

Research Article

Measuring Emotional Intelligence in First Year Medical Students

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Abstract: Background: The term emotional intelligence is being used more often in the medical field and different healthcare-related fields. The evaluation of emotional intelligence is crucial in assessing how well students adjust and perform academically. Neglecting this stage of life can result in psychiatric issues or make them worse, as well as failure in social and academic situations.

Objectives: To evaluate first-year medical students' emotional intelligence (EI) and determine how it relates to their social and personal characteristics.

Materials and Methods: This cross-sectional study included 166 first-year medical students and took place at University College of Medicine and Dentistry between September and December 2022. Ethical approval was obtained from the ERB committee before the study was conducted. A proforma was used to collect social and demographic information, while an emotional quotient self-assessment checklist was used to assess participants' emotional intelligence, rated on a five-point Likert scale. The collected data was then subjected to statistical analysis.

Results: Out of 166 students approached in the first year class, 149 (79 females and 70 males) participated in the study with an average age of 19.12 ± 0.69 years. Results showed that 33.6% of the first-year medical students scored below the 20 cutoff in all emotional intelligence domains. Those who reported making a conscious career choice, getting adequate sleep, and engaging in more social and physical activity than average had higher emotional intelligence scores ($p=0.05$). Additionally, females had significantly higher emotional intelligence scores compared to males ($p=0.02$). A positive correlation was observed among the various emotional intelligence domains.

Conclusion: Good emotional intelligence comprises the capacity to comprehend and regulate emotions, to be empathic, to be emotionally aware, and so on. These traits enhance general communication abilities, which enhance performance in the medical training.

Keywords: Assessment, Level, Factors, Impact, Success, Medical School, Professional Development, Improvement.

INTRODUCTION

One component of a wide range of abilities that enables a person to produce value for both oneself and others is emotional intelligence (EI) [1]. The need of emotional intelligence for both professional mental health and efficient practice is being discussed more frequently in medicine and other healthcare areas. EI enables one to forge stronger bonds with others, perform well at workplace, and realize professional and individual goals. The concept of Emotional Intelligence (EI) was initially presented more than ten years ago by Salovey and Mayer and it refers to the ability to identify and comprehend one's own emotions and the emotions of others, distinguish between them, and utilize this information to guide thoughts and actions [2].

EI has an influence on a variety of perspectives of daily living, including actions and interactions with others. The evaluation of emotional intelligence is crucial in assessing how well students adjust and perform academically [3]. University is a transformative experience that encompasses forming new

relationships and embracing new experiences. From an academic perspective, the freshman year of college presents numerous opportunities to explore a variety of academic disciplines [4]. Freshers at college, however, may go through a number of changes that can cause issues because college is extremely unlike high school.

Emotional intelligence is thought to play a role in determining the quality of personal and professional relationships, job performance, and overall success. Emotional Intelligence encompasses six crucial elements, including self-awareness, self-confidence, self-control, empathy, motivation, and social competence. The aspect of self-awareness involves a complete understanding of one's emotions, abilities, limitations, needs, and drives [5]. Self-confidence refers to a favorable and harmonious outlook towards one's self-awareness. It is the belief that one has the ability to achieve desired outcomes through action. Self-control involves the capacity to regulate stress and maintain emotional stability, avoiding excessive reactions. Empathy involves being aware of and responsive to others' emotions, helping to build connections and retain talent. Motivation is one of the major components of both leadership and emotional intelligence. Social Compe-

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tency is the result of appropriate social behavior [6]. Instead than concentrating on our own feelings or what we want to say, we must concentrate on other people in order to improve these social skills. Assessing the emotional intelligence of students is important as the university years are a crucial period in their lives as productive, energetic future contributors to society. This time is often associated with significant changes in their social and personal relationships [7]. Neglecting this stage of life can result in psychiatric issues or make them worse, as well as failure in social and academic situations. The aim of this study is to assess the emotional intelligence (EI) of first-year medical students at University College of Medicine and Dentistry in Lahore and examine its relationship with their social and personal characteristics.

MATERIALS AND METHODS

A total of 166 students were included in the study, which was conducted between September and December 2022.

This cross sectional study included first-year medical students at University College of Medicine and Dentistry in Lahore as participants. Participants who did not meet the inclusion criteria of being a first-year medical student at the specified institution were excluded from the study.

