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EMOTIONAL INTELLIGENCE AS PREDICTOR OF ACADEMIC PERFORMANCE AMONG NURSING STUDENTS

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Abstract

The study aimed at investigating the relationship between emotional intelligence and academic performance among nursing students. Emotional Intelligence was measured using Emotional Quotient Test developed by Chadha and Singh (Singh, 2006). It comprised three sub-dimensions: emotional sensitivity, emotional maturity and emotional competence. The academic performance was based on the marks obtained in the University examination. Results revealed no statistically significant correlation between the emotional intelligence and the marks obtained, indicating that academic performance of nursing students might not be predicted from emotional intelligence. Need for exploring emotional intelligence in conjunction with cognitive abilities for academic predictions is recommended.

Key Words: *Emotional Intelligence, Academic Performance, Cognitive Abilities, Social Intelligence*

INTRODUCTION:

Intelligence Quotient continued to be considered as an important predictor of the level of success an individual could achieve until a few decades back. Cognitive abilities involving logical reasoning along with language and mathematical skills dominated assessment of performances. However, there had been a gradual shift in making predictions using other

indicators as well in the recent past. Emotional intelligence has now assumed greater importance and been instrumental in predicting success in various fields. Extremera and Fernández-Berrocal (2006) observed that emotional intelligence has increasingly been studied as a predictor of mental, social and physical health and found that approximately 90% of very successful individuals had a high degree of emotional intelligence.

Salovey, Brackettand and Mayer, D. (2004) visualised emotional intelligence as a typical social intelligence that involved the ability to monitor one's own and other's feelings and emotions to discriminate among them and to use the information to guide one's own thinking and action. Nursing is a profession which involves interactions with patients, their caretakers and other members of the medical team in hospitals as well as in communities. These interactions are not merely simple conversations but they are an intricate processes involving nurses' own perception, understanding patient's emotions and utilisation of these perceptions in quality and effective patient management (Ardon, Grabato, Hisoler, Longcob and Salvana, 2011). Thus, it is important to assess attributes other than cognitive ability to predict the academic and professional performance of students in nursing.

Medical profession has attracted researchers to correlate emotional intelligence and academic/professional achievements. Codier, Kooker and Shoultz (2008) concluded that in medical education, emotional intelligence was related to clinical performance and higher academic achievements which were as a result of prioritisation of thoughts, behaviour regulation and appropriately adapted lifestyle choices facilitated by emotional intelligence (Brackett, Rivers and Salovey, 2011).

Similarly, in a cross-sectional study on medical students, Chew, Zain and Hassan (2013) found that students who were more emotionally intelligent performed better in both the continuous assessments and the final professional examination. They concluded that emotional skill development might enhance academic performance of medical students.

However, mixed results have been reported on studies done involving other disciplines or levels of students. Azimifar (2013) found no significant relationship between emotional intelligence and academic achievements in Science and Mathematics on elementary level school children. Similarly, Lawrence (2013) did not find any significant correlation emotional intelligence and academic achievements of either male or female or with regard to socio-economic status of high school students in Kanyakumari district.

Castro-Johnson and Wang (2003) in their study on college honour and non-honour freshmen found the high school and first semester performance were better predictors of academic performance rather than emotional intelligence and holistic approach should be adopted in making any prediction on academic performance.

A review of existing educational research involving emotional intelligence, covering health and other professionals, by Romanelli, Cain and Smith (2006) suggested that in view of the pressure due to increased student enrolment in colleges of pharmacy prospectus of using emotional intelligence as predictor of success or capacity to provide care was attractive.

In a study on fourth year nursing students, Ardon, Grabato, Hisoler, Longcob and Salvana (2011) did not find significant correlation between emotional intelligence and academic performance.

It is observed that inconsistencies in results of these studies may be due to different approaches in defining and measuring emotional intelligence Ardon, Grabato, Hisoler, Longcob and Salvana (2011). It is also possible that the selection procedure adopted for the admission to various courses and rigour of the examination conducted could influence the relationship of academic performance with emotional intelligence.

In view of major involvement of nursing personnel in medical care and case management, the present study was conducted on nursing students. They are not only supposed to use their cognitive abilities but also operational social skills to augment the management procedure of the patients.

Research Methods:

Participants:

All the forty female students of fourth and final year students of B. Sc. (Nursing) studying in an Institute of Nursing in Punjab comprised the subjects of this study. These subjects were admitted for this professional course based on their marks in 10+2 examination and performance in the competitive examination held centrally by Baba Farid University of Health Sciences, Faridkot through Punjab Para Medical Entrance Test. Their age ranged between 21 to 23 years.

***Hypotheses*:**

There would a significant correlation between emotional intelligence and academic achievement of the nursing students.

As a corollary, there would be a significant difference in means of intelligence and academic performance of the two groups.

Research Design

Correlational design was used to find out the relationship between two variables under study i.e. emotional intelligence and academic achievement. Furthermore, means were calculated to find out significant differences, if any, between emotional intelligence, its components and academic performance of the two groups.

