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Emotional Intelligence among Medical Internees and its relationship with Academic Performance: A Cross-Sectional Observational Study

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Abstract

Background: Emotional Intelligence (EI), defined by Salovey and Mayer as a type of social intelligence is not only essential to overall life satisfaction but also for academic success. In a profession where one deals with the suffering of fellow human beings, understanding of their EI can be insightful which led us to undertake this study.

Aim: To find out the relation of Emotional Intelligence to academic performance among medical interns.

Methods: A Cross-Sectional Observational Study done at Tertiary care centre, Guwahati in a sample of 100 MBBS interns. They were given the Emotional Quotient (EQ) Test Questionnaire developed by Chadha and Singh to find out the EQ. Overall academic achievement was calculated as average percentage of marks secured in 1st professional MBBS, 2nd professional MBBS, 3rd professional part I and 3rd professional part II MBBS examinations. The means of EQ, and the means of overall academic achievement was calculated for the sample and Pearson correlation test was used for statistical analysis.

Results: The correlation of total EQ to total academic performance was found to be statistically significant ($r=0.422$, $p<0.001$). Also, correlation of EQ subscale scores- sensitivity, maturity and competency to total academic performance were found to be statistically significant.

Conclusion: This study found that EI is strongly associated with academic performance which has implications for both educational and clinical practice. EI is an important skill set which helps us to excel in academics, to understand and build empathy which will enhance patient care.

Keywords: Emotional intelligence, Emotional Quotient, Academic performance, medical interns

Introduction

Emotions are coordinated set of responses which include physiological and behavioural mechanism that drive us to take action.[1] "Emotional Intelligence" (EI) is a relatively new term first defined in 1990s by Salovey and Mayer as "a type of social intelligence that involves the ability to monitor one's own and others' emotions, to discriminate among them, and to use this information to guide one's thinking and actions". [2] Some doctors have greater capacity than others to carry out sophisticated information processing about emotions of patients. According to Goleman, IQ contributes no more than 20% towards one's success, while the remainder 80% comes from factors such as social intelligence and emotional intelligence.[3] Doctors deal with suffering of human beings on daily basis, where understanding of their EI can be insightful. So, the study was conducted with the aim to find out Emotional intelligence among the medical interns in tertiary care hospital and Medical College and to find out the relation of Emotional Intelligence to academic performance.

Materials and Methods

Participants and setting: This study was a Cross Sectional and Observational study conducted in Department of Psychiatry, in a tertiary care centre in Guwahati, Assam. Study was done during the time period of May 2021 to April 2022. Ethical clearance was taken from Institutional Ethics Committee. Study sample consisted of 100 MBBS interns, both male and female who were included after taking informed consent. Those who were not willing to give consent and not willing to participate were excluded from the study. The medical interns who gave consent for the study were given the sociodemographic proforma and EQ Questionnaire developed by Chadha and Singh[4] to find out the EQ. The academic achievement was determined from the percentage of marks secured in 1st, 2nd, 3rd part I and 3rd part II professional MBBS examinations. Total academic achievement was calculated as average percentage of marks secured in 1st, 2nd ,3rd part I and 3rd part II professional MBBS examinations. Mean of Total EQ was first calculated for the entire sample. Then, the correlations of Total EQ and different subscales of EQ to academic achievements were seen in the total sample.

Instrument: The following tools and scales were used for study purpose-

a. A socio-demographic proforma- A socio-demographic proforma was prepared for use in the study for collecting and documenting information on sociodemographic variables.

b. EQ Test Questionnaire developed by Chadha and Singh[4] - The EQ test used in the study had been developed by Dr Dalip Singh and Prof NK Chadha. It was used to measure EQ of the participants which has a test-retest and split half reliability of 0.94 and 0.89 respectively, and validity of 0.89. The test constitutes three psychological dimensions - emotional competency, emotional maturity and emotional sensitivity.