The sample was collected from the first-year medical class at University College of Medicine and Dentistry in Lahore. Ethical approval was obtained from the ERB committee before the study was conducted to ensure that the rights and confidentiality of the participants were protected. Participants provided informed consent before participating in the study. EI was then evaluated utilizing Sterrett's Emotional Quotient Self-Assessment Checklist [8]. This checklist consists of 30 items, a 5-point Likert scale, with a score range of 1 to 5, with five questions for each of the six traits: self-awareness, self-confidence, self-control, empathy, motivation, and social competence. The scores from each of the six domains were added to obtain the final score, with a minimum score of 5 and a maximum score of 25 for each domain. A score of 20 is considered to be a good EI in each domain, and any number below that requires improvement in that particular domain. Total scores could go as high as 180 or as low as 30, respectively.

Data was gathered through a structured questionnaire with a five-point Likert scale which included questions about the participants' social and demographic characteristics, such as age, gender, socioeconomic status, college ID, address, career interests, and lifestyle habits, including sleep, extracurricular activities, and exercise, as well as their interpersonal relationships. The sample collection process was carefully designed to ensure that only eligible participants were included in the study and that their rights and confidentiality were protected

throughout the research process. The participants were asked to fill out a questionnaire through Google Docs, which facilitated an accurate evaluation of their emotional intelligence and the identification of correlations between various variables. In the study, the questionnaire used was previously validated and tested, with a reliability coefficient of 0.82 (according to Cronbach's alpha). The students were given an explanation of the study's objectives and methods, and the questionnaire was distributed to them in their classroom for completion. The socio-economic status of the students was assessed using the modified Kuppaswamy scale [8].

SPSS-22 was used to analyse the data. Each student's overall emotional intelligence score as well as the scores for each domain were obtained. Frequency, mean scores, and standard deviation were used as descriptive statistics, and independent t-test and Pearson correlation coefficient were applied as inferential statistics, to evaluate the data.

RESULTS

Out of 166 students approached in the first year class, 149 (79 females and 70 males) participated in the study. The average age of the students was 19.12 ± 0.69 years, with 53% (79 students) being female and 47% (70 students) being male. The majority (60%) of medical students came from cities other than Lahore, 76% had chosen their profession freely, and 49% were not content with their current living conditions. Most of the students (59%) came from upper-class backgrounds, according to the modified Kuppaswamy scale. The medical students spent 6-8 hours at college daily, with 70% reporting good sleep of 6-8 hours. Over 80% had less than 2 hours a day for leisure activities and exercise. 81% of the students had positive interpersonal relationships with their peers, with the majority being female. 79% had regular contact with their families, while 26% faced major problems such as illness, financial difficulties, or interpersonal conflicts. Approximately 34% of first-year medical students scored below 20 on all facets of EI, indicating poor emotional intelligence.

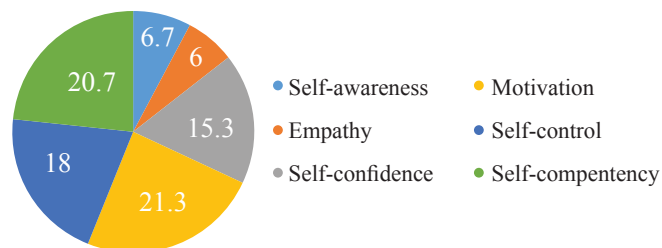


Fig. (1). Students Percentage with EI Scores.

Among 149 medical students, approximately 15% had scores less than 15 on the EI assessment, indicating a requirement for improvement in these students' emotional intelligence (Fig. 1).

Table 1. The Mean of the Domain Scores for Emotional Intelligence.

Emotional Intelligence	Males	Females
Self-awareness	17.75 + 0.06	18.34+ 1.34
Empathy	15.85 + 1.27	15.01+ 2.22
Self-confidence	19.24 + 1.29	19 +1.57
Motivation	18.68 + 1.35	16.02+ 1.25
Self-control	17.85 + 2.45	17.03+ 2.27
Social-competency	16.32 + 1.85	16.4+ 1.01

Table 2. Mean Scores of Total Emotional Intelligence in Males and Females.

