In Taif University the mean empathy score among Medical students was found to decrease with academic year and was found to be higher among male students.

Key words: Patient empathy, medical students, Saudi Arabia

Introduction

Patient doctor communication is an essential element of medical practice (1). It is known that it supports the patient's healing process and has a therapeutic effect; it has also been shown to have an excellent effect on objectively measurable outcome parameters and on psychosocial outcomes (2-5). Empathy is defined as the ability of a physician to "(a) understand the patient's situation, perspective and feelings (and their attached meanings), (b) communicate that understanding and check its accuracy and (c) act on that understanding with the patient in a helpful (therapeutic) way" (6). Patients have been found to report higher levels of satisfaction, comfort and self-efficacy when doctors are more empathetic (7,8,9). Empathy facilitates the development of trust and openness, enables more accurate diagnosis and possibly fosters greater adherence to treatment regimes(10,11). Being in receipt of physician empathy may have a direct influence on clinical outcomes (12).

Empathy in the doctor-patient relationship may also benefit the doctor (13). Displaying empathy may enhance job satisfaction by making medicine less frustrating (14). Diminished empathy has been found to be associated with higher levels of physician burnout, which in turn may be associated with increased likelihood of perceived medical error (15,16,17).

Study rationale

Empathy among Taif University medical students has not been studied. Therefore, the goal of this study was to determine the level of empathy among the medical students at various years of study and other factors that affect the patient empathy level.

Objectives of the study

1. To measure the mean level of empathy among medical students.
2. To compare the level of empathy among various academic years and among gender.

Materials and Methods

Study Design

A cross sectional study was conducted at Faculty of Medicine at Taif University to assess the level of empathy among undergraduate medical students from third to sixth years. Total number of participants consisted of 545 medical students of whom 304 were female and 241male, during their academic year from 2018 to 2019 and the study was conducted for six months duration. Inclusion criteria for the study included all medical students who agreed to participate in the study from 3rd to 6th grade and medical students who did not agree to take part in the study were excluded.

Instrumentation

Student empathy levels were measured using valid structured self-administered questionnaire in English version. The questionnaire consisted of demographic information such as student's age, sex, marital state and academic year choice of specialty, also it consisted of a 20 item Likert scale with 5 options. In response to each statement the students chose an option between (1=strongly disagree and 5=strongly agree). Level of empathy was directly proportional to the score that was calculated from 20 questions.

Data Analysis

The collected data was verified and coded for computerized data entry. The Statistical Package for Social Sciences (SPSS version 21) was used to analyze the data. The descriptive statistical analysis in the SPSS was employed to demographic data presented by frequencies and percentages and, also employed by means (M) and standard deviations (SD) which were used to calculate the total empathy score. Inferential statistics were used to compare the difference of total empathy score among gender and medical year by used independent samples t-tests and Analysis of Variance (ANOVA) test respectively. Chi-square test was used for testing difference of demographic data among medical year level. All tests used were considered statistically significant if the p value was < 0.05. Microsoft Excel 2017 was used to represent specialty preference in future by bar chart.

Ethical Approval

The research proposal was reviewed and approved by Taif University Research Ethics Commitee .Permission was gained from Medical College Administration before starting the study. The students who participated in the study were given a brief overview about the nature of the study. They were assured the contents would be kept confidential. after taking informed consent. Data was treated confidentially during all stages of the research.

Results

545 medical students participated in this study; an overwhelming majority 304 (55.8%) were females, while the rest 241 (44.2%) were males, including 129 (23.7%) third year, 159(29.2%) fourth year, 129(23.7%) fifth year, and 128(23.5%) sixth year students. Age ranged between 19 to 34 years and most of the participants were aged between 23-26 years. According to the questionnaire, apart from religious denomination, other factors examined were in relation to being the eldest child in their family; 28.3% of students reported being the eldest child. Considering whether they had a disabled family member or had cared for a disabled family member in the past, 14.1% of students reported in the affirmative. Regarding nationality, the majority of the 98.7%% were Saudi except 1.1% of students were non-Saudi. 18 (3.3%) of students had at least one of their parents as a medical doctor. According to the percentage of last annual exams and specialty preferred in the future showed that the majority of students between 80-100% preferred General Surgery as a future specialty as shown in Figure 1. All demographic data shows no statistical difference among medical year except for gender, age and marital status which were (p-value= .032) (p-value= .000) (p-value=.000) respectively, as shown in Table 1.

