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Emotional Intelligence of Dental Students in Dharwad City

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ABSTRACT

Emotional Intelligence (EI) is an important measure of success. It plays a vital role in a dental student's life which is often faced with stress and risk-taking. The present study aimed to assess the level of EI of dental students in a dental college in Dharwad. A cross-sectional, questionnaire-based survey was conducted among dental students in a dental college in Dharwad, India Schutte Self Report Emotional Intelligence Test (SSEIT) scale containing 33 questions was used to determine the EI. It was answered on a five-point Likert scale and scored accordingly. Descriptive statistics, independent sample "t" test & one-way ANOVA was used for statistical analysis. There was no significant difference in EI scores of males and females and also within the different age groups. The mean EI score of the 1st year BDS, 2nd year BDS, 3rd year BDS, final year BDS students, interns, and postgraduate students were 126.93, 127.49, 129.73, 131.1, 125.68, 130, respectively. It was noted that EI scored did not significantly vary with gender and age. It was also noted that the EI scores increased consistently from 1st year BDS through 4th year BDS.

Keywords: Dentistry; Education; Intelligence

1 INTRODUCTION

Emotional intelligence (EI) is a type of intelligence that involves the ability of a person to observe one's own and other's emotions, to discriminate among them, and to use the information to direct one's thinking and actions[(1)]. It is suggested that success in life depends more on emotional intelligence than cognitive intelligence[(2)]. It is indicated that people who have higher levels of emotional intelligence used reflection appraisal, social and interpersonal, and organization and time-management skills to cope with stress whereas those with lower EI scores engaged in health-damaging behaviors[(3)]. Higher emotional intelligence may be one of the reasons that students pursue their interests more enthusiastically which could be an explanatory factor for higher academic performance in this group of students. As dental students face situations that require social, organizational, and stress management skills EI could play an important factor in their performances[(4)]. This study aims to investigate the Emotional Intelligence of dental students in Dharwad. The objectives of the present study include a comparison of Emotional Intelligence between different age groups, gender, and year of study. The study will also compare the seven dimensions of emotional intelligence between different age groups, gender, and year of study.

2 METHODS

A descriptive study was conducted among the students enrolled in the course of Bachelor of Dental Surgery (BDS) and Master of Dental surgery (MDS) at SDM College of Dental Sciences and Hospital, Dharwad to assess their Emotional Intelligence between December 2019 to February 2020. The Declaration of Helsinki guidelines were strictly adhered to while conducting the research work. Convenience sampling was done by including all the 412 students studying in the college, aged 18 years and above, belonging to both genders, present on the days of the examination.

- Inclusion criteria

1. Volunteers pursuing BDS or MDS
2. Volunteers above 18 years of age
3. Volunteers willing to participate in the study

4. Volunteers who gave consent

- Exclusion criteria

1. Subjects who were not willing to participate in the study
2. Subjects who did not give consent

After written informed consent was obtained a link to the survey was sent to the students and requested their participation in the study. The questionnaire was made in Survey Monkey and sent to the student's respective WhatsApp application numbers along with an introductory message mentioning the purpose of the study. Data received through Survey Monkey was transferred to an Excel sheet for analysis.

The Schutte Self-report Emotional Intelligence test (SSEIT) scale which contains 33 questions distributed in seven dimensions was used [5]. All 33 questions were valued based on the Likert scale of five values: strongly disagree (1), disagree (2), neither disagree nor agree (3), agree (4), and strongly agree (5). The questions described the seven dimensions of EI as follows:

1. The first factor was labelled Positive Affect. Items loading on this factor relate to positive affect in personal experiences. It involves mainly the respondents' tendency to have a positive outlook on life in general, but more specifically when facing problems.
2. The second factor was labelled Emotion-Others and included the respondents' experience of other people's emotions.
3. The third factor was labelled Happy Emotions. The items that loaded on this factor include aspects such as good mood, positive emotions, happiness, and joy.
4. The fourth factor was labelled Emotions-Own and included the respondents' perception of their own emotions.
5. The fifth factor was labelled Non-verbal Emotions. The items that loaded on this factor included aspects such as non-verbal messages that the person sends and receives from others, and how the person interprets these non-verbal emotions.

Socio-demographic profiles of the study participants like age, sex, and year of study were also asked.

