ORIGINAL RESEARCH PAPER

Dentistry

ASSESSMENT OF EMOTIONAL INTELLIGENCE AMONG DENTAL UNDERGRADUATE STUDENTS: A MIXED METHODOLOGICAL APPROACH

KEY WORDS: Emotional Intelligence, Mixed-Methodology, Self- Awareness, Empathy.

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ABSTRACT

Emotional Intelligence (EI) relates to how an individual can understand and manage their own emotional needs as well as recognise and deal with the needs of others and the skills to do this. Emotional intelligence is vital in dentistry for improved patient trust, satisfaction, and better treatment outcomes, particularly by managing patient anxiety and fostering clear communication. A mixed methodological study design was used to assess EI of all undergraduate dental students. A structured questionnaire was adapted from Sterrett's EI questionnaire. Six facets of EI explored were self-awareness, self-confidence, self-control, empathy, motivation and social -competency. A qualitative exploration involved using methods like interviews and focus groups to understand students lived experiences and perceptions of EI in various contexts, such as leadership, education, and personal development. A baseline data of the undergraduate students was obtained. There is a dire need of integrating EI training into dental education curricula and addressing cultural and institutional factors within dental education programs. Initiatives aimed at improving EI could involve training sessions focused on emotional regulation, managing stress, and developing interpersonal abilities. Key aspects of Emotional Intelligence in dental education need to emphasize on stress management, patient interaction, academic performance and professional development.

INTRODUCTION

Emotional Intelligence (EI) helps to accurately perceive, assess and express emotions, and to develop and acquire them into day-to-day thinking. There are six facets in EI which include self-awareness, self-control, self-confidence, empathy, motivation, and self-competency[1]. Dental education is one of the most challenging, demanding, and stressful fields of study, since dental students are expected to acquire diverse academic as well as clinical competencies and interpersonal skills. Studies of dental and health professional students have addressed the relationship between academic performance and EI[2]. Assessment of emotional intelligence is an important factor in determining student's adjustment and educational achievements. EI impacts many different aspects of daily life, such as the way one behaves and the way they interact with others. It is believed that emotional intelligence may explain differences in the quality of intrapersonal and interpersonal relationships and contribute to job performance, management effectiveness and predict success[3]. Research studies have been done to investigate the relationship between emotional intelligence (EI) and undergraduate dental students' ability to deal with different situations of communication in clinical dentistry. Individuals with higher EI demonstrate better skills in practical fieldwork. Students with higher EI have also been associated with more effective clinical adaptability and proactivity during their clinical rotations. So also, a dentist has to be competent to understand the influence of the behavior of the patient so that unique individualized approach can be applied while treating patients[4].

Assessment of EI is an important factor in determining student's adjustment and educational achievements. Hence this study was undertaken with the aim to assess the emotional intelligence among undergraduate dental students. The objectives of the study were to establish a baseline data of emotional intelligence of students and to explore any intervention measures required for improvement of emotional intelligence.

MATERIALS AND METHODS

A cross-sectional, self-administered, structured questionnaire survey in English was conducted among all the undergraduate students and interns. Ethical approval for protocol was obtained from the Institutional Human Ethics Committee (SMIDS/IHEC No 5, Protocol No 43/2024). Informed consent was obtained from every participant. The study design was Mixed methodological design. The Quantitative component was determined using a structured questionnaire adapted from Sterrett's Emotional intelligence questionnaire[5]. It consisted of 30 questions,5 each to assess the self- awareness, empathy, self -confidence, motivation, social control and self- competency. All the participants will be asked to answer each question, anything between virtually never to virtually always using 5-point Likert's scale (1-5). The total score will be sum of all 6 domain scores. The minimum and maximum score for each domain will be 5 and 25 respectively. The EI score will be derived by summing up the score obtained for all the domains; the maximum and minimum total scores being 150 and 30 respectively. Any score of above 20 in each domain will be deemed good EI Scores, between 16 and 20 will be considered average EI; Scores below 15 and 10 are deemed to be poor EI and very poor EI. For Qualitative exploration focus group discussions and In-depth interviews involving students in each year was conducted. Data analysis was done with SPSS version 24. Descriptive analysis was done to assess percentage of overall subjects in the six identified domains of EI. The qualitative component of the study was carried out by conducting 4 focus Group Discussions (FGD's) and 10 In-depth interviews. Emergent themes were identified. Qualitative data analysis was done using NVivo software.

RESULTS AND DISCUSSION

The demographic characteristics of the study population is shown in table 1. A total of 182 subjects participated in the survey giving a response rate of 97.85%. Out of 182 participants 30 were males and 152 females. The proportion of participants by gender appeared to be in line with the present trend with females constituting much greater percentage of total population. The presence of women in dentistry has dramatically increased, with women now representing a significant portion of dental students and workforce globally[6,7].

