

Empathy Assessment Among Medical Students Towards Patients - A Cross-Sectional Study

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ABSTRACT

Background: Empathy is the student's understanding of the patient's experience and ability to convey the feeling. Empathy is teachable and measurable, and proper teaching to students about ethics, humanity, and professionalism can improve patient care.¹ This study tries to determine the empathy levels among medical college students towards patients and the variation in empathy levels among medical college students towards patients each year.

Methodology: The sample size was 400, undergraduate students from 1st year to compulsory rotating medical internship were selected.

Results: There was a significant association between empathy levels and year of education and as the year of study increases the empathy level decreases and this is statistically significant.

Conclusion: The empathy level of medical students is at good levels. Still, the empathy level is declining as the year of studies increases because of the stress in studies and increased patient load

Keywords: Empathy, Health, Medical students, Patient care, Medical education, Year of studies

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INTRODUCTION

The patient-doctor relationship is the most important factor for providing good quality health care. Empathy in students helps in student's understanding of patient's experience and their ability to converse back the feeling. Studies conducted on medical students about empathy have shown a decline. Empathy is teachable and measurable, and proper teaching about ethics, humanity, and professionalism to students can improve patient care.¹ Empathy is understanding another individual's emotions. Students have the desire to cure diseases and improve patient's quality of life.² Empathy improves patient satisfaction, and quality drug prescriptions, decreases burn-out, and reduces medical errors. Low empathy levels are caused by economic pressure, lack of adequate training, low job satisfaction, etc.³ Empathy is an important factor in the improvement of health, good empathy levels lead to good behavior and low empathy levels lead to aggressive behavior. Empathy is affected by various internal and external factors.⁴ Healthy patient-doctor relationship is the success of good quality care. Empathy can be classified into cognitive or affective, self-directed actions, or external actions. Empathy is lacking from models of professional development.⁵

The objectives of the study were to determine the empathy levels among medical college students towards patients and to assess the variation in empathy levels according to their academic year

METHODOLOGY

This cross-sectional study was conducted at a medical college in Puducherry. The study participants were all undergraduate M.B.B.S students from 1st year to Compulsory Rotating Medical Internship (C.R.M.I). Since the students have competency-based medical education they are having early clinical exposure, so first-year students were included in the study. The sample size of 400 was calculated based on a similar study by Baig KS et al¹. The Study duration was 3 months (August 2023 to October 2023). A cluster Sampling Technique was used and All Undergraduate M.B.B.S students from 1st year to CRMI of a Medical College were included, each year was considered as a cluster in the study, and from each cluster 80 students were selected by using a Simple random sampling technique using computer-generated random number table. The Independent variables are Gender and Year of Education. The Outcome variable is Empathy levels. The Data were collected in all four-year medical students along with CRMI and they were given Toronto Empathy Questionnaire⁶ in Epicollect software and informed consent was obtained from the students. All the resulting scores were entered and analyzed using SPSS version 29. The median and interquartile range of the Toronto Empathy Questionnaire score was calculated. The Toronto Empathy Questionnaire is a reliable and val-

id instrument for the assessment of Empathy, it consists of 16 questions, each question has 5 responses with score ranges from 0 to 4, total score ranges from 0 to 64. Kruskal Wallis H test and Maan Whitney U test was used for all years and to compare the empathy scores among all year of medical students. The P value less than 0.05 was considered statistically significant. Minimal risk was involved in this study. The study was approved by the Institutional Human Ethical Committee (AV/IHEC/2023/114) on 18.10.2023.

RESULTS

The medical students involved in this study were 400, among them female students were 212 in numbers which was 53% and male students were 188 in numbers which was 47%. The female students are more than male students in our study.

The median empathy scores of male and female students were 45 and 48 respectively. A statistically significant difference was found in the empathy scores between the genders (P<0.001).

