Relationship between Emotional Intelligence and Depression in Teaching Faculty of Basic Sciences at a Private Medical College: A Cross Sectional Correlational Study

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ABSTRACT

Background: Emotional Intelligence (EI) spans five basic principles including awareness and management of self-emotions, ability to motivate oneself, awareness, and management of other's emotions. EI takes a person to high level of professional as well as academic success by improving one's cognitive performance far above the level attained by general intelligence (GI). In addition, EI enables one to control negative attributes such as anxiety, anger, and stress and highlight pragmatic and constructive feelings like congeniality, self-confidence and empathy. **Objective:** The current study was designed to estimate the level of emotional intelligence (EI) in teaching faculty of basic sciences at a private medical college and to check its correlation with depression. **Study Design:** Cross sectional correlational study. **Settings:** Lahore Medical & Dental College, Lahore Pakistan. **Duration:** December 2021 to April 2022. **Methods:** Two questionnaires including "Leadership Toolkit Emotional Intelligence Questionnaire" and "Patient Health Care Questionnaire 9 were used to collect the data. After approval from Institutional Review Board, informed written consent was taken from the participants. Data was collected by using convenient sampling technique from faculty of basic science departments. SPSS 22 was utilized for analysis of the data. **Results:** In the current study a total number of 72 faculty members participated. Out of total 72 participants, 69.4% (50) were in the average EI range and 23.6% (17) had good EI with only 6.9% (5) falling in the poor EI range. The mean score for overall EI was higher in senior faculty as compared to junior members with a value of 189.7 but the difference was not statistically significant. Similarly, no significant difference was found among male and female participants regarding overall EI as well as its constructs. The sub-sections managing emotions, motivating one-self and social skills showed significant difference with a higher value in the senior faculty. Overall, EI was found to be inversely correlated with depression with a p value < 0.01. **Conclusion:** The score of Emotional Intelligence is reasonably good in the faculty of basic science departments. Moreover, EI has been found to be inversely correlated with depression.

Keywords: Emotional Intelligence, Faculty, Depression, social skills.

INTRODUCTION

The objectives of education have evolved immensely in the recent years, demanding a change in the methodology as well as educators. Traditionally, the focus of higher education has been subject oriented learning; however, this perspective has shifted to a new, learner centered approach. In addition to excel in content, the student must acquire self-directed learning skills and become a lifelong learner. The upcoming advancements in the field of medical education have placed a huge responsibility on the teachers to motivate and help their students in learning the skills to be lifelong learners. The educators should focus their efforts to gradually and firmly motivate the learners to become autonomous and

self-directed.[1] In this era of changing paradigm, cognitive intelligence is not enough to be successful, and one must be emotionally intelligent to achieve the goals. Emotional intelligence (EI) takes a person to high level of professional as well as academic success by improving one's cognitive performance far above the level attained by general intelligence (GI).[2,3] The initial concept of relating success with intelligence quotient (IQ) was changed drastically when researchers found no association between IQ and success in careers of graduates in different disciplines.[4]

EI spans five basic principles including awareness and management of self-emotions, ability to motivate oneself, awareness, and management of other's emotions. EI enables one to control negative attributes such as anxiety, anger, and stress and highlight pragmatic and constructive feelings like congeniality, self-confidence, and empathy. The five components are not constant and there is always room for improvement.[5] Professionals with high EI are confident, contented, and compassionate with great leadership qualities.[6] These properties play a dynamic role in the prosperity of educators and enhance students learning. High emotional intelligence enables an instructor to understand and recognize their students' emotions and comprehend the cause. The facilitators can thus assist their students to analyze and solve these challenges with considerate comprehension.[7]