Statistical Analysis: The socio-demographic data were analysed using descriptive statistical methods in the form of mean, standard deviation, frequency and percentage. Descriptive statistics were used for demographic characteristics and for calculating the means of EQ and academic achievements. Inferential statistics were in the form of Pearson's correlation test. It was used to see the correlations between EQ and overall academic performance.

Results and observation

In the study group, 85% of interns were in age group of 20-25 years and 15% interns were in age group 26-31 years. The mean age of the interns was 24.36 years. In the study group, 59% interns were males, and 41% interns were females. Majority of sample population (86%) were Hindus. 32% of sample population were from rural background and 68% of sample population were from urban background. 24% of interns belonged to joint type of family and 76% belonged to nuclear type of family and 100% of sample population were unmarried. Demographic data is shown in table 1.

Table 1: Demographic structure of the data

Variables	Mean
1.Age	24.36
2.Gender:	
a) Males	59(59%)
b) Females	41(41%)
3.Religion	
a) Buddhism	1(1%)
b) Christianity	3(3%)
c) Hindu	86(86%)
d) Islam	10(10%)
4.Domicile	
a) Rural	32(32%)
b) Urban	68(68%)
5.Marital Status	
a) Unmarried	100(100%)
6.Type of family	
a) Joint	24(24%)
b) Nuclear	76(76%)

Table 2 shows the academic performance of medical interns. The total academic performance was calculated by adding marks of examination of 1st professional MBBS (Mean=352.32, SD=50.29), marks of 2nd professional MBBS (Mean=315.26, SD=43.79), marks of 3rd professional MBBS part I (Mean=244.64, SD=44.50) and part II (Mean=495.20, SD=85.83) examination and calculating the mean. The mean total academic performance of the sample was 1407.43 (SD=166.34).

Table 2: Shows the Academic performance (AA) of medical interns

Examination	N	Mean	Median	SD
1st prof MBBS	100	352.32	351.5	50.2
2nd prof MBBS	100	315.26	313.5	43.7
3rd prof part I	100	244.64	242.7	44.5
3rd prof part II	100	495.20	501.5	85.8
Total AA	100	1407.43	1423	166.3

Table 3 shows mean of EQ and the correlation of total EQ and different subscales of EQ to Total academic performance. Mean sensitivity EQ was 86.65 (SD=12.08), mean maturity EQ was 101.45 (SD=14.13), mean competency EQ was 147.52 (SD=22.13) and the mean Total EQ of 100 interns was 335.62 (SD=37.80). In the study, the Pearson correlation test was used to find out the correlation of total EQ to total academic performance and was found to be statistically significant ($p<0.001$, $r=0.422$) which is shown in figure 1. Also, correlation of EQ subscale scores - sensitivity, maturity, and competency to total Academic performance were statistically significant as shown in figure 2, figure 3 and figure 4 respectively.

Table 3: Shows the mean of Emotional intelligence and Correlation of total EQ and different subscales of EQ to Total academic performance

Emotional Intelligence	N	Mean	SD	Correlation with Total AA	
				r	P value
1.Sensitivity EQ	100	86.65	12.08	0.503	<0.001
2.Maturity EQ	100	101.45	14.13	0.274	0.006
3.Competency EQ	100	147.52	22.13	0.270	0.007
Total EQ	100	335.62	37.80	0.422	<0.001

