

CORRELATION OF EMOTIONAL INTELLIGENCE WITH ACADEMIC ACHIEVEMENT IN UNDERGRADUATE MEDICAL STUDENTS

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ABSTRACT

BACKGROUND: Emotional intelligence is one of the important characteristics that can affect the academic achievement of medical students.

AIM: This study is aimed at investigating the relationship between students' emotional intelligence and their academic achievement.

METHODS: It was a cross-sectional correlational study. Sample of the study comprised 90 students of 2nd year MBBS class of Bannu Medical College, Bannu, available at the time of data collection. Short version of Workgroup Emotional Intelligence Profile (WEIP-S) was used as a research tool of the study. Mean, SD and Pearson Coefficient were used as statistical tests.

RESULTS: The correlation between students' awareness of own emotions and their academic achievement was $r = -.03$ (p value .71). The correlation between students' management of own emotions and students' academic achievement was $r = .34$ (p value .00). The coefficient of correlation between students' awareness of other emotions and their academic achievement was $r = .24$ (p value .02). The coefficient of correlation between students' management of other emotions and their academic achievement was $r = .21$ (p value .04). The coefficient of correlation between students' overall emotional intelligence and their academic achievement was $r = .26$ (p value .01).

CONCLUSION: The study showed that there exists a significant correlation between students' overall emotional intelligence and academic achievement. It was recommended that parents and teacher may also concentrate on the nourishment of emotional intelligence along with the cognitive development.

KEY WORDS: Emotional intelligence, academic achievement, Undergraduate medical students

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INTRODUCTION

Human emotions play great role in one's life, especially in students' academic achievement¹. A person is said to be emotionally intelligent if he is able to manage feelings and emotions of his own and other people, this capability lead to success in educational and other professional fields.²

Academic achievement is the performance in school, college or university in a standardized series of educational tests. Goleman in 1995 declared that IQ alone is no more the measure for success. He gave only 20% weightage to IQ for success and the rest, according to him, is the result of Emotional and Social Intelligences.²

The term 'Emotional Intelligence' (EI) formally came in the scenario with the publication of the article providing an initial definition, and theory of EI³, but the publication of the bestseller book "Emotional Intelligence" by Goleman (1995) sparked the notion of association between EI and success in education; workplace; social interaction; and marital relationships.² EI is expected to be linked to a range of theoretically interesting outcomes.⁴

Salovey and Mayer model of EI describes four components of emotional intelligence.⁵ The first component is about "emotional perception", which explains the ability of a person to be self-aware of his own emotions and to direct his emotions

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and emotional desires perfectly to others.⁵ This component also contains the ability to differentiate between true and false expressions of emotion.⁵ The second component is “emotional integration”, which is the ability to discriminate among the different emotions, an individual is sensing and to recognize those that are influencing his thought processes⁵. The third component is “emotional understanding”, which is the ability to appreciate complex emotions, like feeling two emotions at one time, and the ability to identify changeover from one to the other.⁵ The last component is “emotion management”, which is the ability to connect or disengage from an emotion, subject to its effectiveness in a given circumstances.⁵

Goleman’s model also explains emotional intelligence in four parts.² The first part is “self-awareness”, which is the ability to read one’s emotions and identify their effect while using instant feelings to direct decisions.⁶ The second part is “Self-management” which is the ability to control one’s emotions and compulsions and adjust oneself to changing situations.⁶ The third part is “social awareness”, which is the ability to sense, understand, and react to other’s emotions while comprehending social set up.⁶ The fourth part is “relationship management” which is the ability to inspire, influence, and develop positive emotions in others while managing conflict.⁶

The learning of students is affected by their environment.⁷ Some researchers claim that emotional intelligence is a more dependable forecaster of academic achievement than is IQ.² Alternately, low emotional health may lead to negative consequences for academic achievement as well as personal relationships.⁸ Le Page-Lees in 1997 conducted a study on a group of 21 women who achieved high academic success in their educational career, but were deprived and neglected children. Results of the study showed that those women who had endured

stress as children often developed a highly advanced level of emotional intelligence or interpersonal and intrapersonal intelligence.⁹ Ford in 1996 conducted a research on the role of EI in academics. The results showed that only EI quotient was a significant contributor to academic excellence.¹⁰ Another showed that students with education in the arts made emotionally better literate decisions than the 2nd one.¹¹ Similarly, another found that academic success was strongly associated with overall EI level.¹² However, one study did not find a significant correlation between IQ and creativity or between IQ and EI.¹³ Another study found significant correlation between students’ academic performance and emotional intelligence.¹⁴

The objective of this study was to measure emotional intelligence of medical students, and to explore relationship between emotional intelligence and academic achievements.