***Research Tools*:**

Following tools were used to quantify the variables under study:

(a) ***Emotional Intelligence***: The Emotional Quotient Test (Singh, 2006), one of the most widely used test on Indian population, was used in the study. The test has been standardised for professional managers, businessmen, bureaucrats, artists and graduate students. It is based on operational definition adopted by the author that 'emotional intelligence is the ability of an individual to appropriately and successfully respond to a vast variety of emotional stimuli being elicited from the inner self and immediate environment'. The test measures three dimensions of emotional intelligence namely; emotional sensitivity, emotional maturity and emotional competency. It consists of 22 items, each of these items measures emotional response of the subjects to different situations commonly encountered in personal and professional life. Each item has to be answered out of 4 alternatives, each having weightage ranging between 5 to 20 scores. The test-retest and split-half reliabilities of 0.94 and 0.89 respectively have been reported. The validity of 0.89 has also been recorded (Singh, 2006).

(b) ***Academic Performance*:** Aggregate marks obtained in the examinations conducted by the University each year formed the basis for measuring academic performance.

Aggregate marks comprised marks obtained in theory, practical and ongoing periodic evaluations.

Procedure for Data Collection:

After getting permission from the concerned authorities, Emotional Quotient Test was administered in small groups of students two months prior to their appearing in the final University examination. Their aggregate marks were collected after declaration of the result which was available on the website of the University.

Statistical Procedure*:*

Pearson's Product Moment Correlation was applied to find out the correlation between two variables under study. The mean and standard deviation of the scores on two variables were also calculated. Grouping of the data was also done to find out the significance of means of the Groups.

Results:

The range, mean and standard deviation of emotional intelligence scores and academic performance scores of the subjects are given in Table 1.

Table 1: Performance of the subjects on emotional intelligence and their academic performance.

	Emotional Intelligence (Emotional Quotient)	**Academic Performance (% of marks obtained)**
Range	280-400	62.4 – 73.1
Mean	363.88	67.70
Standard Deviations	24.53	2.74

Academic performance of the subjects had narrow range of marks, whereas emotional quotient has sufficient scatter to differentiate the subjects.

In order to test the hypothesis, a Pearson Product Moment Correlation was computed. Table 2 given below presents the value of correlations for all the three dimensions of emotional intelligence scale and for the total score representing emotional quotient, as required to test the hypothesis.

Table 2: Pearson Product Moment Correlations between Emotional Intelligence Dimensions and Academic Achievement

S. No.	Emotional Intelligence Dimension	Correlation
1.	Emotional Sensitivity	0.141 (NS)
2.	Emotional Maturity	0.200 (NS)
3.	Emotional Competence	-0.030 (NS)
Total (1 to 3)	**Emotional Quotient**	**0.121 (NS)**

NS=Not Significant

The correlations as shown above were low and not significant. Therefore, the hypothesis was rejected.

In order to further analyse the data the entire sample was divided into two groups based on the median academic achievement score (68%). The results are given below in Table 3.

Table 3: Mean and Standard Deviations of the two Groups of subjects on Academic Achievement

	Group A (N=20)		Group B (N=20)		t-values
	Mean	S. D.	Mean	S. D.	
Academic Achievement (Percentage of marks)	65.54	1.66	69.86	1.68	8.18*

*p< .01

The two groups formed were found to be significantly different. In order to determine the significance of means of the two groups on three dimensions of Emotional Intelligence

and total score, representing Emotional Quotient, t-values were calculated. The results are summarised in Table 4.

Table 4: Significance of Mean scores on Emotional Intelligence Dimensions and Emotional Quotient

	Group A (N=20)		Group B (N=20)		t-values
	Mean	**S. D.**	**Mean**	**S. D.**	
Emotional Sensitivity	87.00	6.96	87.25	7.16	0.09 (NS)
Emotional Maturity	109.50	14.04	111.00	14.74	0.33 (NS)
Emotional Competence	169.00	15.78	163.00	15.68	0.14 (NS)
Total of three (EQ)	366.00	23.20	361.75	26.22	0.54 (NS)

NS= Not significant

Table 4 suggested that two groups were not significantly different on emotional sensitivity, emotional maturity and emotional competence as well as on Emotional Quotient. There was no evidence to support the hypothesis. The hypothesis, therefore, was rejected. Emotional intelligence, therefore, cannot be taken as a predictor of academic performance.

Discussion:

Results presented in Table 1 to Table 4 did not support the hypotheses formulated. A perusal of the scores on academic performance reveals that the range of scores is narrow as compared to the range of scores on emotional intelligence. The cut off point for passing the University examination was 50% and all the subjects of this study passed the examination in first division i.e. with above 60% marks. This certainly had a bearing on the range of scores on academic achievement, which was restricted between 62.4% and 73.1%.

The findings of this study are consistent with that of Ardon, Grabato, Hisoler, Longcob and Salvana (2011) in nursing. The findings are also consistent with studies of Azimifar (2013) and Lawrence (2013) in other fields and level of students. The findings, however, are not consistent with the findings of Codier, Kooker and Shoultz (2008), Brackett, Rivers and Salovey (2011) and Chew, Zain and Hassan (2013) on medical students. The type of assessment tools used and the selection and evaluation procedures adopted by various educational institutions might have contributed to the variations in results of these studies.

Comments:

The present study aimed at finding an association between emotional intelligence and academic achievement among nursing students. Academic performance could not be found associated with emotional intelligence. However, in view of the small sample used in the study, there is a need to repeat it on a larger sample. Also, since there is no conclusive evidence of relationship between the two variables, it is suggested that the combination of cognitive abilities and emotional intelligence could provide a holistic picture and help in making better predictions in academic achievements.

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