Mean score of empathy was found to be 65.21±7.24. Score of empathy was found to be better (4.29 ± .831) and (4.28 ± .788) for question no. 2 and no 3 respectively ('My understanding of my patients' feelings gives them a sense of validation that is therapeutic in its own right'& 'An important component of the relationship with patients is understanding of the emotional status of themselves and their families'). Score was found to be poor (2.09 ± 1.024) and (2.14 ± 1.028) with question 17 and 16 respectively (I consider asking patients about what is happening in their lives as an unimportant factor in understanding their physical complaints. & I try not to pay attention to my patients' emotions in interviewing and history taking.) as shown in Table 3.

Mean score of empathy was found to be better among male students (66.31±7.78) compared to female students (64.37±6.68). Difference between scores among male and female students was found to be statistically significant (p value=0.002). Male students were found to be more empathetic than female students as shown in Table 3.

Mean score of empathy among medical year was found to be high among third year (65.92±6.84) in comparison to other medical years and that might because they had not experienced clinical life yet. Difference between scores among medical years was found to be statistically not significant (p value=0.583) as shown in Table 3.

Figure 1: Represents the percentage of specialty preference by medical students

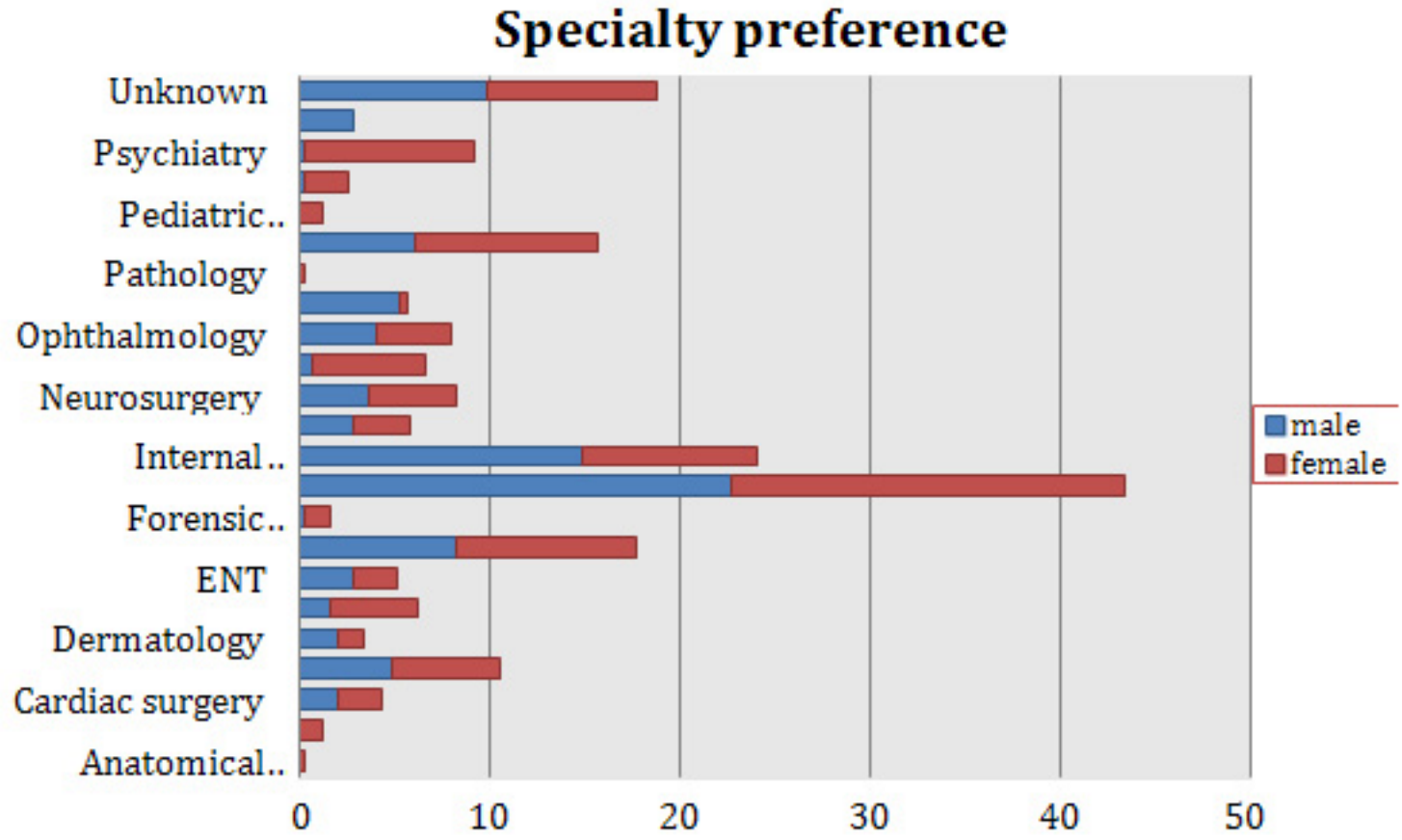

Table 1: Demographic Characteristics of Medical Students (N=545) by Medical Years