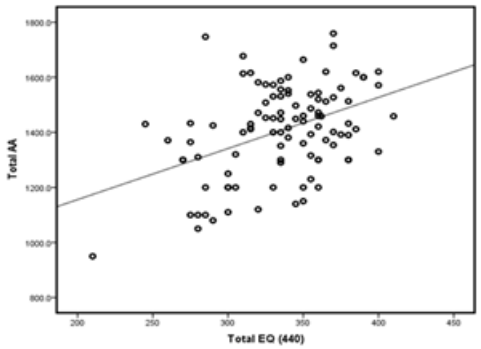

Figure 1: Correlation of Total EQ to Total Academic performance

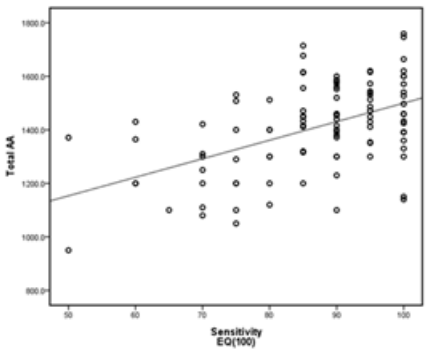

Figure 2: Correlation of subscale -Sensitivity EQ to Total academic performance

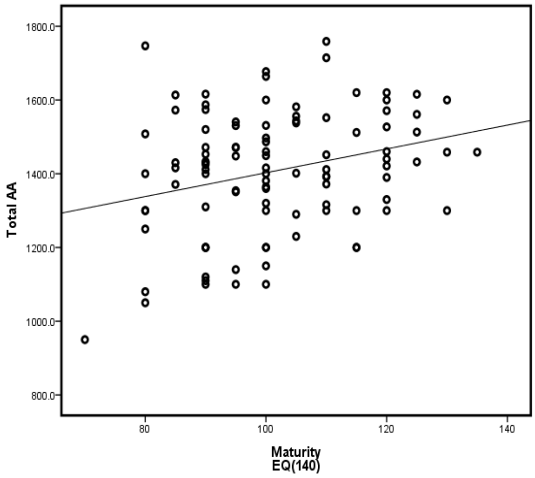

Figure 3**:** Correlation of subscale- Maturity EQ to Total academic performance

Discussion

The study is carried out on a sample of 100 medical interns, to measure the EI among them and to find the relation between EI and academic performance.

In the sample, males constituted 59% of the sample and females constituted 41% of the sample. Majority (85%) of interns were in age group of 20-25 years. Most of the participants i.e. 86% were Hindus, 32% of sample population were from rural background but more (68%) of sample population were from urban background. 100% sample were unmarried and majority (76%) belongs to nuclear type of family.

The study findings highlight the significant connection between the EI and academic performance of medical interns. In the present study correlation of Total EQ to Total academic performance is found to be statistically significant ($p<0.001$, $r=0.422$) which means EI is strongly associated with Academic achievement. Several other earlier researchers, Wijekoon CN et al (2017)[5], Saumya Vinod Joshia et al (2012)[6], Boon How Chew et al (2013)[7], Ranasinghe P et al (2017)[8] have found a significant positive correlation between EQ and academic performance. There could be different reasons

for the better academic performance among those with higher EI.

Those with higher EI can adjust to the emotionally challenging medical curriculum more easily and hence, perform better. It is supported by the study done by Joseph et al. (2010) who has reported that EI positively predicts performance in emotionally demanding situations.[9]

When the different subscales of EI are considered, the present study sample shows highest mean scores in the subscale of "Emotional Competency" which signifies that they are better in tackling emotional upsets, has high self-esteem, can respond tactfully to emotional stimuli and good at handling egoism. Also, in this study, correlation of subscale of "Emotional Competency" to total academic performance is found to be significant ($p=0.007$)**,** which denotes that emotional competency has notable link to academic performance. This means being able to tackle frustrations, conflicts, and avoiding emotional exhaustion such as stress, burnout and negativity along with finding ways to deal with anger, fear, anxiety and sadness which are essential signs of emotional competency help in overall performance. For example, learning how to manage oneself when upset and when anxious and frustrated before exams or handling critical cases is one such asset. Being able to channelise emotions to a positive end is another key skill which helps to improve academic performance.

Also, in the present study**,** the domain "Emotional Maturity" has significant correlation with academic performance ($p=0.006$) which denotes that Emotional maturity that includes components such as self-awareness, developing others, delaying gratification, adaptability and flexibility has remarkable relation to academic performance. Ability to recognise different feelings coming from within and giving a name to them and knowing one's own emotional strength and weaknesses is of great help.

