



Analysing Emotional Intelligence and Its Effect on Academic Performance of Undergraduate Students Attending a Dental College in Central India.

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ABSTRACT:

Aim - Analysing Emotional Intelligence and its effect on academic performance of undergraduate students attending a Dental college in Central India.

Material and Methodology - The data was collected through a self-administered structured and pre-validated EI questionnaire consisting of 5 domains: self-awareness, empathy, self-confidence, motivation, social control, and self-competence each consisting of 6 questions.

(Response was assessed on Likert Scale ranging from 1=virtually never to 5=virtually always). The scoring was divided into 3 categories, (Score ≤ 15 , 16-19 and ≥ 20). The collected data was entered in Microsoft Excel and was analyzed using SPSS 16.

Results - 20% of the participants scored below 15 in terms of Self Awareness whereas 69% of participants scored over or equal to 20. The same trend was followed in all the domains with exception to Self-control, where only about 52% of the total subjects scored above or equal to 20. The results show that female subjects have recorded a higher score in each domain of Emotional Intelligence when compared to male subjects. More subjects with High EI scored above 65 when compared to ones with lower EI illustrating the Impact of Emotional Intelligence on Academic Performance.

Conclusion - Hence, there is a need for orientation programs, with periodic reinforcements for enhancing and understanding EI and its relationships with career needs and demands in dentistry for better treatment outcomes, professional success, and gratification. Its inclusion in the academic curriculum may help students in identifying their emotional characteristics.

Keywords - Emotional Intelligence, Academic Performance, Patient-Doctor Relationship, Confidence.

I. INTRODUCTION -

Emotional Intelligence, as defined by Goleman, refers to “the capacity for recognizing

our own feelings and those of others, for motivating ourselves, and for managing emotions well in ourselves and in our relationships.” It describes abilities distinct from, but complementary to, academic intelligence, the purely cognitive capacities measured by Intelligence Quotient. EI is conceptualized in terms of perception, appraisal, and expression of emotion; emotional facilitation of thinking; understanding, analyzing, and employing emotional knowledge; and reflective regulation of emotions. Emotional intelligence (EI) is a measure of pure intelligence of cognitive ability that translates psychological knowledge into terms that are usable by people not professionally trained in psychology, like dentists.¹ Many studies have reported that high levels of stress and psychological morbidity occur in students in the healthcare profession.² Stress has been defined as the strain that accompanies a demand perceived to be either challenging (positive) or threatening (negative) and, depending on the appraisal, may be either adaptive or debilitating.²

Dental education is one of the most burdensome, testing, and stressful specialties of study, since dental students are expected to acquire diversified academic and clinical competencies and communication skills. The dentist has to be competent to understand the influence of the behavior of the patient so as to apply a unique individualized approach while treating the patients. A mutually satisfying patient–doctor relationship has been described in literature and has many benefits including improved patient adherence and loyalty, better therapeutic outcomes and decreased malpractice suits.³

In medical education, EI has been proposed as an important attribute of professional competence.⁴ However, Wong et al. found that social perception was only a moderate predictor of academic performance amongst university students.⁵ Sternberg et al. reported a modest association between ‘practical intelligence’ and



academic performance in students making the transition from high school to university.⁶ Newsome et al. found little association between academic success and emotional and social competencies,⁷ but using a sample of physicians, Wagner et al. summarized that higher patient satisfaction is directly associated with the physician's Emotional Intelligence. Parker et al. proposed that intrapersonal, adaptability and stress management abilities are important factors in the successful transition from high school to university.⁸

Research focused on Emotional Intelligence for the last two decades has suggested that this might significantly determine whether these emotions improve the practice or lead to interpersonal disputes. In contrast to them, This pilot study aims to provide information about the effects of Emotional Intelligence (EI) on academic performance of Dental undergraduate students.

II. MATERIALS AND METHODOLOGY

The data was collected from the final year Undergraduate students and interns attending

Dental College in Nagpur Maharashtra (Central India).

All the final year undergraduates and interns attending dental college were included in the study. A total of 218 subjects participated in the study and the period of study was one month.