Teachers can influence students' accomplishments professionally and academically. In addition to subject knowledge and teaching methods, emotional competency (EC) is an important unrecognized and hidden component of educators. EC brings creativity and innovation to the teaching methods and helps in focusing on affective and psychomotor domain. Facilitators with high EI can communicate better and efficiently solve disputes and conflicts.[8] An important aspect of EI, being highlighted recently by mental health specialists, is its effect on mental health and relation with psychological diseases. Depression is a disorder of mood that can range from sadness and lack of interest in daily routine to suicidal thoughts.[9] Recently, studies have reported various degree of depression and stress in teaching faculty of medical and dental colleges but there is room for investigation of the possible causative factors.[10,11] Smart and efficient use of emotions is essential for physical and mental health and appropriate psychological adaptation.[12] Emotional intelligence has been reported to have positive relationship with adaptive coping.[13] EI has been reported as a possible protector or risk factor in psychological and physical wellbeing of patients of depression. Few studies have reported inverse relationship between EI and depression.[14,15] The aim of the current study was to estimate EI and check its distribution among senior and junior faculty members in

medical teachers of basic sciences at a private medical college. It also aimed to check the correlation of EI with depression.

METHODS

A cross sectional correlational study was conducted at a private medical college (December 2021 to April 2022) using two questionnaires including "Leadership Toolkit Emotional Intelligence Questionnaire" and "Patient Health Care Questionnaire 9. After approval from Institutional Review Board, informed written consent was taken from the participants and they were assured about anonymity and confidentiality. Data was collected by using convenient sampling technique from basic science departments. Participants were elaborated about the objectives of the study. A total number of Seventy-two members responded including both junior (demonstrators) and senior faculty (assistant, associate, and professors). EI was estimated with the 50 items Leadership Toolkit Emotional Intelligence Questionnaire, a pre-validated questionnaire with a Cronbach's alpha value of 0.84. The items of the questionnaire are interpreted at a 5-point Likert scale ranging from 1= strongly disagree to 5 = strongly agree. The components of the scale are headed under 5 divisions relating to 5 components of EI. A participant can score between a minimum of 10 to a maximum of 50 score for each component, the higher the score, the better is level of EI.[7] The maximum score for overall EI can be 250. The score percentage of more than 80% was considered as good EI, between 60-80% as average EI and < 60% as poor EI.[8]

Patient Health Care Questionnaire 9, a reliable and valid tool was used to assess the state of depression. It is a 9-item questionnaire ranging from a score of 0 to 27, and each of the 9 questions can be graded from 0 (not at all) to 3 (nearly every day). The interpretation of the scale is such that the participants with higher score will be having more severe depression.[14] SPSS 22 was utilized for analysis of the data. Descriptive and analytical statistics were computed along with means and standard deviations for over EI as well as the 5 constructs of the EI questionnaire. Independent sample t test was applied to compare EI between junior and senior faculty as well as to measure the variation gender wise. Pearson's correlation was calculated to check the correlation between overall EI as well as different constructs of EI and depression, p value ≤ 0.05 was considered statistically significant.

RESULTS

In the current study a total number of 72 faculty members participated. Regarding gender, 66 (84.7%) of the participants were females with just 11 (15.2%) male members. A major share of the faculty was junior

members with a percentage of 66.67 (48) while 33.33% (22) of the participants were senior (Figure-1). Out of total 72 participants, 69.4% (50) were in the average EI range and 23.6% (17) had good EI with only 6.9% (5) falling in the poor EI range. Majority of the senior faculty members were having either high or average EI with none falling in the poor E I range, in contrast 10.4% of the junior participants had poor EI (Figure-2).