METHODS

All 2nd year undergraduate medical students studying in medical colleges of Khyber Pakhtunkhwa constituted the population of the study. All the students enrolled in 2nd year MBBS class Bannu Medical College, session 2013, constituted the accessible population of the study. Ten students were selected for pilot study randomly out of total 100 students. Rest of the 90 students was taken as sample of the study. Hence, the accessible population and the sample size were identical.

The Workgroup Emotional Intelligence Profile Short version (WEIP-S) inventory was used, Peter Jordan and Sandra Lawrence from Australia developed this questionnaire in 2009.¹⁵ To validate this questionnaire, they administered it to a group of employees who have close interaction amongst themselves. The data provided evidence of test-retest stability for the WEIP-S across three time periods. The Cronbach Alpha values, they obtained were .85, .77, .81, .81 for aware owns’ emotions, manage

owns’ emotions, aware others. Emotions and manage others’ emotions respectively.¹⁵

There are 16 questions in the inventory; each was given weightage from 1 to 5 (minimum to maximum). Thus the emotional intelligence of the sample ranged from 16 to 80 (minimum to maximum)

For the internal validity of the questionnaire, research experts in the field of medical education, and psychology were consulted. Their suggestions were incorporated in the questionnaire. The weightage for each statement in the questionnaire i.e. strongly disagree= 1, disagree= 2, undecided= 3, agree=4 and strongly agree=5, were deleted. The subheadings of the four facets of emotional Intelligence were also deleted. The serial number given to the 16 statements was kept continuous from 1-16. These changes, according to educational expert in the field of education research will help to increase the validity so that the respondents may give the true information regarding their EI.

A pilot study was conducted on ten students in order to find out the reliability of the tool. The Cronbach Alpha value found was 0.68 which is reasonable. The 90 students were divided into three batches. A two hour session was conducted for each batch on three consecutive days for data collection. Those students, who were absent on 1st or 2nd day, were given chance of participation on the next day.

In order to guarantee to comprehend the questionnaire and draw the same meaning of each statement, the researcher himself explained each question to the students. All the queries from the students were welcomed by the researcher. Students’ academic achievement were obtained from their 1st year MBBS detailed marks certificate (DMC) issued by Khyber Medical University Peshawar session 2013 Annual examination. Total marks obtained in the subjects of anatomy, physiology and biochemistry, both in theory

and practical was taken as academic achievement.

Data collection was conducted in October 2013. This research was descriptive and the research tool was personally administered by the researcher to the subjects in groups, in order to clarify any doubt on the

LIKERT SCALE		
	Scale Options	Weight
1	Strongly disagree	1
2	disagree	2
3	Undecided	3
4	Agree	4
5	Strongly agree	5

statement at the spot. The filled inventories were collected by the researcher on the spot. The data was collected in the physiology laboratory of Bannu Medical College on three consecutive days during two hours session. Any student absent on 1st day was given chance of participation on the next day. The respondents who filled the inventories, their detailed marks certificate (DMC) photo copies were collected from student's affair section record.

The collected data was entered in SPSS-20 and was analyzed using appropriate statistical tests. Emotional intelligence of the sample students were measured using Mean and SD respectively. Emotional intelligence and academic achievement scores were correlated using Pearson Correlation. Independent Samples t-test was used to compare the mean scores of emotional intelligence of the male and female students, at 0.05 level of significance.

