

## Emotional intelligence and academic performance of students

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### Abstract

The medical profession deals with 'humanism' which involves interactions with people, the ability to think about them, care for them, and to provide positive reinforcement in clinical follow-ups. Emotional intelligence integrates the significant features of personal relationships to promote self-management skills, like adaptability, control of temperaments and reduction of tension, which can improve performance of individuals. This has led to increasing interest in the importance of emotional intelligence for effective academic growth, professional experiences and clinical practice. There are many studies examining the correlation between emotional intelligence and academic achievement at different education levels, signifying its importance to predict students who need guided intervention. With proven relationship between emotional intelligence and academic success, the assessment of emotional intelligence can be introduced in entrance exams of medical schools to recognise students who might need directed intermediation. With the agreement of all stakeholders, emotional intelligence training workshops and awareness sessions can be introduced for educators and students.

**Keywords:** Emotional intelligence, Academic performance, Students.

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### Introduction

The initial work on emotional intelligence (EI), done in 1990 described it as the ability to monitor one's own and others' feelings and emotions, to discriminate among them and to use this information to guide one's thinking and actions.<sup>1</sup> The 'ability model' concentrates on concepts that stimulate intelligence by understanding emotions.<sup>2</sup> Subsequently, the 'trait model' was presented that gauges EI through intrapersonal skills, interpersonal skills, stress management, adaptability, and general mood.<sup>3,4</sup> The 'mixed model' of EI, also called the 'competency model, portrays a chain of aptitudes and

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proficiencies encompassing the fundamental concepts of self-awareness, social skills, self-regulation, motivation and empathy, and takes EI as a collection of skills that enable an individual to face interruptions while preserving the capability to think, empathise and remain optimistic.<sup>5</sup>

All these theories consequently concur that EI has a set of 4 diverse yet associated abilities: perceiving emotions; using emotions; understanding emotions; and managing emotions".<sup>6</sup> It enables an individual to recognise, indicate, control and reply one's own emotions and apply this knowledge to monitor and manage feelings and activities.

The current narrative review was planned to see if literature supports the introduction of EI assessment in entrance exams of medical schools in order to recognise students who might need directed intermediation later.

### Methods

The narrative review comprised literature search on PubMed, Education Resources Information Center (ERIC), Google Scholar and Pak Medinet databases using key words 'EI', 'Models of EI', 'Tools for assessment of EI', 'Students in Health Care', 'academic performance', 'Emotional Intelligence Scale' and 'EIS'. a total of 8 international and national studies were included<sup>4,6-12</sup> and their key findings were tabulated (Table).

### EI and academic success

Academic success is the acquisition of subject knowledge, achievement in practice, and development of proficiencies, aptitudes and skills as delineated in the outcome of educational system.<sup>13</sup> Inherent features, like motivation, self-directed learning and individual proficiency, together with extrinsic issues, like the syllabus, teaching strategies and the student support structure, play a key role in academic success. EI assumes a key position in acquiring educational accomplishment, academic acclimatisation and emotional wellness of students, especially during stressful conditions,<sup>14,15</sup> by bridging the gap between efforts for learning, effective learning and academic success.<sup>4</sup>

EI develops self-awareness which enables an individual to identify the desires, take positive actions and make