Data was analysed using SPSS version 20. Using descriptive statistics: frequency, percentage, means & standard deviation were calculated. Means of various dimensions were compared using independent sample "t" test & one-way ANOVA. Scoring was done for each dimension of EI and compared with demographic variables.

3 RESULTS

Out of 412 eligible participants, only 318 were included as these responses were received during the study period. Table 1 shows the demographic distribution of the subjects. Table 2 shows the mean EI score of subjects between the age groups, gender, and year of study. A one-way ANOVA test was done to find a significant difference in EI in the different age groups and years of study. There was no significant difference. An independent sample t-test was done to find the significant difference in the EI of males and females. There was no significant difference.

Table 1: Demographic distribution of subjects enrolled in the study

Variables	Category	Frequency (percentage)
Age (in years)	18-20	170 (53.46 %)
	21-23	121(38.05%)
	24-26	17(5.35%)
	>27	10(3.14%)
Gender	Male	71 (22.33%)
	Female	247 (77.67)
Year of study	I BDS*	79 (24.84%)
	II BDS	71 (22.33%)
	III BDS	46 (14.47%)
	IV BDS	47 (14.78%)
	Intern	50 (15.72%)
	Postgraduate	25 (7.86%)
Total (N)	**318**	

*BDS = Bachelor of dental surgery

Figure 1 shows the mean EI score of the 1st year BDS, 2nd year BDS, 3rd year BDS, final year BDS students, interns, and postgraduate students to be 126.93, 127.49, 129.73, 131.1, 125.68, and 130 respectively.

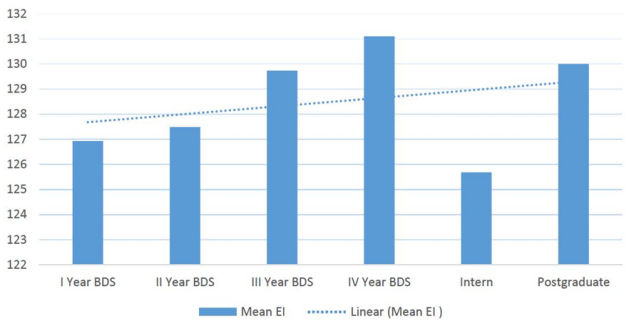

Fig. 1: Bar graph showing the mean Emotional Intelligence scores of students of first year BDS, second year BDS, third year BDS, final year BDS, Interns, and Post Graduate students

Table 3 shows the mean scores of six components of EI among different age groups, gender, and years of study. A one-way ANOVA test was done to find a significant difference in the six factors of EI in the different age groups and years of study. There was no significant difference except in the dimension of Happy emotions between students from

different years of study. An independent sample t-test was done to find the significant difference in the 6 different factors of EI of males and females. There was no significant difference.

Table 2: Comparison of mean Emotional Intelligence score between the different age groups, gender, and year of study

Variables	Category	Mean EI*	P-value†
Age (in years)	18-20	127.1	0.31
	21-23	129.24	
	24-26	128.94	
	>27	130.7	
Gender	Male	127.44	0.53
	Female	128.32	
Year of study	I Year BDS‡	126.93	0.09
	II Year BDS	127.49	
	III Year BDS	129.73	
	IV Year BDS	131.1	
	Intern	125.68	
	Postgraduate	130	

* EI = Emotional Intelligence; †P-value = probability value;
‡BDS = Bachelor of Dental Surgery

4 DISCUSSION

Goleman suggested that success in life was determined more by EI than cognitive intelligence. Salovey and Mayer introduced this concept of EI and described it 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[6,7]. EI plays an important role in medicine and other healthcare disciplines where it is suggested to influence professional mental health as well as effective practice[8].

Dental education has been asserted as one of the most challenging, demanding, and stressful fields of study, as dental students are expected to acquire diverse competencies such as academic and clinical skills and also develop skills that help them provide effective patient care like interpersonal skills, time and organization skills that help them manage the stressful environment of dental education. The stressful nature of the dental profession and the factors involved have been well-documented[9]. Recent studies have proven that students with high EI can cope up with the stress and perform better in academics[3,9–11]. Assessment of EI is an important factor in determining students' adjustment and educational achievements.

