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Emotional intelligence among medical students of a medical college in Southern India

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Abstract:

Background:

Emotional intelligence plays a fundamental role in the practice of medicine, influencing various aspects of patient care, communication, teamwork, and professional relationships. This study aims at assessing the emotional intelligence among medical students in a medical college located in South India.

Methodology:

A cross-sectional study was conducted using google forms among students of Phase 2 MBBS. Through universal sampling technique 213 students gave consent and participated in the study. SSEIT questionnaire was used to assess the emotional intelligence among the medical students. Data was analysed using IBM SPSS v 21. Fisher's exact test was used to find the association. $P < 0.005$ was considered significant.

Results:

The mean age of the study participants was 20.4 ± 1.2 . The mean EI score was 122.6 ± 15.3 . The prevalence of good EI among the participants were only 22.5% whereas 73.7% had average EI and 3.8% had poor EI. Variables like age, gender, type of family, place of residence, educational board and parental education were not found to be the determining factor of EI among medical students in this study.

Conclusion:

By understanding and evaluating their emotional strengths and areas for growth, medical schools can tailor interventions and support systems to enhance students' emotional intelligence, ultimately contributing to their success as empathetic, competent, and resilient healthcare providers.

Keywords:

Emotional intelligence, medical students, AETCOM, soft skills, attitude

Introduction:

Emotional intelligence may be defined as the ability of a person to understand and respond to one's own and others' emotions and use this ability to guide one's thoughts and actions.¹ The following are the characteristics or elements of emotional intelligence: the ability to recognize, comprehend, use, and regulate emotions.² Emotional intelligence (EI) plays a fundamental role in the practice of medicine, influencing various aspects of patient care, communication, teamwork, and professional relationships.³

There has been a rise in doctor-patient disagreements in India in recent decades, and the Consumer Protection Act's inclusion of medical services has made doctor-patient interactions even more difficult.⁴ Emotionally intelligent doctors can better sense the patient's needs and manage any complications that develop. Doctors' emotional intelligence plays a vital role in today's society, as patient satisfaction is considered as one of the most important variables for assessing the success in medical practice.⁵ In addition to facilitating the delivery of high-quality clinical treatment, EI fosters teamwork among medical practitioners.⁶

Medical students encounter a multitude of emotionally charged situations throughout their training and careers, ranging from delivering difficult diagnoses to providing empathetic support to patients and their families. Their ability to navigate these encounters with sensitivity, self-awareness, and interpersonal skill can profoundly impact patient outcomes and satisfaction, as well as their own resilience and fulfillment in the profession.⁷ Additionally, it has been noted in the realm of medical education that a medical student's academic achievement and emotional intelligence are directly correlated.⁸

The earlier medical curriculum included an excessive amount of academic content and relatively little time dedicated to skill development. A large portion of skills, particularly soft skills like empathy and good interpersonal communication, were left to subconscious learning from observing experienced peers in action at the outpatient clinics and at the bedside.⁹

Active teaching-learning techniques have recently gained popularity in several nations to integrate communication, emotional intelligence, and empathy into the medical curriculum. The recently revised CBME curriculum of the National Medical Commission of India (NMC) includes the AETCOM (Attitude Ethics and Communication) module, which teaches communication skills, empathy, emotional intelligence, and ethics to medical students in order to train future medical practitioners who will be emotionally competent.¹⁰ This assessment aims to identify and cultivate the emotional competencies necessary for effective clinical practice and personal well-being.

Materials and Methods:

A cross-sectional study was conducted between December 2022 and February 2023 among the undergraduate medical students of a private medical college situated in Chengalpattu district, South India.

Inclusion criteria: The Phase 2 (second professional year) MBBS students who were willing to participate in the study were included because early identification of EI scores during this phase is likely to maximize the effectiveness of future educational initiatives.

Exclusion criteria: Students with known psychiatric conditions or those who are currently on medication for psychiatric disorders and those who were not willing to participate were excluded from the study.

After obtaining IHEC approval from the institution, through universal sampling technique, out of total of 250 Phase 2 MBBS Students, only 213 consented and participated in the study. Data collection was done using a semi-structured questionnaire via google forms. The questionnaire comprised of questions pertaining to baseline demographic characteristics following which it had the questions of the Schutte Self-reporting Emotional Intelligence test (SSEIT) questionnaire. The SSEIT questionnaire had 33 questions which were assessed in a 5-point Likert scale while 1 being strongly disagree to 5 being strongly agree. Question number 5, 28 and 33 of segment 2 were reverse scored.¹¹ A higher score indicated a higher level of emotional intelligence.