Characteristic	3rd year (129)23.7%	4th year (159)29.2%	5th year (129)23.7%	6th year (128)23.5%	Test value	p-value
Gender						
Male	(50)20.7%	(75)31.1%	(48)19.9%	(68)28.2%	8.806	.032
female	(79)26%	(84)27.6%	(81)26.6%	(60)19.7%		
Age						
19-22	(121)37.8%	(125)39.1%	(57)17.8%	(17)5.3%		
23-26	(7)3.2%	(34)15.4%	(70)31.7%	(110)49.8%	216.524	.000
27-30	(1)33.3%	0	(1)33.3%	(1)33.3%		
31-34	0	0	(1)100%	0		
Percentage in last annual exam						
20-49	(3)36.5%	(3)37.5%	(2)25%	0		
50-79	(31)19.5%	(37)23.3%	(46)28.9%	(45)28.3%	11.430	.076
80-100	(95)25.1%	(119)31.5%	(81)21.4%	(83)22%		
Marital status						
Single	(127)24%	(158)29.9%	(127)24%	(117)22.1%	19.087	.000
married	(2)12.5%	(1)6.3%	(2)12.5%	(11)68.8%		
Are you the eldest child in your family?						
Yes	(32)20.8%	(50)32.5%	(33)21.4%	(39)25.3%		
No	(97)24.8%	(109)27.9%	(96)24.6%	(89)22.8%	2.320	.509
Are either of your parents a medical doctor?						
Yes	(3)16.7%	(3)16.7%	(3)16.7%	(9)16.7%	7.341	.062
No	(126)23.9%	(156)26.6%	(126)23.9%	(119)22.6%		
Have you cared for a person with permanent disability In your family, now or in the past?						
Yes	(19)24.7%	(24)31.2%	(23)29.9%	(11)14.3%	4.849	.183
No	(110)23.5%	(135)28.8%	(106)22.6%	(117)25%		
Are you an international (non Saudi) student?						
Yes	(2)33.3%	(2)33.3%	(1)16.7%	(1)16.7%	.521	.914
No	(127)23.6%	(157)29.1%	(128)23.7%	(127)23.6%		

Table 2: Total Score of empathy for each question

Questions	Minimum	Maximum	Mean ± SD
1. I try to imagine myself in my patients' shoes when providing care to them.	1	5	4.26 ± 0.935
2. My understanding of my patients' feelings gives them a sense of validation that is therapeutic in its own right	1	5	4.29 ± .831
3. An important component of the relationship with my patients is my understanding of the emotional status of themselves and their families	1	5	4.28 ± .788
4. I try to understand what is going on in my patients' minds by paying attention to their non-verbal cues and body language	1	5	4.08 ± .864
5. I try to think like my patients in order to render better care	1	5	3.75 ± 1.174
6. I believe that empathy is an important therapeutic factor in medical treatment	1	5	3.78 ± 1.218
7. Empathy is a therapeutic skill which without it my success as a health care provider would be limited	1	5	3.69 ± 1.002
8. Patients' illnesses can only be cured by medical treatment; therefore, affection ties to my patients cannot have a significant place in this endeavor	1	5	2.61 ± 1.126
9. I do not allow myself to be touched by intense emotional relationships between my patients and their family members.	1	5	3.48 ± .985
10. I believe that emotion has no place in the treatment of medical illness.	1	5	2.23 ± 1.142
11. Because people are different, it is almost impossible for me to see things from my patients' perspectives.	1	5	2.78 ± .947
12. Attentiveness to my patients' personal experiences is irrelevant to treatment effectiveness.	1	5	2.40 ± .959
13. My patients feel better when I understand their feelings.	1	5	4.02 ± .853
14. I have a good sense of humor that I think contributes to a better clinical outcome.	1	5	3.49 ± 1.023
15. I consider understanding my patients' body language as important as verbal communication in caregiver–patient relationships	1	5	3.96 ± .808
16. I try not to pay attention to my patients' emotions in interviewing and history taking.	1	5	2.14 ± 1.028
17. I consider asking patients about what is happening in their lives as an unimportant factor in understanding their physical complaints.	1	5	2.09 ± 1.024
18 It is difficult for me to view things from my patients' perspective.	1	5	2.72 ± .855
19. I do not enjoy reading non-medical literature and the arts.	1	5	2.37 ± 1.054
20. My understanding of how my patients and their families feel is an irrelevant factor in medical treatment	1	5	2.76 ±.967
Mean score of empathy	1	5	65.21±7.24

Table 3: Distribution of depressive symptoms experienced nearly every day during the last 2 weeks by gender among depressed PHC consumers according to PHQ-9 questionnaire.

