

A Cross-Sectional Study on The Assessment of Empathy Among MBBS Students in a Medical College in Kerala

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Abstract

Background: Empathy is the ability to understand the patient's situation, perspective, and feelings, and act on that understanding with the patient in a helpful way. The aspects of the undergraduate course such as the context and timing of clinical experience, the academic curriculum, the communication skills training, and the other specific educational interventions play an important role in the development of empathy. **Objective:** The objective of this study was to assess the empathy among different batches of MBBS students and to find out the factors associated with empathy in a medical college in Kerala. **Methodology:** After obtaining institutional Ethical Clearance, data were obtained from 125 students through the self-administered Jefferson scale of an empathy questionnaire (student version). Various factors that influence empathy were also noted. **Results:** Out of 125 students studied, 33 (26.4%) were from the 1st semester, 31 (24.8%) from the 4th, 30 (24.0%) from the 7th and remaining 31 (24.8%) from the 9th semester. First semester students had the highest mean score of 112.79 (\pm 9.027) and the 4th semester have the least mean score of 106.74 (\pm 12.152). Even though the final year students with a mean score of 108.81 \pm 12.867 showed an increase in empathy as compared to 4th-semester students, a general trend in the decline of empathy was seen as semesters progressed. **Conclusion:** Empathy scores in students declined in the pre-clinical years and showed a decrease during the clinical years. More research is needed to establish if our clinical training impacts empathy negatively, and if so, there is a need for interventions to mitigate this impact.

Keywords: Empathy; Medical Students; Assessment Impact; Interventions.

Introduction

The importance of professionalism and its assessment in physicians-in-training and in-practice has led to the acknowledgment that at least two major components are involved in medical education.¹ One component includes a set of "cognitive" abilities often reflected in academic attainment, performances on examinations of recalling factual information, declarative knowledge, and procedural skills. The other component, often described under the heading of "personality" includes features such as personal

qualities, attitudes, interests, values, and other psychosocial characteristics. In a paradigm of physician performance, both the cognitive abilities as well as personality are associated with patient outcomes, the ultimate goal of medical education.²

"Empatheia" is a Greek word, meaning affection or passion with a quality of suffering, from which the word "empathy" has been derived.³ It refers to "the ability of physicians to imagine that they are the patient who has come to them for help."⁴ It has been said "I have to let a part of me become the patient, and I have to go through their experience as if I were the patient."⁵

Mercer and Reynolds defined clinical empathy as "The ability to understand the patient's situation, perspective and feelings, communicate the understanding and check its accuracy and act on that understanding with the patient in a helpful way.⁶ Therefore empathy is very important for good patient care. It enhances patient satisfaction, comfort, self-efficacy and trust which in turn may facilitate better diagnosis, shared decision making, and therapy adherence. Empathetic doctors experience greater job satisfaction and psychological well-being. Hence, understanding the relationship of empathy with patient care for tomorrow's health care professionals is very important.

Needless to say that learning the basics of empathy has to begin from student days among our health care professionals including the factors which influence the development and maintenance of empathy. Broadly, these include age, sex, psychological wellbeing and culture of the people in that geographical area. Further, context and timing of clinical experience, the academic curriculum, the communication skills training, and the other specific educational interventions may also play an important role.⁷

Empathy is an important quality in every clinician and it plays an important role in patient-physician relationship. Very few studies have been reported in the literature assessing the empathy among South Indian medical students. In the backdrop of above, this study was undertaken to find out the empathy level and different aspects pertaining to it among our medical students.

Methodology

A cross-sectional study was conducted amongst undergraduate medical students in a medical college in Thrissur, Kerala. Sample size was calculated taking into account a similar study done by S. Nair, et al, conducted in a neighboring state, Karnataka⁸, which had brought out highest empathy mean score as 105.2 and lowest mean score as 95.2. Based on the above findings our sample size was calculated to be 125.

After obtaining institutional Ethical Clearance, data was obtained from 125 students. Out of which 33 students were from the 1st semester, 31 from the 4th, 30 from the 7th and 31 from the 9th semester. All the participants were briefed about the objectives of the study and informed that their participation was voluntary and were also assured of anonymity and confidentiality of the data. A written informed

consent was obtained from those students willing to take part in the study.

The primary measure of empathy, the Jefferson Scale of Physician Empathy—Student Version (JSPE-S), was used to assess clinical empathy in medical undergraduate students. The English version of the questionnaire was used. It is a 20-item psychometrically validated instrument measuring components of empathy among health professionals in patient care situations. Respondents indicated their level of agreement to each item on a 7-point Likert scale. The JSPE-S total score ranged from 20 to 140, with higher values indicating a higher degree of empathy.⁹⁻¹¹ JSPE-S, initially developed in 2001, has since been revised and tailored into 3 versions.¹²⁻¹³ Data regarding age, semester, gender, whose decision it was for the student to enroll in UG medical training, whether they experienced the death of any closed relative and whether they live in a joint family were also noted.

Results

Out of 125 students 33(26.4%) students were from the 1st semester, 31(24.8%) from the 4th, 30(24%) from the 7th and 31(24.8%) from the 9th semester. Further, 17(13.6%) out of them were males while remaining 108(86.4%) were females. Age of the participants was found to be between 18 to 26 years. The age breakdown shows that 43(34.4%) of the participants were < 20 years of age while remaining 18(65.6%) were > 20 years of age. Males were found to be having a mean empathy score of 110.24 while female students had a mean score of 109.77 (Table :1). Participants under < 20 years were found to be having more empathy than those > 20 Years of age and this difference was also found to be statistically significant (p<0.008) (Table :1).

Table 1: Mean Empathy Scores Based on Age and Gender (N=125).