Of the 318 participants, 77.7% were female and 22.3% were male. This is the trend in most of the colleges in India, as most of the females are choosing dentistry as their career[12]. It was found that there was no significant difference in the EI of males and females. A similar finding was observed by Arvind Hans et al in their study on emotional intelligence among teachers i.e. no significant difference between male and female teachers in Oman based on descriptive statistics[6].

It was also found that Emotional Intelligence did not significantly vary in the different age groups of students that participated in the study. This is in accordance with the study done by Shipley and Jackson[13].

Another area of interest was the association between Emotional Intelligence and the Year of study. Though statistically there was no significant difference there was an improvement in the EI from the 1st year BDS (126.9) students to Final year BDS (131.1) students. The Interns showed the lowest EI (125.68) whereas postgraduate students showed an EI of 130. This interesting pattern could reflect the association between EI and stress[11] which can be expected to be high at the beginning of an undergraduate course as well as when the Internship ends. Other associated reason for this pattern needs to be further investigated preferably with a bigger sample size. But it can be conjectured that the low score of first years is related to the stress caused by the new demanding environment of the dental undergraduate program which they are yet to cope with. The gradual improvement of EI from 1st year BDS to final year BDS could be an indicator of improved management skills through learned experience. The dip seen in the Interns may be due to stress related to an uncertain future as they are approaching the last phase of student life. These factors need to be investigated and corroborated in future research.

Among the components of EI that were measured, only Happy Emotions had any significant difference with respect to years of study. The scores followed the same pattern as the overall EI score. This reflects aspects such as good mood, positive emotions, happiness, and joy which is shown to improve from 1st BDS to Final year BDS and again dipping down for Interns. The reasons for this must be further investigated.

It is increasingly realized that a complete and holistic dental education cannot be devoid of emphasis on soft skills such as communication, empathy, ethics, and emotional intelligence. Dental professionalism comprises three essential components: ethical value system, knowledge and technical skills, and interpersonal skills for working with patients and the medical care team[14]. Therefore, creating a professional dental doctor is a dynamic process of imparting not just knowledge and technical skills but also ethics and interpersonal skills. Emotional intelligence abilities are the building blocks that will allow dental college students to build healthy doctor-patient relationships in the future. There has been very little focus globally on training dental students in emotional intelligence. Therefore, dental educators must include emotional intelligence testing and training in the syllabus. This should be focused more on the 1st BDS students who are entering the demanding curriculum of dentistry and also the Interns who are exiting

Table 3: Comparison of mean of scores of different dimensions of Emotional Intelligence between the different age groups, gender, and year of study

Variables	Categories	PA*	EOT†	HE‡	EO§	NVE‖	EM¶
Age (in years)	18-20	83.61	77.29	75.94	80.65	68.59	77.74
	21-23	85.55	77.62	77.93	81.03	71.07	79.26
	24-26	83.70	78.15	77.35	82.65	72.94	77.06
	>27	87.14	75.43	80.50	84.00	70.00	85.50
	P-value	**.231**	**.886**	**.284**	**.731**	**.344**	**.146**
Gender	Male	84.79	75.77	77.68	80.14	68.73	79.01
	Female	84.37	77.87	76.70	81.26	70.12	78.38
	P-value	**.255**	**.136**	**.479**	**.495**	**.602**	**.264**
Year of study	I Year BDS	83.22	76.71	74.68	81.27	68.61	79.11
	II Year BDS	84.83	77.26	77.75	79.58	67.61	78.52
	III Year BDS	85.16	79.57	78.48	82.72	69.13	77.07
	IV Year BDS	86.93	77.69	79.79	81.81	73.19	81.17
	Intern	82.40	75.89	74.70	79.80	71.47	75.80
	Postgraduate	85.60	78.51	77.80	82.00	71.47	79.80
	P-value	**.082**	**.358**	**.025**	**.522**	**.184**	**.170**

PA* -Positive Affect; EOT†- Emotion-Others; HE‡- Happy Emotions; EO§- Emotions-Own; NVE‖ - Non-Verbal Emotions; EM¶- Emotional Management

their student life taking into consideration their unique set of characteristics.

5 CONCLUSION

The findings of this study were that there is no significant difference in EI with respect to demographic variables like age, gender, and year of study. But the EI showed a gradual increase with the year of study and the lowest EI being recorded for the 1st year BDS and Interns.

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