In this study, the other subscale of EI, "Emotional Sensitivity" has significant relation to academic performance ($p<0.001$). Emotional sensitivity has aspects such as- Understanding threshold of emotional arousal, Empathy, Improving inter-personal relations, communicability of emotions. The interpersonal EI is a very useful attribute for a medical student specially, during the final year where huge amount of the learning and assessment is dependent on interpersonal relationship with patients. Interpersonal EI is also important for nurturing positive relationships with the colleague and the other healthcare workers in the hospital, which accelerate a smooth learning process. The findings in the present study with regard to the relationship between EI and academic performance are in keeping with the findings of several previous studies from different countries including USA, India and Malaysia.[10,11]

However, there are some limitations of the study**.** The study did not report the contribution of general intelligence towards the examination results. Selection bias could play a role, as in any voluntary study. Those non-participating interns could be less motivated or discouraged with their already poor academic achievement. Sample size was within each academic year and was done in medical interns, so results cannot be generalised to the general population. As it is a cross-sectional study, follow up of participants was not done.

Strengths of the study is that there are very few studies in India and north-eastern part of the country regarding emotional intelligence. So, this study can help to bring the concept of EI to the foreground in medical field.

Also, the study analysed the subscales and the components of EI, which can help us to understand and apply the concept of EI to improve performance.

Conclusion

From the present study, Emotional Quotient is seen as an important element in life. Medical education needs to examine the emotional intelligence of its students and doctors and possibly pave path to provide greater emotional skill development and enhance learning and academic performance. Students with serious academic problems can use these findings in order to identify the best method in reducing their problems. EI might help to reduce the stress levels and develop and nurture better coping during academic and professional life in future.

This study has implications for both educational and clinical practice. EI is an important skill set which helps us to excel in academics, to understand and build empathy which will enhance patient care.

References

1. Fox E. Emotion science cognitive and neuroscientific approaches to understanding human emotions. Palgrave Macmillan; 2008.
2. Salovey P, Mayer JD. Emotional intelligence. Imagination, cognition and personality. 1990 Mar;9(3):185-211.
3. Goleman D, Cherniss C. The emotionally intelligent workplace: How to select for, measure, and improve emotional intelligence in individuals, groups, and organizations. San Francisco, CA: Jossey-Bass; 2001.
4. Singh D. Emotional intelligence at work: A professional guide. Sage; 2006 Nov 14.
5. Wijekoon CN, Amaratunge H, de Silva Y, Senanayake S, Jayawardane P, Senarath U. Emotional intelligence and academic performance of medical undergraduates: a cross-sectional study in a selected university in Sri Lanka. BMC medical education. 2017 Dec;17(1):1-1.
6. Joshi SV, Srivastava K, Raychaudhuri A. A descriptive study of emotional intelligence and academic performance of MBBS students. Procedia-Social and Behavioral Sciences. 2012 Dec 24; 69:2061-7
7. Chew BH, Zain AM, Hassan F. Emotional intelligence and academic performance in first and final year medical students: a cross-sectional study. BMC medical education. 2013 Dec;13(1):1-0.
8. Ranasinghe P, Wathurapatha WS, Mathangasinghe Y, Ponnamperuma G. Emotional intelligence, perceived stress and academic performance of Sri Lankan medical undergraduates. BMC medical education. 2017 Dec;17(1):1-7.
9. Joseph DL, Newman DA. Emotional intelligence: an integrative meta-analysis and cascading model. Journal of applied psychology. 2010 Jan;95(1):54.
10. Kumar A, Puranik MP, Sowmya KR. Association between dental students' emotional intelligence and academic performance: a study at six dental colleges in India. J Dent Educ. 2016; 80:526–32.
11. Victoroff KZ, Boyatzis RE. What is the relationship between emotional intelligence and dental student clinical performance? J Dent Educ.2012; 77:416–26