The total score expected out of SSEIT questionnaire is a minimum of 33 to a maximum score of 165. The final score of SSEIT was categorized into 3 categories. Students who had a total score more than 80 % of maximum score (132) were categorized to have good emotional intelligence, those who scored between 60 and 80 % (score of 99 – 132) of the maximum score were considered to have average emotional intelligence, and <60 % (<99) of the maximum score were considered to have poor emotional intelligence.

The questions were grouped to assess emotional intelligence into four major domains. Perception of emotions (items 5,9,15,18,19,22,25,29,32,33), Managing own emotions (items 2,3,10,12,14,21,23,28,31), managing others emotions (items 1,4,11,13,16,24,26,30) and utilization of emotion (items 6,7,8,17,20,27).

Statistical analysis :

The data collected were entered in Microsoft Excel spreadsheet and analyzed using IBM SPSS v 29. The descriptive statistics of categorical variables were expressed in terms of frequency and percentages, for continuous variables it was expressed as mean and standard deviation. Fisher's exact test was applied to find the association among qualitative variables and p value < 0.05 was considered statistically significant.

Results:

Table 1: Socio-demographic characteristics of the study participants (n=213)

Characteristics	Frequency	Percentage
Age		
18 - 20 years	125	58.7%
≥ 20 years	88	41.3%
Gender		
Male	73	34.3%
Female	140	65.7%
Residence		
Rural	38	17.8%
Urban	175	82.2%
Type of family		
Joint family	45	21.1%

Nuclear family	168	78.9%
Educational board		
CBSE	120	56.3%
ICSE	11	5.2%
Matriculation	23	10.8%
State board	59	27.7%
Parental education		
≤ Secondary schooling	11	5.2%
Higher secondary schooling	23	10.8%
Undergraduate degree	75	35.2%
Postgraduate degree	104	48.8%

Majority of the participants in this study were between the age group of 18 to 20 years. Female participants were higher when compared to males. The other demographic details were depicted in Table 1. The prevalence of good EI among the participants were only 22.5% whereas 73.7% had average EI and 3.8% had poor EI (Table 2).

Table 2: Frequency distribution of Emotional intelligence among the participants (n=213)

Emotional intelligence	Frequency	Percentage
Good	48	22.5%
Average	157	73.7%
Poor	8	3.8%

The emotional intelligence (EI) scores (minimum possible score 33 and maximum possible score 165) of the medical students ranged from 57 to 161, with a mean score and standard deviation of 122.6 and 15.3 respectively. The distribution of scores on the four EI domains has been depicted in Table 3.

Table 3: Domain-wise distribution of Emotional intelligence score (n=213)

Variables	Minimum	Maximum	Mean	SD
Perception of emotion	14	47	35.8	4.8
Managing own emotion	13	45	33	5
Managing others emotion	12	40	30.4	4.4
Utilization of emotions	11	30	23.3	3.7
Total	57	161	122.6	15.3

The students whose age was between 18 to 20 years had a higher proportion of good and average EI (Figure 1). On the other hand, female participants were reported to have higher proportion of good and average EI when compared to male participants (Figure 2). However the comparison was not statistically significant ($p = 0.389$)