Variable	Mean Empathy Score	Standard Deviation	P- Value
Age	18-20	113.56	0.008
	21-26	107.88	
Sex	Male	110.24	0.877
	Female	109.77	

The study brought out highest empathy mean scores among first semester students i.e. 112.79 (\pm 9.027) while the 4th semester students had the lowest mean empathy score of 106.74 (\pm 12.152). The different factors which showed influence on empathy were also explored. Out of 125 students,

122 students joined medical school on their own decision and interest and they had a higher mean empathy score of 109.92; while 3 students who joined against their interest and insisted on by their parents; had a lower mean empathy score of 106.33 (± 12.152). Further, 80 students who experienced the death of a close family relative showed increased empathy and had a higher mean score of 110.39 (± 11.767), while remaining 45 students had a lower mean score of 108.84. (± 10.108). Empathy scores based on stay in a joint or nuclear family were also studied and it was brought out that 31 students who stayed in a joint family showed a slightly higher empathy score of 110.03 (± 13.841) as compared to 94 others students who stayed in nuclear families who had a mean score of 109.77 (± 14.771). However, the occupation of parents (doctors) did not influence the empathy score of our students under study.

Table 2: Semester Wise Mean Empathy Scores (N=125).

Semester	Mean Empathy Score	Standard Deviation
First	112.79	9.027
Fourth	106.74	12.152
Seventh	110.83	11.483
Ninth	108.81	12.867

Discussion

The present study has explored empathy levels of undergraduate (UG) medical students and its correlates. The mean empathy score of undergraduate students in the present study was found to be 109.83 \pm 11.527. This empathy score was similar to the findings in studies conducted by Hegazi I, et al, in Australia (109.07) and Mustafa, et al, in Bangladesh (110.41). However, the empathy scores were different in studies by MK Hosseini, et al, in Iran (61.11) and Chatterjee, et al, in India (96.01). Present study brings out that with increase in age, the empathy levels of medical students declined. Similar observations have also been made by MK Hosseini, et al, in their study. However, Bangash, et al, reported an increase in empathy levels with increase in age in their study in Pakistan. The variations observed among these studies may be attributed to different cultural factors, customs, ethnicity, spiritual beliefs and educational systems prevalent in various geographical regions.¹⁴⁻¹⁸

In the present study it was observed that first semester students had the highest empathy scores. However, the empathy scored declined when students reached fourth semester i.e., the

para-clinical and clinical curriculum. Several other studies have also brought out a decline in empathy levels when students moved from pre-clinical to para-clinical and clinical subjects. This decline in empathy levels while moving from pre-clinical to para-clinical and clinical curriculum may be attributed to stress and anxiety faced by the students owing to competitiveness among students and the need to perform better in the clinical examinations for ensuring a better career and subject of choice for post graduation. Another factor that may play a significant role in decline in empathy with advancing curriculum could be the media's presentation of doctors as God-man and heroes, which many a time creates a skewed image of an ideal clinician and puts the medical students under stress.¹⁹⁻²¹

Present study brings out an increase in empathy scores from 106.74 in fourth semester to 110.83 in seventh semester; during which they are primarily devoted to direct patient care. A systematic review of the impact of early practical experience in medical training concluded that it fostered empathetic attitudes toward ill people. However, some studies also indicate that the decline occurs later, during more clinically oriented phases.^{16,22,23,26}

The study again brings out a decline in empathy levels among the subject medical students from 110.83 in seventh semester to 108.81 in ninth semester. When comparing the first semester and the ninth semester there is a decline in empathy scores from 112.79 to 108.81. This shows that empathy of medical students towards their patients declined as the years in medical curriculum progressed. This finding is consistent with observations made by M.K. Hosseini, et al, and Suma N, et al in their studies. Lack of role models, lengthy medical syllabus, time constraints, peer pressure, environmental factors and over reliance on technology have been postulated to be responsible for the decline in empathy as the students move from first semester to ninth semester. Age wise differences in empathy levels were also observed. Empathy scores decreased as the age of medical students advanced. This might be attributed to the fact that- as the semesters moved from first to ninth, the age of the student also increased and so did the stress level to perform better. This concludes that as semester increases, the empathy level decreases. Studies also reveal that those medical students, who lived in joint families during their medical studies, were more empathetic than those who lived in hostels or in nuclear families, which could be attributed to their

family member's constant moral and psychological support, which in turn could have led to reduction in their stress level due to studies and examinations resulting in higher empathy for patients. In the present study too; we had similar observations as medical students who stayed in joint families had a higher empathy score of 110.03 as compared to 109.77 for those who stayed as single/in hostels or in nuclear families i.e.^{8,16,18}

Empathy is widely considered to be normally distributed in the general population. In our study male students scored a mean score of 110.24 while female students scored a nearly same mean score of 109.77. This shows that there is not much difference in empathy levels among male and female students. Similar results were also observed in many studies where no gender differences in the empathy scores were reported among undergraduate medical students. However, in contrast, to our findings, many studies conducted in different geographic and cultural settings from Asia, Europe, and the Americas support the view that female medical students have higher empathy levels than their male counterparts.^{7-8, 24-35}

Conclusion

Empathy scores in students were high in the pre-clinical years, but decreased during the para-clinical and clinical years. The study also revealed that empathy is more on initial clinical exposure but decreases as the clinical experience increases. On comparing the empathy between first and final year students there was a significant decrease in empathy scores. More research with longitudinal study designs is required to obtain a more accurate picture of the empathy scores before and after para-clinical phases to confirm whether clinical training impacts empathy negatively, and if so, whether specialized interventions like interpersonal training and workshops are required to mitigate this negative impact, to enable our future doctors serve the community in a more positive manner and with high levels of empathy when they eventually become clinicians.

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