(PART 1: The Second half of this table is on the following page)

Symptoms	Depression score				P value
	frequency	valid %	Mean	SD	
Little interest					
-Not at all	360	45%	83.7	55.6	0.001
-Several days	273	34.1%	88.5	50.2	
-More than half the days	124	15.5%	80.6	56.4	
-Nearly every day	43	5.4%	90.5	53.9	
-Total	800	100%	85.2	53.8	
Hopelessness					
-Not at all	334	41.8%	86.6	57.1	0.001
-Several days	296	37%	85	52.07	
-More than half the days	127	15.9%	79.1	48.08	
-Nearly every day	43	5.4%	93.7	56.5	
-Total	800	100%	85.2	53.8	
Sleeping problems					
-Not at all	295	36.9%	87.9	56.4	
-Several days	248	31%	84	54.7	0.001
-More than half the days	170	21.3%	82.3	51.4	
-Nearly every day	87	10.9%	85.3	47.2	
-Total	800	100%	85.2	53.8	
Little energy					
-Not at all	254	31.8%	82.8	58.7	
-Several days	314	39.3%	86.4	52.2	0.001
-More than half the days	154	19.3	86.5	51.8	
-Nearly every day	77	9.6%	85.3	48.3	
-Total	799	100%	85.2	53.8	
Poor appetite or overeating					
-Not at all day	387	48.4%	87.7	55.7	
-Several days	207	25.9%	88.8	52.7	
-More than half the days	146	18.3%	75.3	50.3	0.001
-Nearly every day	60	7.5%	81.1	51.5	
-Total	800	100%	85.2	53.8	
Feeling bad about yourself					
-Not at all	506	63.2%	85.5	55.2	
-Several days	166	20.8%	85.4	48.6	0.001
-More than half the days	78	9.8%	76.6	52.5	
-Nearly every day	50	6.3%	95.1	58	
-Total	800	100%	85.2	53.8	

Table 3: Comparison of scores of empathy among gender and medical year

Group		Mean ± SD	Test value	p-value
Gender	Male	66.31±7.78	3.092	0.002*
	Female	64.37±6.68		
Medical year	3th year	65.92±6.84	0.651	0.583*
	4th year	64.74±8.13		
	5th year	65.23±7.72		
	6th year	65.04±5.82		

* Among gender by use of independent test
* Among medical year by one way ANOVA test

Discussion

In our study the mean score of empathy was found to be (65.21±7.24). Vinay and Swanand (18) conducted a cross sectional study to assess the patient Empathy level in undergraduate medical students and mean empathy score was found to be (99.25±13.813). Shashikumar et al(19) conducted a cross sectional study to assess empathy among medical college students. Mean empathy score was found to be 102.91±19.217.

The availability of appropriate role models, variation in the selection and education of medical students in different countries, and expression of empathy in different cultures can partially explain the empathy score disparity in different cultures and studies.

Total score of empathy was better in question no.2 and question no.3 compared to Vinay and Swanand[1] that showed Score of empathy was found to be better for question no. 6.

And the total score in our study of questions no. 10, 16 and 17 was found to be poor. In Vinay and Swanand(18) showed total score was found to be poor with question 1, 9 and 16.

Mean score of empathy was found to be better among male students (66.31±7.78) compared to female students (64.37±6.68). Male students were found to be more empathetic than female students. While in the study of Vinay and Swanand(18) they found that empathy score was better among females (101.30 ±14.534) as compared to male students (97.05±12.717). Another Japanese study(20) showed that female Japanese medical students scored higher than their male counterparts.

The empathy level decreased with academic year, which was high in the third year (65.92±6.84), followed by a drop in 4th year (64.74±8.13). Then it increased in the 5th year (65.23±7.72) then slightly decreases in the 6th year (65.04±5.82) which is different from a study in Kuwait (21).

In Kuwait the mean empathy level increased with academic year. There was a low empathy score among 2nd year students then it is increase until the 4th year then there is drop of mean empathy score, but it is more than the basic year (21).

In this study the mean score of empathy relating to medical year was found to be high among third year (65.92±6.48), while the study done in Kuwait showed the higher score among 4th year students.21

The mean empathy score in this study was found to be low among 4th year students (64.74±8.13) but in the Kuwait study the high mean score was in 4th year students(21).

Limitations of the study:
It was not possible to include all semesters and all students of all health colleges (Pharmacy, Applied medical sciences) due to the short duration of period. The present study was a cross sectional study. The results cannot be generalized. A longitudinal study with a large sample size from a greater number of colleges in the country would be helpful to assess the real findings.

Conclusion

In Taif University the mean empathy score among Medical studentswas found to decrease with academic year. And it was found to be better among male students.

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