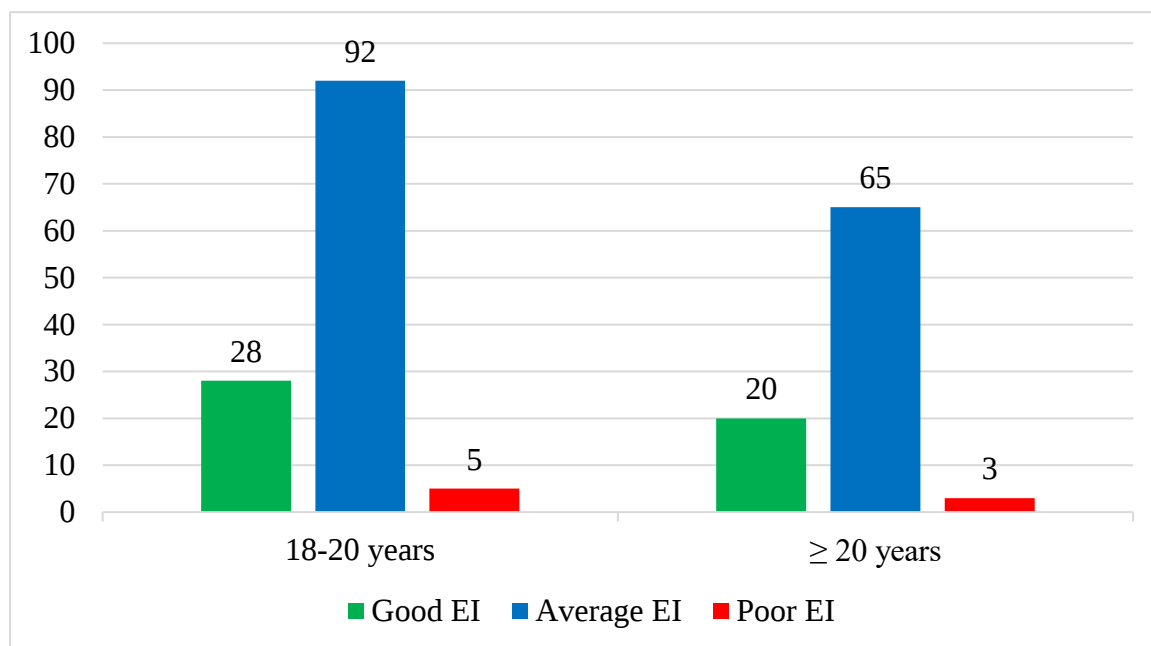
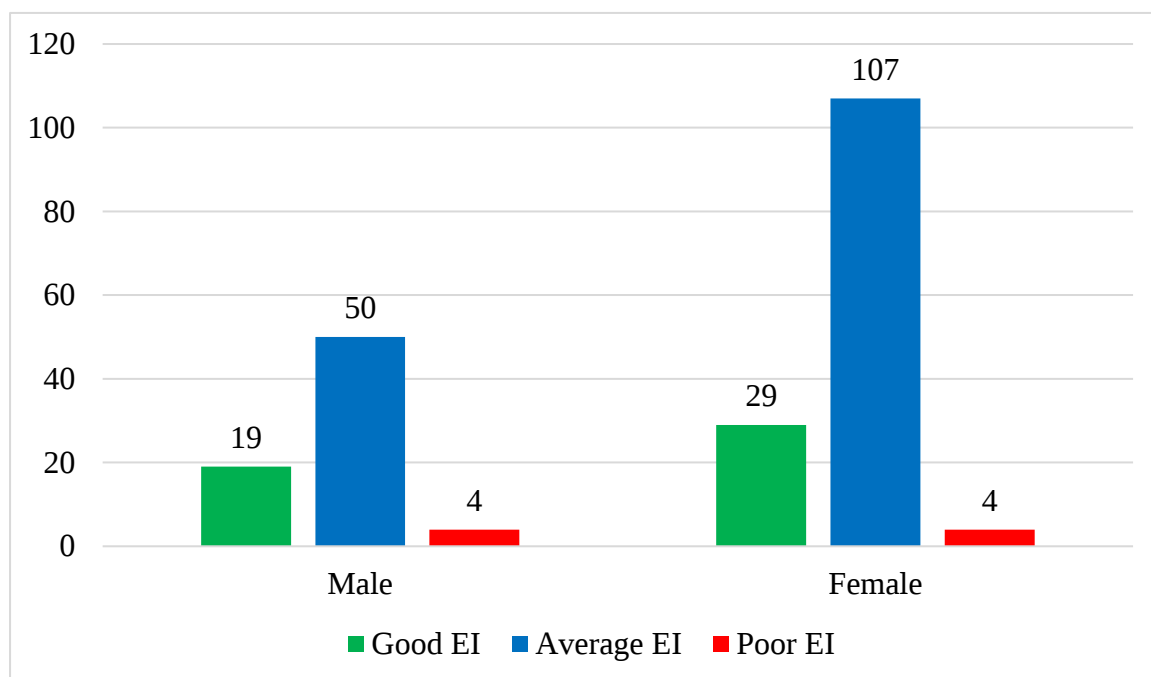
Figure 1: Age-wise distribution of emotional intelligence among the study participants**Figure 2: Gender-wise distribution of emotional intelligence among the study participants**

Table 4 depicts the association of socio-demographic characteristics with EI of the participants. Variables like age, gender, type of family, place of residence, educational board and parental education were not found to be the determining factor of EI among medical students in this study.