Table 1: Comparison of Empathy scores among genders and each year of medical students

Variables	Students (%)	Median (IQR)	P-value
Gender			
Male	188 (47)	45 (44-47)	<0.001*
Female	212 (53)	48 (45-50)	
Year of studies			
First year	80 (20)	50 (49-52)	<0.001*
Second year	80 (20)	48 (47-49)	
Third year	80 (20)	48 (47-49)	
Final year	80 (20)	45 (44-45)	
C.R.M.I	80 (20)	42 (40-43)	

IQR - Interquartile range

*Mann-Whitney U value test and Kruskal-Wallis H Value test; *Statistically significant at 5% level of significance

Table 2: Empathy levels in medical students

Empathy levels	Scores	No. of students (%)
Below average	≤45	162 (40.5)
Good	≥46	238 (59.5)

The comparison of empathy scores among each year of medical students was given in Table 1, first-year student's median empathy score was 50 with an interquartile range of 49 to 52, and second-year student's median empathy score was 48 with an interquartile range of 47 to 49, third-year student's median empathy score was 48 with interquartile range 47 to 49, final-year student's median empathy score was 45 with interquartile range 44 to 45, CRMI's median empathy score was 42 with interquartile range 40 to 43, Kruskal Wallis Test was applied and statistically significant results were found between each year of medical students which shows that the first year students have high empathy scores, second

year and third year students have same empathy scores, the empathy scores are declining in final year students and CRMI have the least empathy scores because of the high caseload and more pressure in work and entrance exam preparations for postgraduate examinations.

The overall empathy scores of medical students are shown in Table 2, among 400 medical students, 162 medical students (40.5 %) have below-average empathy levels and 238 medical students (59.5 %) have good empathy levels. In this study, we found that medical students have good empathy levels.

The trends of empathy levels in medical students from the results show that from the first year to CRMI there is a gradual decline in empathy levels among medical students.

DISCUSSION

Empathy is important in the doctor-patient relationship, it is good for both doctors and patients. According to the medical curriculum, doctors should approach patients empathetically.¹ In our study total of 400 students were included, and the female and male empathy scores are (47.47±4.05) and (45.31±2.88) respectively, which is similar to study done by Baig KS et al¹ where the Females have empathy score of 49.08 (S.D = 7.588) and Males have empathy score of 44.59 (S.D = 7.58), and the studies done by Sadia Riaz et al⁷, Bijit Biswas et al⁸, Leonard H. Calabrese et al⁹, Anna Ratka et al¹⁰, Gayatri Bhatia et al¹¹, Sonali Saha et al¹² found that females have more empathy levels than males, as the females are more caring and have a good attitude towards patients naturally.

In our study empathy level is high in first year students as they are more interested in learning patient care which is similar to the studies done by Muhammad Zafar Iqbal et al¹³, Gayatri Bhatia et al¹¹, Baig KS et al¹ and empathy levels decreases in final year students because of increased patient load, stress in work, increased educational pressure, in clinical environment lack of resource may lead to poor empathy among students towards patients which leads to poor empathy in final year and CRMI students¹⁴, empathy decreases as the patient load increases³, whereas the studies done by Ardi Findyartini et al¹⁵, Sanjib Kumar Ghosh et al², Leonard H. Calabrese et al⁹ shows that first year students have low empathy levels which increases in final year of studies, the empathy level is increasing gradually after attending classes, empathy can be increased by effective education to students about patient care and a study done by Sergio Serrada-Tejada et al¹⁶ shows there was no significant difference found between groups in empathy levels among students, empathy can increase or decrease in a human lifespan.¹⁰

In our study, we have used the Toronto Empathy Questionnaire and this questionnaire was used in

similar studies where they assessed empathy levels in medical students like Gayatri Bhatia et al¹¹, Shezadi Sabah Imran¹⁷ and Baig KS et al¹ and the scores are declining as the year of studies increases. The decline in scores is because of many factors such as increased pressure due to education, personal reasons, increased patients which is high in final year students and CRMI than first year students.

In our study overall empathy scores are Above-average (59.5%) among medical students which is similar to the study conducted by Luiz Miguel Santiago et al¹⁸ medical students have good empathy levels and the study done by Baig KS et al¹ found that medical students have above average empathy score (49.5%), whereas the study done by Sadia Riaz et al⁷ the empathy scores are 42.57±7.513 which was below average empathy score of students which is contrary to our study.

By successful training program student's empathy can be increased which helps in improving patient care, good doctor-patient relationships, and good communication among doctors and patients.

CONCLUSION

The empathy level of medical students is at good levels. Still, the empathy level is declining as the year of studies increases because of the stress in studies and increased patient load. Communication skills should be developed and stress management should be done in medical students so that their empathy levels towards patients will be maintained at good levels. Empathy is an important factor in the improvement of health. Empathy is affected by various internal and external factors which should be corrected to maintain a healthy patient-doctor relationship which results in the success of good quality care.

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