**Table:** Summary of research conducted on emotional intelligence (EI) and academic performance.

| Author / Year                          | Objective   | Context/Setting/<br>Sample/ Methodology   | Significant Findings  | Recommendations   |
|--|---|---|---|---|
| Tariq et al, 2020. <sup>9</sup>        | To compare trait emotional intelligence and its factors between students of different faculties and their residing status and the effect of faculty - student's residing status and emotional intelligence – student's residing status interaction on student test scores | Cross-sectional analytical, questionnaire-based study using trait emotional intelligence questionnaire – short form (TEI Que-SF).   | EI, an important factor predisposes to academic accomplishment of students. Significant interaction of EI was seen between the 7 studied faculties & student's residing status. | EI could be used as a starting point to guide students for future careers, in assessments and in their selection and placement in hostels.      |
| Connor et al, 2019. <sup>19</sup>      | Describes different conceptualizations of EI to choose and apply different processes of EI.   | Mayer and Salovey's model; Stream 1: includes ability measures Stream 2: includes self-report Stream 3: includes "expanded models of EI"  | An inclusive review of the main psychometric properties of EI tool  | Trait of EI is a strong predictor of emotion related outcomes. It is suggested that trait of EI be considered by new users.                     |
| Dolev et al, 2019. <sup>11</sup>       | To measure EI levels in medical students, examine its association with scores on MOR test and study students' thoughts about importance of EI in medical profession   | EI was evaluated by the 'Bar-On EQ-i 2.0', and 'MOR' assessment scores were given by the faculty  | EI leads to professional success and improved clinical outcomes.  | EI scores should be considered in the selection processes of medical students and incorporated in the medical prospectuses.                     |
| Suleman et al; 2019. <sup>4</sup>      | To explore the relationship of EI with academic performance in undergraduate students of Science & Technology university in Pakistan.   | A standardized tool "Emotional Intelligence Scale" was used for the assortment of data. Academic success was interpreted by average "Cumulative Grade Point Average" scores of students | Improvement in EI of undergraduate students can improve academic performance  | The findings suggest that the EI of the undergraduate students needs improvement to enhance their academic performance                          |
| Sundararajan et al, 2018. <sup>8</sup> | To measure EI in medical students and study their thoughts about impact of emotions in medical profession   | 'Quick Emotional Intelligence Self-Assessment Test' was applied for this objective  | Medical students, had different views about the effect of emotions in medical care, intellectual replication;   | Emphasizes need for community oriented medical education for better clinical care   |
| Chaudhry et al, 2013. <sup>12</sup>    | To examine the difference of EI through field of study as well as difference in gender among university students  | A self-reported scale encompassing 33 items was used  | Results of EI can be utilized by Human Resource managers during recruitment/selection and placement processes.  | EI Results can be utilized in the hiring and selection process based on the nature of job   |
| Mac Cann C et al, 2020 <sup>7</sup>    | What is the influence of EI on objective parameters of academic performance in undergraduate medical, dental, and nursing students aged 18–30 years?"   | Meta-Analysis: Databases for empirical studies on EI of medical, nursing, or dental undergraduate students were compared with academic performance appraisal                            | EI plays a significant role in academic success of clinical year medical and dental students  | For the holistic impact on health-care improvement, EI skills should be incorporated in health-care teams                                       |
| Partido et al, 2018 <sup>10</sup>      | To determine an associations between EI scores with academic and clinical performance in a group of undergraduate dental hygiene students.  | Cross sectional study; The EI subset scores were assessed and correlated with students' academic and clinical grades.   | EI subsets of self-control, motivation, and self-confidence turned out to be predictors of overall academic performance.  | More attention should be paid to the development of EI for improved academic and clinical performance in undergraduate dental hygiene students. |

Search Engines: PubMed, Education Resources Information Center (ERIC), Google Scholar, Pak Medi Net. Key Words: EI, Medical Students.

changes in life by selecting coping strategies for relief of stress and anxiety to improve mental health.<sup>16</sup> It has been recognised that EI normalises negative emotions, such as nervousness, monotony and dissatisfaction, which emerge during the course of studies. Students with higher EI manage improved interactions with instructors, colleagues and family members. These competencies

intersect with interpersonal and communication skills required for academic proficiencies.<sup>17</sup> Therefore, educators, investigators and legislators unanimously agree that EI is an imperative proficiency required by the students to improve their wellness and future workplace success.<sup>17</sup>

A study conducted at the University of Malaysia revealed

that EI helped in acquiring educational accomplishment among pre-service teachers.<sup>7</sup> It was further observed that health-damaging behaviours were associated with students having low EI, and, on the contrary, enhanced interpersonal, organisational and time-management skills were related with high EI of students.<sup>18</sup> A national-level study showed a very strong association of EI with grades obtained during assessments.<sup>4</sup> A study conducted on undergraduate students in Faisalabad, Pakistan, showed EI to be a predictor of academic achievement in altered living conditions, and students with relatively higher EI were able to score equally well regardless of whether they were boarders or non-boarders.<sup>9</sup>

**Emotional Intelligence Scale (EIS)**

Around 30 different tools for measurement of EI have been developed.<sup>19</sup> The emotional intelligence scale (EIS) by Hyde et al. is a valid and reliable ( $r=0.995$ ) tool used among undergraduate Pakistani students by Suleman et al.<sup>4</sup>