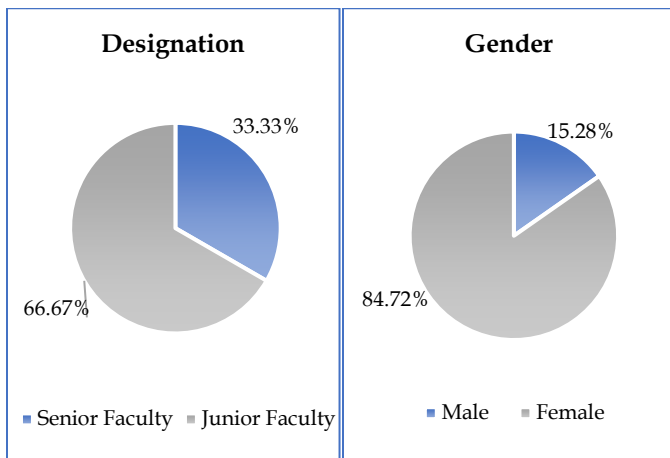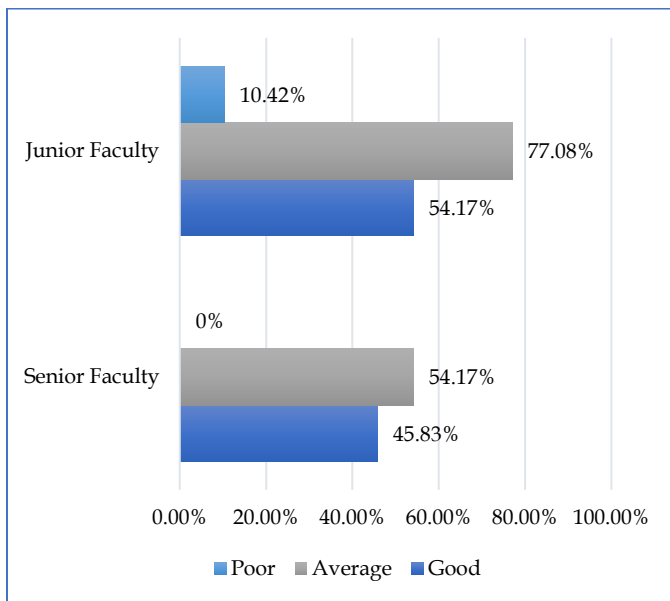## Figure 1: Demographic data of the participants

## Figure 2: Grading of emotional intelligence

The mean score for overall EI was higher in senior faculty as compared to junior members with a value of 189.7 ± 32 but the difference was not statistically significant. Similarly, no significant difference was found among male and female participants regarding overall EI as well as its constructs. The sub-sections managing emotions, motivating one-self and social skills showed significant difference with a higher value in the senior faculty (Table-I). Overall, EI was found to be inversely correlated with depression with a p value < 0.01 (Figure-3)

Table 1: Mean Score of overall Emotional Intelligence and its sub-items

	Mean ± SD		p-value	Mean ± SD		p-value
	Gender (n=72)			Designation (n=72)		
	Male	Female		Senior Faculty	Junior Faculty	
Overall, EI	190.0 ± 39	178.2 ± 24	0.06	189.7 ± 32	175.1 ± 23	0.03
Self-awareness	38.5 ± 9.4	38.7 ± 5.8	0.92	39.6 ± 8.0	38.2 ± 5.6	0.40
Managing Emotions	36.0 ± 7.7	32.4 ± 6.6	0.11	35.8 ± 7.6	31.5 ± 6.1	0.01
Motivating oneself	39.4 ± 8.6	35.8 ± 6.6	0.11	38.6 ± 7.6	35.2 ± 6.5	0.04
Empathy	38.5 ± 8.2	36.5 ± 6.1	0.36	38.2 ± 7.2	36.1 ± 6.1	0.19
Social skills	34.6 ± 6.1	37.4 ± 8.6	0.20	37.3 ± 6.8	33.9 ± 6.2	0.03

*Emotional Intelligence (EI), Mean ± standard deviation, *p value computed by independent sample t test. p value <0.05 considered significant*

Figure 3: Pearson's correlation between overall emotional Intelligence and depression
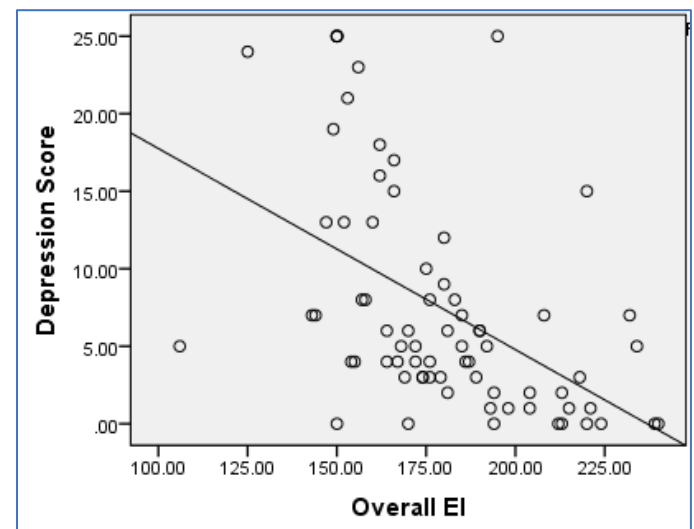
Pearson's rho 'ρ', p value <0.05 considered significant.