The data was collected through a self-administered structured and pre-validated EI questionnaire consisting of 5 domains: self-awareness, empathy, self-confidence, motivation, social control, and self-competence each consisting of 6 questions. (Response was assessed on Likert Scale ranging from 1=virtually never to 5=virtually always). The scoring was divided into 3 categories, (Score - ≤ 15 , 16-19 and ≥ 20).

The collected data was entered in Microsoft Excel and was analyzed using SPSS 16.

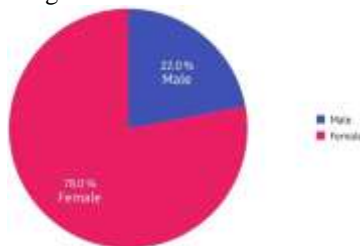
Inclusion Criteria: Final year and Interns.

Exclusion Criteria: Those who did not give informed consent and Those who had a day off on the day the study was conducted.

III. RESULTS -

Majority of the subjects studied were female, which was around 78% and 22% were males as shown in Figure-1.

Figure-1 : Gender Distribution.



Mean Age of the male participants was 23.8 ± 1.8 years and that of females was 22.7 ± 1.9 years. Average Mean age recorded for total sample size was 23.3 ± 1.57 years.

Table 1: EI frequency by number and percentage :

DOMAIN	SCORE ≤ 15	SCORE 16 - 19	SCORE ≥ 20
Self awareness	44(20%)	23(11%)	152(69%)
Self confidence	28(13%)	55(25%)	136(62%)
Self control	22(11%)	70(37%)	118(52%)
Empathy	11(5%)	48(22%)	160(73%)
Motivation	13(6%)	64(29%)	142(65%)
Social competence	37(17%)	34(15%)	148(68%)

Table-1 shows that 20% of the participants scored below 15 in terms of Self Awareness whereas 69% of participants scored over or equal to 20. The same trend was followed in all the

domains with exception to Self-control, where only about 52% of the total subjects scored above or equal to 20.



Table-2: Gender Wise comparison of Mean Score in Domains of Emotional Intelligence scale (N=218).

DOMAIN	MALES	FEMALES	TOTAL	P-VALUE
Self awareness	16.23 ± 2.03	20.03 ± 2.16	18.67 ± 3.91	.02
Self confidence	16.87 ± 3.15	20.16 ± 2.87	19.17 ± 2.8	.01
Self control	17.15 ± 2.82	19.87 ± 2.17	18.18 ± 2.12	.02
Empathy	17.47 ± 3.56	19.70 ± 3.17	19.62 ± 2.91	.021
Motivation	16.05 ± 2.17	20.16 ± 2.17	18.91 ± 3.91	.011
Social competence	17.85 ± 2.87	20.17 ± 2.16	18.4 ± 2.82	.013
Overall score	101.62 ± 16.6	120.09 ± 14.7	112.55 ± 18.47	.012

Table-2 illustrates the comparison between scores in different domains of Emotional Intelligence between males and females. The results show that female subjects have recorded a higher score in each domain of Emotional Intelligence when compared to male subjects.

Academic performance of students in their 3rd and final year with Cumulative over 65 is categorized as High, while that below 65 is categorized as low. 167 participants (76%) have been recorded in the high academic performance category while 51 participants (24%) in the low academic performance category as shown in Figure-2.

Figure-2: Academic Performance Comparison

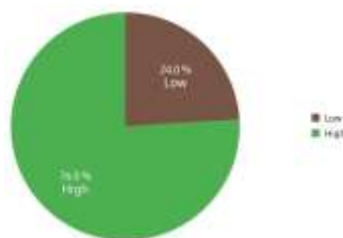


Table-3: Association and multivariate analysis of emotional intelligence (independent variable) and academic performance.

EMOTIONAL INTELLIGENCE	FINAL & 3 rd YEAR ACADEMIC PERCENTAGE		ADJUSTED ODDS
	Low(<65%)	High(>65%)	
Low EI	33	78	1
High EI	18	89	1.98(1.25-3.97)

Table-3 shows that, more subjects with High EI scored above 65 when compared to ones with lower EI illustrating the Impact of Emotional Intelligence on Academic Performance.