Variable	Gender	Mean	Standard Deviation	Standard Error Mean	t-value	Sig.(2- tailed)
Emotional	Male	103.00	08.27	1.132	2.359	0.03*
Intelligence	Female	104.47	10.19	0.619		
	Total	102.82	09.28			

Table 1 shows domain scores of EI where the mean scores were higher in females than males ($p=0.030$)

These findings in Table 2 suggest that there may be a difference in emotional intelligence between males and females, with females having slightly higher emotional intelligence scores on average.

The standard deviation of emotional intelligence scores for males was 8.27, and the standard deviation for females was 10.19. This indicates that there was more variability in emotional intelligence scores for females than males.

The t-value of 2.359 suggests that there was a significant difference in emotional intelligence scores between males and females. The significance level of 0.03* indicates that the difference was statistically significant at the 0.05 level. However, it is important to note that there is still a large degree of variability in emotional intelligence scores within each gender group, and that individual differences play a significant role in emotional intelligence.

DISCUSSION

The first-year medical students' combined EI score was 102.92+9.58, according to the results of the EI examination. In all the EI domains, more than 30% of the students scored below 20, and approximately 15% of them scored below 15, suggesting that these students' EI needs to be improved. Emotional intelligence is seen to be crucial for leadership, workplace, and professional advancement [9,10]. Only approximately 20% of job accomplishments are predicted by intelligent quotient (IQ), leaving the other 80% to other characteristics like emotional intelligence. Low EI may make it more difficult to succeed academically and adjust throughout medical school [11,12]. The t-value and significance level

represent a correlation analysis; a positive t-value indicates that there is a positive relationship between EI and the outcome variable. In other words, higher EI scores are associated with better performance or competency ratings.

Studies have shown that high levels of EI in first year medical students are associated with better academic performance, increased empathy and communication skills, and improved patient care. For example, a study by Arora *et al.* (2010) found that medical students with higher levels of EI had better communication skills and were more likely to engage in patient-centered care [13].

In comparison to men, women were shown to have greater EI ratings. The results attained are consistent with those of earlier research. They all discovered that women had higher emotional intelligence than men [14,15]. The current findings may have arisen from the fact that social skills and emotional intelligence are two main facets of emotional intelligence [12, 16]. It has been proven that women are more likely than males to express their feelings openly, understand emotions better, and perform some interpersonal skills better. Women, for example, are more observant, intuitive, and empathetic. They also perceive other people's emotions better [7,14]. Therefore, they should have stronger emotional intelligence than men [8]. Additionally, there is some data that suggests that women may have larger emotional processing brain regions than men and that sex differences in brain activity may occur [10,17,18]. In our study sample, higher EI was correlated with satisfaction with one's professional path and job choice [19,20]. A student's academic performance would undoubtedly suffer if they felt intrinsically unsatisfied with the course [21].

Maybe this is because emotional intelligence is one of the

things that determines how well people adjust, so those who are better at adjusting also have higher emotional intelligence. EI is benefited by setting aside time for leisure pursuits, exercise, and sleep [6,8]. A greater sense of self-awareness is demonstrated by having one or more significant issues at home. Life experiences lead to a greater ability to perceive human expression, which in turn leads to a proportional improvement in responsiveness, sensitivity, and empathy. Subjects that had frequent contact with their family displayed greater empathy [22]. Family is our first school for emotional learning since it is where we initially learn the concept of recognizing and managing emotions from our parents and the surrounding environment [23,24].

CONCLUSION

Good emotional intelligence includes the ability to understand and manage emotions, exhibit empathy, be sociable, and more. These traits improve overall communication skills, which in turn improve medical education performance. The results showed: 1. approximately 14% of medical students scored below 15 on all facets of EI, indicating a need for improvement. 2. Women had higher EI compared to men. 3. A healthy sleep, positive interpersonal relationships, leisure time, and exercise were linked to good EI. This study provides insight into the emotional intelligence of medical students and its relationship to professional, interpersonal, and lifestyle factors.

AUTHORS' CONTRIBUTION

Kainat Javed: Conceived the idea, Writing and editing of manuscript.

Umair Bin Nasir: Data collection and analysis.

Arooj Javed: Data collection, Proof read.

CONFLICT OF INTEREST

Declared none.

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