Original Research Article

EVALUATION OF EMOTIONAL INTELLIGENCE AMONG NEW MEDICAL STUDENTS

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ABSTRACT

Background: Emotional intelligence plays a crucial role in medical students' academic adaptation, interpersonal skills, and professional development. Assessment at the entry point of medical education provides valuable insight into emotional competencies. The aim is to assess emotional intelligence and its dimensions among first-year MBBS students at the beginning of their medical professional education. **Materials and Methods:** A descriptive cross-sectional study was conducted among 120 first-year MBBS students. Emotional intelligence and its dimensions were assessed using a standardized questionnaire, and comparisons were made based on gender and age. **Result:** Female students demonstrated significantly higher sensitivity scores than males. Older students exhibited higher sensitivity compared to younger students. Maturity and competency scores showed no significant gender or age differences. **Conclusion:** Emotional intelligence varies across demographic factors at entry into medical education. Early identification and targeted emotional intelligence training may enhance professional competence and resilience in medical students.

INTRODUCTION

Emotional intelligence (EI) refers to the ability to perceive, understand, regulate, and apply emotions in oneself and others to guide thinking and behavior. In medical education, EI is recognized as a vital non-cognitive skill that influences not only academic achievement but also interpersonal communication, stress management, professionalism, empathy, and future clinical performance.[1,2] As students transition from life in school to the demanding environment of medical training, their capacity to manage emotions effectively becomes crucial for both personal well-being and professional success.[3]

Research indicates that higher EI is associated with better academic outcomes in health sciences students, although the strength of this association varies by context, measurement tools, and demographic factors.[4,5] In several studies involving undergraduate medical cohorts, EI has been positively correlated with academic performance, communication capabilities, and reduced perceived stress, suggesting that emotionally intelligent students adapt more efficiently to rigorous curricula.[6,7] However, some investigations report only weak or inconsistent relationships, highlighting the complex interplay between cognitive abilities and emotional competencies.[8]

The dimensions of EI—such as self-awareness, self-regulation, empathy, and social skills—are particularly relevant at the entry point of medical education, where students begin forming professional identities and face early academic pressures.[9] Early assessment of EI and its subscales can provide educators with valuable insights into learners' emotional strengths and areas requiring support, enabling targeted interventions that foster resilience, teamwork, and patient-centered attitudes.[1,10] Despite growing evidence, there remains a relative paucity of research focused specifically on first year medical students at the start of their professional education, especially in diverse cultural and educational settings. This gap underscores the importance of the present study to assess EI and its dimensions at the beginning of the medical profession journey, to better understand how these competencies shape early academic and professional adaptation.

MATERIALS AND METHODS

A descriptive cross-sectional study was conducted among first year Bachelor of Medicine and Bachelor

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of Surgery (MBBS) students at the beginning of their medical professional education. The study included a total sample size of 120 students, comprising 63 males and 57 females, who were enrolled in the first year of the MBBS course during the study period. All students present at the time of data collection and willing to participate were included in the study, while students who did not provide informed consent or submitted incomplete questionnaires were excluded.

Emotional intelligence and its dimensions were assessed using a standardized, validated emotional intelligence questionnaire designed to measure key domains such as self-awareness, self-regulation, motivation, empathy, and social skills. The questionnaire was administered in a classroom setting under supervision after explaining the purpose of the study to the participants. Adequate time was provided to complete the questionnaire, and anonymity and confidentiality were ensured to encourage honest responses.

Demographic details including age and gender were recorded. Data collected were entered into a spreadsheet and analyzed using appropriate statistical software. Descriptive statistics were used to summarize emotional intelligence scores and their dimensions, expressed as mean and standard deviation. Gender-wise comparison of emotional intelligence scores was carried out using suitable statistical tests, with a p-value of less than 0.05 considered statistically significant. Ethical approval was obtained from the Institutional Ethics Committee prior to commencement of the study, and informed consent was obtained from all participants.

RESULTS

[Table 1] shows the comparison of mean emotional intelligence (EQ) dimension scores between male and female first-year MBBS students. Among the 120 participants, 63 were males and 57 were females.

Female students demonstrated a higher mean sensitivity score (92.14 ± 10.26) compared to males (88.02 ± 14.18), and this difference was statistically significant (p = 0.041). The mean maturity score was slightly higher in males (105.48 ± 17.92) than females (103.21 ± 16.84), though this difference was not statistically significant (p = 0.318). Competency scores were comparable between males (158.76 ± 21.34) and females (159.42 ± 18.67), with no statistically significant difference observed (p = 0.744), indicating similar competency levels across genders.

[Table 2] presents the mean EQ dimension scores according to age groups. Out of 120 students, 88 belonged to the 17–18-year age group and 32 to the 19–21-year age group. Sensitivity scores were marginally higher in the 19–21-year group (91.62 ± 13.21) compared to the 17–18-year group (88.94 ± 11.78), and this difference was statistically significant (p = 0.049). Maturity scores were nearly similar between the two age groups, with mean values of 104.87 ± 17.46 in 17–18-year students and 103.52 ± 18.02 in 19–21-year students, showing no significant difference (p = 0.682). Competency scores were higher among students aged 17–18 years (159.88 ± 18.54) compared to those aged 19–21 years (154.26 ± 25.71), approaching statistical significance (p = 0.051).