RESULTS

Table 1 shows the results of the different facets of emotional intelligence and overall intelligence with their mean score and SD. The management of other emotions has got the highest mean score 3.76 with its SD= .55 and awareness of own emotion has got the lowest mean score 3.36 with its SD= .78

Table 2 presents the correlation between students' awareness of own emotions and their academic achievement as $r = -.03$ (p value .71). The r value indicate that there is negative correlation between students awareness of own emotions and their academic achievement but not significant. The correlation between students' management of own emotions and students' academic achievement was $r = .34$ (p value .00), which indicate that there is statistically significant correlation between students' management of own emotions and their academic achievement ($p < .05$). The coefficient of correlation between students' awareness of other emotions and their academic achievement with $r = .24$ (p value .02), which shows that there a statistically significant correlation between students' awareness of others emotions and their academic achievement ($p < .05$). The coefficient of correlation between students' management of other emotions and their academic achievement with $r = .21$ (p value .04), which means that there a statistically significant correlation between students' management of others emotions and their academic achievement ($p < .05$). The coefficient of correlation between students overall emotional intelligence and

their academic achievement with $r = .26$ (p value .01), which means that there a statistically significant correlation between students overall emotional intelligence and their academic achievement ($p < .05$).

DISCUSSION

The main objectives of this study were to explore the emotional intelligence of the students, to find out relationship between students' emotional intelligence and their academic achievement. Results indicated that there is a significant correlation between students' emotional intelligence and their academic achievement. This result is in line with Goleman², who explored that success depends on several intelligences (intrapersonal and interpersonal intelligence). Intelligence (IQ) is no more the measure of success. It has been previously reported that cognitive intelligence accounts 20% of the total success whereas intrapersonal and interpersonal intelligences accounts for the rest of intelligence.² Similarly, it was previously concluded that there is a positive relationship between emotional intelligence and academic achievement.¹⁶ Intrapersonal and interpersonal intelligence have been found a reliable predictor of academic

TABLE 1: MEAN & SD OF EMOTIONAL INTELLIGENCE OF THE STUDENTS (N: 90)

	Facets of emotional intelligence	Mean	SD
1	Awareness of own emotions	3.36	.78
2	Management of other emotions	3.76	.55
3	Awareness of other emotions	3.69	.78
4	Management of other emotions	3.61	.74
5	Over all emotional intelligence	3.60	.45

TABLE 2: CORRELATION BETWEEN STUDENTS' EMOTIONAL INTELLIGENCE AND THEIR ACADEMIC ACHIEVEMENT (NO: 90)

Emotional intelligence	Pearson correlation (r)	Sig. (p)
Awareness of own emotions	-.03	.71
Management of own emotions	.34	.00
Awareness of others emotions	.24	.02
Management of others emotions	.21	.04
Overall emotional intelligence	.26	.01

*Correlation is significant at 0.05 level of significance.

achievement.¹⁷ A student's mood or emotions and the way that they are arranged are considered to have an influence on their creative and intellectual competencies and on their ability to form and maintain healthy interpersonal relations. People with strong intrapersonal intelligence have strong self-esteem, self enhancement, self-discipline and the ability to solve personal problems.¹⁸

To handle the academic pressure, students need not only to be emotionally stable, but also to be emotionally intelligent to meet the demands of everyday school life,¹⁹ those with higher emotional intelligence, have the ability to understand their emotional climate, and are able to regulate it, depending upon the demand of the situation. These students appear good in social interactions, as they know the art of handling relationships by effectively communicating with others.

In later work, Goleman tried see relationship between I.Q. and E.Q. theoretically, and their corresponding effect on job performance.²⁰ He declared that I.Q. plays role in a sorting function, helping in determining the types of jobs, individuals are capable of holding, while emotional intelligence, on the other hand, plays key role in determining the excellence in a particular job when levels of I.Q. are relatively equal. When it comes to a small group of people in a particular job in a certain organization, specifically in the higher levels, the predictive power of I.Q. for outstanding performance among them weakens greatly, while E.Q. becomes stronger forecaster of individuals who outclass others. For example, doctors in a particular clinic may all have above average I.Q. however, what would distinguish the successful doctors from others would be their levels of emotional intelligence.

CONCLUSION

The findings of the study revealed that students possess high ability of management of others' emotions

and low ability of awareness of own emotions, significant correlation exists between students' overall emotional intelligence and their academic achievement.

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NOTES ON CONTRIBUTORS

The study was part of SZ Masters in Health Professions Education. UM supervised the dissertation, and were involved in every part of the analysis, idea's development, and write-up.

CONFLICT OF INTEREST

Authors declare no conflict of interest.

ETHICS APPROVAL

The approval was obtained from Khyber Medical University Research and Ethics Board.

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