Table 1: Demographic Characteristics

Age (years)	Gender		Total no of participants (based on age)
	Male	Female	
18-19	8	39	47
19-20	3	32	35
20-21	5	22	27
21-22	4	23	27
22-23	10	36	46
Total no participants	30	152	182
Grand total			182

The American psychologist and science journalist Daniel Goleman first coined the term emotional intelligence. Goleman's Emotional Quotient theory comprises of five core components: empathy, effective communication social skills, self-awareness, self-regulation and motivation. In the present study all the participants were assessed by evaluating the six facets of EI: Self-awareness, self-confidence, self-control, empathy, motivation, and social competency. Self-awareness means having a deep understanding to one's emotions, strengths, weaknesses, needs, and drives. Self- confidence is a positive and balanced attitude having to do with the self dimension. It consists of a basic belief that we can do what is needed to produce the desired outcome. Self-control is dealing well with stress, controlling emotional moods or outbursts without over control. Empathy means to be considerate and aware of other's feelings. Empathetic individuals are also effective in retaining talent because they are able to develop a personal rapport with others. Motivation is a synonym for enthusiasm, initiative, and persistence. A positive attitude in the social dimension is motivation, one of the key facets of EI and of leadership. Appropriate behavior in the social dimension leads to social competency. To develop such social skills, we must focus on other people, rather than on what we are experiencing or want to say[8,9].

The domain score of the participants when analyzed over 6 domains is shown in table 2. With respect to self-awareness maximum percentage of 38.94 obtained scores below 20 and only 1.53% obtained a very low score below 10. In the domain of self confidence 62.85 % of subjects had scores below 20 with only 11.22% having scores above 20. With regard to self-control only a small percentage(9.50%) of subjects had scores above 20. In the empathy domain 60.12% had scores below 20. With regard to domain of motivation and social competency percentage of subjects with above 20 were only 12.87 and 5.20% respectively. When the total score obtained by each individual were analyzed only 12.60% of the participant's had good EI with scores above 20 in all the 6 domains. Majority (56.12%) of them had average EI. Very poor EI was seen in 4.25% and 29.94% demonstrated poor EI. The study shows that most of the students require assistance to improve their EI. These findings are similar to observations in other literature [8,9,10].

Table 2: Percentages of the overall subjects.

EI Components	% of subjects with scores above 20	% of subjects with scores below 20	% of subjects with scores below 15	% of subjects with scores below 10
Self-awareness	18.42.	38.94	15.10	1.53
Self confidence	11.22	62.85	28.96	1.01
Self-control	9.50	58.50	33.89	3.16
Empathy	12.83	60.12	27.48	0.56
Motivation	12.87	59.05	22.72	4.23
Social competency	5.20	48.94	42.02	5.84
Overall percentage of subjects	12.60	56.12	29.94	4.25

Qualitative research can examine emotional intelligence (EI) by exploring lived experiences, perceptions, and the nuanced ways people understand and manage their own and others emotions, often using in-depth interviews and focus groups to provide rich, contextual data on EI's development, impact on social interactions, and its role in professional settings[11]. Qualitative approaches are valuable for EI research because EI is a complex human capacity that is not easily captured by quantitative scale[12]. In the present study a qualitative exploration of emotional intelligence (EI) in the dental students investigated the multifaceted roles of empathy, self-awareness, self-regulation, and social skills in managing stress, enhancing patient interactions, and improving academic performance within the demanding dental curriculum

With regard to qualitative analysis the audio recordings were transcribed and the coded content was categorized into themes. The following themes and focus areas emerged:

Self-Awareness:

- "I need to be more aware of my strengths, weaknesses, thoughts and emotions…"
- "I am not able to control my emotions when not able to meet deadlines for work."
- "I need to learn to control my emotions……"
- These findings reveal that many participants need to be more self-aware. It was also reported that many teachers not much aware of this facet of EI.

Self-Regulation:

- "I don't know how to manage my emotions performing difficult clinical procedures and during stressful exam periods. It's time to do away with exams and rather have regular periodic assessments."
- It is necessary to enlighten students about strategies to manage their emotions, especially during challenging clinical procedures and exams.

Social Skills:

- "I don't get opportunity to develop social skills."
- "I am not aware of the importance of social skills"
- Dentist-patient relationship is very unique and students seem to be aware of its importance. Further there needs to be training program's conducted. This would give opportunity for social skills enhancement.

Technology's Role:

- "We don't have exposure to modern technology …"
- "We need to get more exposure in application of modern technology in clinical procedures……..feel insecure."

Significant complaints about the curricular matrix of course were reported. Another topic of discussion was that not all students were able to perform basic and equivalent clinical procedures required for the training of a dentist. There is need for innovative educational tools and platforms to foster the development of emotional intelligence among dental students.

The results of the present study pointed out major problems related to emotional intelligence throughout the under-graduate dental training. According to many reviews being a graduate student in many moments seems to correspond to an arduous, and demanding journey. While it is critical to be motivated to take on this journey the interviewees presented a high degree of demotivation.

CONCLUSION

The study revealed that only a small percentage of participants had good Emotional intelligence. There is a definite need to update the present curriculum so as to implement stress prevention and incorporate emotional intelligence development so as to support student's well-being and competence. The importance of integrating EI training into dental education curricula and addressing cultural and institutional factors within dental education programs needs to be emphasized. Further studies are to be encouraged toward these dynamics in order to provide evidence-based mechanisms for exploring role of EI. Research on a global scale is required to fully understand the multifaceted relationship between emotional intelligence, stress management and academic achievement in dental education. There is also a need to look at how emotional intelligence could influent patient-dentist relationships, patient satisfaction and overall quality of dental care provided by the dentists in future which will be more technology driven.

Limitations of the study: Although this study has provided some useful findings, it is not without some limitations that

need to be noted. The generalizability of the findings to other student populations may be limited. Other individual or environmental factors that are able to affect EI were also not considered and could have affected the results. Longitudinal studies conducted in the future are recommended to ensure a deeper understanding of the evolution of EI during the course of dental education

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