Emotional Intelligence andAcademic Performance of Medical Students

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Abstract. Emotional Intelligence has been a trending skill since its inception in 1990. The personal and professional benefits of EI have been researched across multiple professions and the medical field was not an exception. Educators had long agreed that EI is an essential skill that could enhance the academic performance and well-being of students. In the medical profession, EI is said to be associated with patient satisfaction, doctor-patient relationships and empathy. Given the importance of EI, it would be interesting to examine the association between EI and the academic achievement of medical students. The findings from previous studies that examined there two variables were contradictory and hence this study attempts to analyze the relationship between the EI skills and academic performance of undergraduate medical students. A sample of 133 students from a medical college in South India were considered for the study. EI was measured using a situational judgment test and academic scores were retrieved from the medical school records. The study found that the EI skill possessed by medical students and their academic performance are positively associated and derives important implications for researchers, academia and the health care industry.

Keywords: Emotional Intelligence, EI skills and academic performance.

1 Introduction

Ever since its inception in 1990, Emotional Intelligence (EI) has been attracting a lot of attention. Researchers have traveled the length and breadth of research on EI and have unearthed its potential benefits across all spheres. This extensive research and increased attention has led to the world economic forum declaring EI as a trending skill (World Economic Forum, 2020). Educators, policy makers, and researchers across the world have come to a consensus that EI is an important attribute that could foster the future success and well-being of students (MacCann, Jiang, Double, Bucich, &Minbashian, 2020). The field of medical education is no exception to this. EI was quoted as an essential skill for physicians and healthcare professionals (Webb, Young, &Balmer, 2010). EI was also found to foster patient-doctor relationship, empathy, and patient satisfaction (Syed, 2011; Arora, Ashrafian,

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Davis, Athanasiou, Darzi and Serdalis, 2010; Satterfield, Swenson and Rabow, 2009; Stratton, Elam, Murphy-Spencer and Quinlivan, 2005; Blue, Chessman, Gilbert and Mainous, 2000).

Programs focusing on social and emotional skills were found to be effective among schools (Durlack, Weissberg, Dymnicki, Taylor, &Schellinger, 2011) and there is substantial research to justify that non-cognitive factors like social and emotional skills can impact academic performance (Richardson, Abraham, & Bond, 2012; Poropat, 2009). However, there are limited studies that have analyzed the association between academic outcomes and EI of medical students in the Indian context. This study aims to address the lacuna and examines the association between the EI levels and academic performance of medical students.

2. Literature Review

EI is an ability to process the emotional inputs from our environment and devise appropriate response strategies in order to realize better outcomes personally and professionally (Krishnaveni& Deepa, 2011).EI fosters the motivation of students and facilitates divergent thinking(Takeuchi, Tomita, Taki, Kikuchi, et al., 2015) thereby influencing the academic performance of students.Roy and colleagues (Roy, Sinha&Suman, 2013) reported a positive association between EI and academic achievement motivation, while Fallahzadeh (2011) found an association of EI with academic performance In another study on 163 medical students, it was found that students with higher EI scored high in both formative and final examination (HowChew, Zain& Hassan, 2013). There was a limited evidence for the association between EI and academic performance in a study done on first year medical students (Austin, Evans, Goldwater, Potter, 2005). In a study on 75 first year MBBS students in India an inverse relationship between EI and academic performance was reported (Shah, Sanisara, Mehta, &Vaghela, 2014). Conversely, a study on 130 medical students in Sri Lanka indicated that academic performance was higher among students who were more emotionally intelligent(Wijekoon, Amaratunge, de Silva, Senanayake, Jayawardane, Senarath,2017). In study done on 120 first and second year students in Pakistan, a positive association between EI and academic performance was reported. This study also suggested that interventions should be implemented to enhance the emotional well-being of medical students so that their academic performance is improved and sustained through the course (Ahmed, Mehak, Ali, Khan et al., 2017). Based on a systematic review, MacCann and colleagues (MacCann et al., 2020) report that the association between EI and academic achievement is stronger for the ability model of EI. Another systematic review (Karkada, Arnold D'Souza, & Mustapha, 2020) also confirms the association and warns that the EI of medical students tend to decrease over the study period. They recommend that the cause for this be determined and necessary interventions are to be implemented to sustain the EI of medical students. EI was found to play a significant role in the academic achievement of medical and dental students (Singh, Kulkarni, & Gupta, 2021). Having examined the research on EI and academic achievement, this study aimed to understand the association between EI and academic performance among UG medical students, using quantitative data.

3 Methodology

The approval of the Institutional Human Ethics Committee (IHEC) (IHEC Study Proposal number: 17/362) was secured before data collection.The sample consisted of students from a private medical college in South India. The students had completed their first year examinations and were entering into the second year of their undergraduate medical training. A total number of 141 potential participants were selected through consecutive sampling from the college attendance registers for participation in the present study. The purpose of the study was explained to these students. Two students declined participation and six students were unavailable for assessment. The final sample consisted of 133 students. There were 53 men and 80 women respondents in the sample.

The Emotional Intelligence Test for Medical Students was used to assess EI.It uses situational judgment tests (SJTs) to test the EI skills of respondents. The test consists of 12 items which measure the constituents of emotional intelligence namely, perception, appraisal and regulation. The statistical validity of this tool has been established, with a reliability of 0.8 (Deepa&Panicker, 2021).

Written informed consent was taken from all participants for participation in the study. Confidentiality was assured and the researchers separately maintained the details obtained from the study. The aggregate internal marks of the students were taken and the EIT-M was administered to the students.

4 Analysis And Discussions

Statistical Package for Social Sciences- Version 19 (SPSS-19) was used for analyses. The data was found to be normally distributed. Independent samples t-test was done to evaluate the differences in total EI as well as the individual components of EI, namely appraisal and regulation. The main objective of the study was to examine the association between EI and academic performance. The statistical analysis revealed a significant positive association ($r = 0.25$; $p <= 0.01$) between EI and the academic performance of medical students.

The results of this study contradict another study done in the Indian context (Shah et al., 2014) which reported an inverse relationship between EI and academic performance. The study also substantiates the outcomes of the systematic reviews in this arena (MacCann et al., 2020; Karkada et al., 2020; Singh et al., 2021). Karkada and colleagues report that there seems to be a decline in the EI skills of medical students over the course of the years and suggest that this needs to be monitored and sustained. Given the important role of EI in the academic and professional fronts for medical students, it is high time that medical schools design programs to develop the social and emotional skills of health care professionals. This could also be included as a module in the curriculum of the undergraduate medical course.

An independent samples 'T' test revealed that women scored higher in EI than Men (Men = 43.46; Women = 51.96; $p <= 0.01$) and that the academic performance of women was superior compared to Men (Men = 35.3; Women 48.2; $p <= 0.01$). The previous research examining the association between gender and EI is mixed (Jorfi, Yacco, & Shah, 2012;

Fernandez-Berrocal, Cabello, Gualda, &Extremera, 2012) and hence these outcomes warrant further investigation.

4 Conclusion

The study has shown that the gold standard for determining the skill of a medical professional is not just their theoretical knowledge and clinical skills alone. Considering the imperative role of EI in enhancing the professional caliber, the contributing factors can be looked into. Thus, prior to entering into core clinical practice, the process of honing EI skills for professional development is important.A clear understanding in this area can help in planning for integrating EI training as part of the medical education curriculum. The health care sector can also design interventions to enhance the EI skills of their entities so as to deliver quality health care that is patient-centric.

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