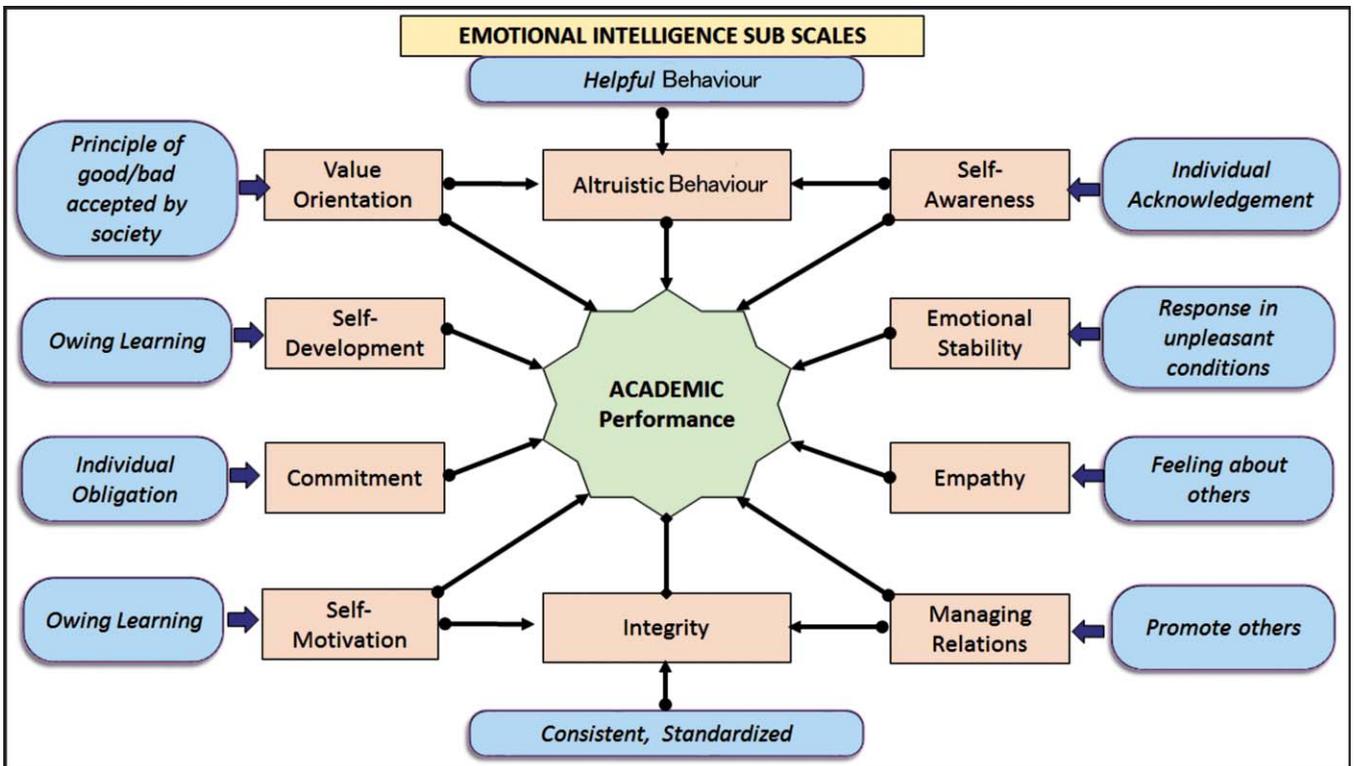
The EIS assesses self-awareness, emotional stability, empathy, managing relations, integrity, self-motivation, commitment, self-development, value orientation, and altruistic behaviour through 4, 4, 5, 4, 3, 6, 2, 2, 2 and 2 items respectively.<sup>20</sup> Responses are obtained on a five-point likert scale, ranging from 5 = 'strongly agree' to 1 =

'strongly disagree'. The various sub-dimensions of EIS assess impact on academic performance and behaviours (Figure).

Answers of items are summed up for calculation of subscale scores which are then merged to have a total score. Mean scores of different sub-dimensions are calculated and summed up to find the overall EIS. Score >85 (mean score: 2.5) means 'Above Average Emotionally Intelligent', while score <55 (mean score: 1.62) indicates 'Below Average Emotionally Intelligent', and scores 55-85 (mean score: 1.6-2.5) declare a student 'Average Emotionally Intelligent'.<sup>4</sup>

**EI and academic success: Students' responses**

EI has been associated with academic and clinical performance and stress-coping strategies for medical as well as dental students.<sup>10,18,21-24</sup> EI of medical students in Chennai, India, assessed by the Quick Emotional Intelligence Self-Assessment Test, comprising emotional awareness, emotional management, social emotional awareness and relationship management domains, documented that application of effective cognitive reflection exercises can help as a building block for EI.<sup>8</sup> Comparison of EI scores by BarOn EQ-i 2.0 evaluation tool and Non-cognitive Assessments for Medical School



**Figure:** Association of emotional intelligence (EI) scales and sub-scales with behaviour patterns and academic performance.

Candidates documented that EI leads to proficient achievement and improved clinical outcomes.<sup>11</sup>

In a study conducted in a medical school of Delhi, India, a strong negative association between EI and psychological health was observed in newly-admitted undergraduate medical students.<sup>25</sup> An exploratory study conducted on medical students in the United Kingdom, which provided the preliminary data on EI scores and identified factors associated with higher and lower EI scores, however was not able to conclusively find a connection between EI and events of scholastic performance.<sup>26</sup> A study confirmed that medical students with higher EI accomplished good scores in continuous assessments as well as concluding professional examination.<sup>21</sup> The importance of EI in the successful clinical practice of medicine has been recognized by a study done to measure EI of postgraduate medical students in medical colleges of Delhi.<sup>27</sup>

## Conclusion

With documented relationship between EI and academic success, there is a case for the inclusion of EI assessment in medical school entrance exams to recognise students who may need directed intermediation later. Also, techniques to improve EI must be incorporated in the orientation/foundation module of medical curricula for all students. Plans must also be devised to improve students with low EI scores and continuously monitor these efforts during the first two academic years. Strategies to promote EI in clinical undergraduates to improve doctor-patient relationship for better clinical outcomes may also be developed, and EI shall be introduced as a fundamental element in medical education, and strengthened by constant proficient development activities. With agreement of all stakeholders, EI training workshops and awareness sessions shall be introduced for educators and students.

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