[Table 3] depicts gender-wise comparison of EQ dimensions among students aged 19–21 years. In this subgroup of 32 students, 17 were males and 15 were females. Female students showed higher sensitivity scores (93.68 ± 9.14) compared to males (87.29 ± 16.38), though the difference was not statistically significant (p = 0.094). Maturity scores were higher in males (106.84 ± 16.95) than females (100.12 ± 17.88), but this difference was not significant (p = 0.178). Competency scores were slightly higher among females (156.48 ± 21.26) compared to males (152.17 ± 30.82), with no statistically significant difference noted (p = 0.604).

Table 1: Mean values for EQ dimensions in males and females

EQ Dimension	Males (n = 63) Mean	SD	Females (n = 57) Mean	SD	P value
Sensitivity	88.02	14.18	92.14	10.26	0.041*
Maturity	105.48	17.92	103.21	16.84	0.318
Competency	158.76	21.34	159.42	18.67	0.744

*Significant

Table 2: Mean values for EQ dimensions according to age

EQ Dimension	17–18 years (n = 88) Mean	SD	19–21 years (n = 32) Mean	SD	P value
Sensitivity	88.94	11.78	91.62	13.21	0.049*
Maturity	104.87	17.46	103.52	18.02	0.682
Competency	159.88	18.54	154.26	25.71	0.051

*Significant

Table 3: Mean values for EQ dimensions in males and females aged 19–21 years

EQ Dimension	Males (n = 17) Mean	SD	Females (n = 15) Mean	SD	P value
Sensitivity	87.29	16.38	93.68	9.14	0.094
Maturity	106.84	16.95	100.12	17.88	0.178
Competency	152.17	30.82	156.48	21.26	0.604

DISCUSSION

The present study assessed emotional intelligence and its dimensions among first-year MBBS students at the entry point of their medical education and revealed meaningful variations across gender and age groups. Female students demonstrated significantly higher sensitivity scores compared to males, while maturity and competency scores did not differ significantly between genders. These findings align with contemporary evidence suggesting that females tend to exhibit greater emotional perception and empathy, attributes closely related to the sensitivity dimension of emotional intelligence.[11] This gender difference may be attributed to socialization patterns and emotional expressiveness, which are often more strongly encouraged among females even before entering professional education.

The absence of statistically significant gender differences in maturity and competency dimensions suggests that these components of emotional intelligence may be more influenced by educational exposure and experiential learning rather than inherent gender traits. Similar observations have been reported among early medical students, where cognitive-emotional regulation and applied emotional skills develop progressively through clinical exposure rather than at the time of entry into medical training.[12] This highlights the importance of structured emotional intelligence development programs during the early years of medical education.

Age-wise comparison revealed that students aged 19–21 years had significantly higher sensitivity scores than those aged 17–18 years, indicating a possible age-related maturation of emotional awareness. This finding is consistent with neuropsychological research demonstrating continued emotional and social development during late adolescence and early adulthood.[13] However, maturity scores were comparable between the two age groups, suggesting that emotional regulation and judgment may require experiential learning within professional settings rather than mere chronological age progression.

Interestingly, competency scores were higher among the younger age group and approached statistical significance. This may reflect heightened motivation, adaptability, and performance orientation among students entering medical education directly after school. Previous studies have suggested that younger medical students often display higher academic engagement and task-oriented behaviors, which may translate into elevated competency-related emotional intelligence scores.[14] However, as competency encompasses applied emotional skills, these differences may equilibrate as students progress through medical training.

Gender-wise analysis within the 19–21-year age group revealed higher sensitivity scores among females and higher maturity scores among males, though these differences were not statistically significant. This pattern suggests convergence of emotional intelligence dimensions with increasing age and exposure to shared academic environments. Longitudinal studies indicate that emotional intelligence dimensions tend to stabilize during early adulthood, with individual differences becoming less pronounced as professional identity formation begins.[15]

Overall, the findings underscore the relevance of early emotional intelligence assessment among medical students. Identifying strengths and deficits at entry allows educators to design targeted interventions aimed at enhancing emotional awareness, regulation, and interpersonal competence—skills essential for effective doctor–patient relationships and professional resilience. Incorporating emotional intelligence training into the early medical curriculum may help bridge observed gaps and support holistic professional development.

CONCLUSION

The study concludes that emotional intelligence and its dimensions vary across gender and age among first-year MBBS students at the beginning of their medical education. Female students exhibited significantly higher sensitivity scores, while maturity and competency dimensions showed no significant gender differences. Age-related differences were observed predominantly in sensitivity, with older students demonstrating higher emotional awareness. These findings highlight the importance of early assessment and structured emotional intelligence development programs within undergraduate medical education to promote emotional competence, resilience, and professionalism from the outset of medical training.

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