DISCUSSION

The present study was designed to assess EI level in the medical faculty of basic medical sciences, at a private medical college and to find the relationship between depression and EI score. Mean EI score 190.0 ± 39 in the current work is interpreted as an average EI level; based upon Daniel Goleman EI toolkit recommendations.[17, 18] It was found to be 76% of the total score (184/250). The score of the current study is comparable to the mean EI score of the teaching faculty of South Karnataka which was reported to be 180.10±27.66.[8] However, a previous study at Delhi reported mean EI score of 124.12±12.8 in

post graduate doctors.[19] The level of overall EI in the faculty was found to be very good. Regarding the subdomains, the section of self-awareness, motivating oneself and empathy has the highest scores. EI provides an overview of one's abilities to sense and control emotions as well as response and reaction to other's behavior. Medical teachers with good EI, create a learning atmosphere of encouragement, motivation, and active social interaction.

Mean self-awareness score in both genders was found to be of 76% of the total score and no significant difference was observed between males and females. Mean score of the domain "Managing emotions" was higher in males 36.0 ± 7.7 as compared to that of the females 32.4 ± 6.6, however, the difference was not significant. Similarly, the male respondents had a higher score in the domains of "Motivation and empathy" (39.4 ± 8.6 and 38.5 ± 8.2 respectively) as compared to females (35.8 ± 6.6 and 36.5 ± 6.1) but the difference was not significant. The areas of EI that needed attention differed in male and female faculty, with females requiring focusing on managing emotions and males in social skills. Previously EI in faculty members has been studied with variable results.[7,20] Our results for distribution of overall EI among male and female members are in accordance with these studies. Petrides and Furnham also reported higher scores with better EI in social skill sub-section in females as compared to males.[21] Managing emotions was the only area in the constructs of EI that needed attention in the female faculty members in the present study and the finding is supported by Ahmed et al 2019.[22]

Interestingly, there was significant difference in the EI subdivisions of managing emotions, motivating one-self and social skills among the junior and senior members with better EI score in seniors. Akram et al. 2021 reported similar findings but the difference was not statistically significant, in contrast our results are supported by another study where seniors scored higher in EI as compared to young ones. These findings favor the possibility that age has an impact on EI. Elderly individuals are known to have better and mature EI when compared to juniors.[23]

The current study also investigated the correlation between EI and depression and reported a strong inverse correlation in congruence with previous research.[13, 15] EI has evolved as an important aspect in mental health. Intelligent application of emotions helps a person in psychological and social adaptation as well as in physical health. High EI has been projected as a protective element in mental health of an individual.[24] Researchers have studied relationship between EI and depression and reported association of high EI with better life quality, while low level of EI has been related with various mental health problems.[25] In a study in 2018, strong connections

were witnessed between management of depression and control of emotions at the level of depression.[13] These results support the perception that lack of control over emotions is linked to failure of adjustment of one's feelings to clinical depression. Managing emotions and social awareness are two important components of EI that help people to qualify for different professions, management of different situations as well as experiencing good working relationship with others. Also, these qualities are very important in decreasing the risk of conflicts by improving contact with social facilities.[26]

In view of these findings of significant effect of EI on psychological health, special focus on role of emotions can improve quality of both physical and mental health. EI is not static and keeps on evolving. Training programs can improve certain constructs of EI like self and social awareness as well as coping with stressful situations. Once trained, one can successfully maintain positive emotions and fix the negative ones efficiently. Such programs can improve not only the quality of services provided by the facilitators and social environment but also their quality of life. Future studies should be planned to assess the effectiveness of such training strategies.

CONCLUSION

The score of Emotional Intelligence is reasonably good in the faculty of basic science departments at a private medical college. EI has been found to be inversely correlated with depression.

LIMITATIONS

The study was limited to the faculty of basic science departments.

SUGGESTIONS / RECOMMENDATIONS

Training programs should be arranged to refine the emotional skills of the faculty. Future studies should be planned after training programs to enlighten the effect of EI on management of emotions and depression.

CONFLICT OF INTEREST / DISCLOSURE

None.

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