Table 4: Association between socio-demographic characteristics and emotional intelligence among the study participants (n=213)

Characteristics	Emotional Intelligence			P - value*
	Good (n=48)	Average (n=157)	Poor (n=8)	
Age				
18 - 20 years	28	92	5	0.975
≥ 20 years	20	65	3	
Gender				
Male	19	50	4	0.389
Female	29	107	4	
Residence				
Rural	9	27	2	0.839
Urban	39	130	6	
Type of family				
Joint family	10	33	2	0.963
Nuclear family	38	124	6	
Educational board				
CBSE	24	92	4	0.581
ICSE	1	9	1	
Matriculation	8	14	1	
State board	15	42	2	
Parental education				
≤ Secondary schooling	2	8	1	0.550
Higher secondary schooling	8	14	1	
Undergraduate degree	17	54	4	
Postgraduate degree	21	81	2	

*Fisher's exact test

Discussion:

This cross-sectional study directed to find the prevalence of EI among medical students reported a good EI of 22.5%, average EI of 73.7% and poor EI of 3.8%. Similarly in the study conducted by Puliykkadi et al⁹, George PS et al¹² and Unnikrishnan et al¹³ majority had average EI of 72.9%, 63.3% and 61.8% respectively. The mean EI score of the present study ranged to be 122.6±15.3 which was considerably higher when compared to 121.43±19.06, 110.08±14.76 and 107.58±16.44 noticed in other studies.^{9,12,14}

The mean age of the study participant in this study is 20.4±1.2 and those aged between 18 to 20 years had higher positive EI when compared to another counterpart. However, no statistically significant difference was observed among the two age categories in this study. This finding coincides with a cross-sectional study by Sundararajan et al¹⁴ and Mathew Todres et al's¹⁵ findings. However, findings by George PS et al¹², Ravikumar et al¹⁶, Ibrahim et al¹⁷ and Coskun K et al¹⁸ showed a significant difference in age and EI. This statistical association might be due to the difference in the age group of study participants who were enrolled in the study.

Furthermore, female participants had higher average EI when compared to their male counterparts which was not statistically significant in our study. This finding coincides with the findings by Sundararajan et al¹⁴ and concludes that gender has no significant influence on EI. Majority of the participants in this study were residing in urban areas and had higher average EI but the association was not statistically significant. Similarly, studies by Sundararajan et al¹⁴, George et al¹² and Vasefi et al¹⁹ found that place of residence has no role in predicting the EI of students.

Statistical association was not seen among the type of family of the participants and this is supported by the evidence recorded in Ewaiwe B et al²⁰ and George et al's¹² study. The majority of the students who had good and average EI had parental education of postgraduation degree however, the association was not significant. Similarly study by George PS et al¹² found no significant association among the parental education and EI of participants.

Conclusion:

Our study concludes that majority of the study population had an average Emotional intelligence only (73.7%). Today's medical students will be the future medical professionals. EI is greatly influenced by one's attitude towards oneself and the others. The NMC has modified the CBME curriculum and added the AETCOM module, which will aid students in raising their EI. By understanding and evaluating their emotional strengths and areas for growth, medical schools can tailor interventions and support systems to enhance students' emotional intelligence, ultimately contributing to their success as empathetic, competent, and resilient doctors.

Some possible recommendations include conducting 1-day EI programs as part of the orientation for each class in medical school and residency programs, holding EI-focused continuing medical education (CME) retreats to introduce mindfulness, self-awareness, and feedback to students, and offering EI courses as electives in the fourth year of medical school, prior to residency, and as a legitimate use of available elective time during residency. Emotional intelligence skill development can also begin with well-designed cognitive reflection exercises that assist students in realizing the significance of emotions in the practice of medicine. This will encourage students to be more socially responsive and motivated.

Limitations :

- 1.The study involved the students of Phase 2 MBBS of one medical college alone.If other phase students and students from other medical colleges were included we would have had a comparison of the emotional intelligence across the various batches
- 2.Lack of follow-up study to assess the emotional intelligence after the introduction of the AETCOM module.

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