IV. DISCUSSION -

Dental practice requires patient engagement and communication, so it is reasonable to assume that students with high Emotional Intelligence scores will achieve more positive clinical results and will be regarded more favorably

by their patients. Emotional Intelligence is a new concept, and currently there are debates and discussions amongst psychologists and most recently, medical educators and practitioners regarding its validity, predictive power, and the psychometric values of the few instruments available to determine it.

Additionally, the association between EI and holistic academic achievement throughout the clinical years supports an indirect function for EI in the learning of communication skills.¹⁶ Dental



courses are assessed by written tasks, tests, and clinical evaluation. This requires the gaining of extra interpersonal skills such as empathy, patient understanding, efficient listening, and effective communication to lessen patient stress and handle patient needs. A dentist with high emotional intelligence can successfully communicate with worried patients and persuade them towards positive lifestyles. This lessens patient fear and increases compliance with dental recommendations, resulting in increased client and dentist satisfaction.¹⁷

In our study we found the significant relationship between EI and academic performance which was in accordance with the studies done by Shetty S, Venkatappa KG, Parakandy SG, et al. in 2013⁹ and Chew BH, Zain AM, Hassan F in 2013.¹⁰

We found that 33.6% of the participants had scores less than 20 in each domain which is in line with the study conducted by Faye et al¹¹ whereas it is in contrast to the study by Shetty et al.⁹ Based on Weiner's theory¹⁴, Ihm et al. outlined that high and low achievers may differ in their learning methods. Low achievers not only tend to have low encouragement, they also mistrust their own ability or presume that success is due to unavoidable factors, such as destiny. Even when successful in a task, low achievers usually tend not to attribute their success to themselves.¹⁵

When the gender wise comparison for the mean score was done for EI, it was found that females had higher mean EI which was statistically significant, this was in accordance with the study done by Katyal S, Awasthi E. in 2005.¹² This study explored the relationship between emotional intelligence and dental students' academic performance by examining the empirical association between students emotional intelligence ratings and grades. The results provide empirical support for an associated relationship between them. A positive relationship was found among the EI domains, that is, those having a high score in self-awareness also scored higher in other domains such as self-confidence, empathy, motivation, competence, and self-control.

Similar findings were reported in two previous studies done by Faye A, Kalra G, Swamy R, et al and Shetty S, Venkatappa KG, Parakandy SG, et al.^{11 9} Another study of medical students also reported that females had more stress than males.¹³

The mean scores in all the sections and overall Emotional Intelligence scores were significantly higher for the female participants than male participants. The expected reason for such finding may relate to the fact that Emotional Intelligence EI principally deals with managing and expressing emotions as well as social and communication skills.

Since females often tend to be more willing than males to express emotion and intimacy in their relationships with parents, friends, and siblings, their EI would likely be higher than that of males. Several explanations have been advanced to explain gender inequalities in EI scores. According to researchers, biological differences, and disparities in early childhood socialization within same-sex playgroups, including compliance with culturally dictated gender role expectations, may be the primary factors.¹⁸

V. LIMITATIONS -

Factors that may have altered Emotional Intelligence such as socioeconomic status and personality traits were not taken into consideration.

The evaluation has solely considered college grades, such as end-of-year marks or GPA. Only conventional learning methods were assessed using these instruments. Expertise, ethical conduct, ability to create a therapeutic connection with the patient, and patient satisfaction have all been correlated to the professional success of a dental practitioner. But, due to unavailability of data, these traits were not considered in this study.

EI can be taught and instilled over a period of time. Therefore, we recommend that short-term courses or training workshops based on the notion of Emotional Intelligence for students should be incorporated into the academic curriculum.

VI. CONCLUSION -

In our study more than 50% of the participants had High emotional intelligence. There was a significant association of emotional intelligence, with high academic performance.

Emotional intelligence can have a shielding effect against stress for healthcare students and can be enhanced via targeted educational training. Hence, there is a need for orientation programs, with periodic reinforcements for enhancing and understanding EI and its relationships with career needs and demands in dentistry for better treatment outcomes, professional success, and gratification. Its inclusion in the academic curriculum may help students in identifying their emotional characteristics and provide a chance to teach them to a higher degree



of competence in handling Emotional Intelligence, furthermore improving the academic performance.

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