



RESEARCH ARTICLE

EMPATHY LEVELS AMONG DENTAL STUDENTS IN INDIA

*¹Dr. R. Pradeep Kumar, ²Ms. Pavithra H Dave and ³Dr. S. Thenmozhi

¹Reader, Department of Public Health Dentistry, Saveetha Dental College, Velappanchavadi, Chennai – 600 077

²BDS Undergraduate, First year, Saveetha Dental College, Velappanchavadi, Chennai – 600 077

³Associate Professor, Department of Counselling Psychology, University of Madras, Chennai-600 005

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ABSTRACT

Background: Empathy is a fundamental value in health care. The present study was conducted to assess the empathy levels among students and assess the difference in empathy levels across gender and year of study and also to improve their attitude and skills towards the patients and their quality of service to enhance the dentist-patient relationship.

Materials and Methods: Cross sectional descriptive study was conducted to assess the level of empathy using a validated, self-administered questionnaire Jefferson Scale of Empathy, Health Care Provider Student version (JSE-HPS) in this study.

Results: A total of 300 dental students and Interns participated in the present study; the mean empathy score among the male dental students was 84.4 and among the female dental students was 84.5.

Conclusion: Mean empathy score among the male and female dental Students showed less difference however empathy should be given importance in dental curriculum to improve dentist-patient relationship, thereby achieving optimal outcome in patient care.

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INTRODUCTION

Empathy is a much talked about concept and yet is one of the least understood aspects of health care. In terms of patient care and service, empathy is regarded as a cognitive attribute that involves an ability to understand the patient's experiences, pain, suffering and perspective (Prabhu *et al.*, 2014). It is seen as a commonly accepted pillar of professionalism for medical students. Empathetic physicians share a bond with patients, which serves to benefit the patient in their physical, mental and social well-being (Hitomi *et al.*, 2009). Communicating with patients is an essential dental activity. Dentist-patient relationship not only helps capture and transmit information but also has a therapeutic effect and supports the patient's healing process (Melanie Neumann *et al.*, 2011). A patient's best interests can be served if the caregivers know relatively more about the patient's world, values or interests. Medical research has shown that the use of a "warm, empathic style" by physicians during communications with patients is involved with improved psychosocial outcomes such as quality of life, depression, anxiety being measureable outcome parameters

such as symptom reduction and lowering of blood pressure (Brett Williams *et al.*, 2014). The role of empathy has gradually declined in the various disciplines of health such as nursing, pharmacy, dental etc (Carilynne Yarascavitch *et al.*, 2009). Demonstration of empathy by dentists has been related with decreased dental fear, increased compliance with various treatments, improved treatment success and cooperation in paediatric patients, and increased patient satisfaction and improved services. Challenges in measuring empathy among health care professionals are many and one of them being, the abundant descriptions of empathy from various domains of psychology and neuroscience (Prabhu *et al.*, 2014). The gold standard for assessment of empathy and interpersonal skills and communication is behavioural observation by trained observers to ascertain use of skills and technique. However, this can be only costly and time-consuming. Jefferson Scale of Physician Empathy (JSPE-HPS) has been used in a variety of dental settings; however there is a lack of studies among the Indian Dental students to assess and measure their level of empathy. Hence the present study was conducted with the objective to assess the level of Empathy among Indian Dental Students and to assess any difference in the level of empathy across gender and year of study (Prabhu *et al.*, 2014).

*Corresponding author: Dr. R. Pradeep Kumar,

Reader, Department of Public Health Dentistry, Saveetha Dental College, Velappanchavadi, Chennai – 600 077

MATERIALS AND METHODS

A cross sectional descriptive study, using convenience sampling method was conducted among the students of Saveetha Dental College to assess their level of empathy using a validated, self-administered Jefferson Scale of Empathy, Health Care Provider Student version (JSE-HPS) questionnaire (Prabhu *et al.*, 2014). The questionnaire consists of 20 items answered on 7-point likert scale which are scored from 1 (strongly disagree) to 7 (strongly agree). Prior to the start of the study approval has been obtained from the college authorities and consent was obtained from the dental students who are willing to participate in the study. Students who were refused to participate in the study were excluded.

The results were tabulated and subjected to statistical analysis using SPSS statistics software 23.0 Version. To describe about the data descriptive statistics frequency analysis, percentage analysis were used for categorical variables and the mean & S.D were used for continuous variables. To find the significant difference between the bivariate samples in Independent groups the Unpaired sample t-test was used. For the multivariate analysis the one way ANOVA with Tukey's Post-Hoc test was used. In both the above statistical tools the probability value .05 is considered as significant level.

RESULTS

A total of 300 dental students and interns participated in the present study. Table 1 shows that this study included 40 students from first year (14%), 55 students from the second year (18%), 70 students from the third year (23%), 60 students from fourth year (20%) and 75 interns (25%). The total response rate for female was 63% (188 students) and for male was 37% (112 students).

Table 1. Distribution of study population according to year of study and gender

Year of study	Male		Female		Total	
	n	%	n	%	n	%
First Year	16	14.28	24	12.7	40	13.33
Second Year	21	18.75	34	18.08	55	18.33
Third Year	25	22.32	45	23.93	70	23.33
Final Year	21	18.75	39	20.74	60	20.00
Interns	29	25.89	46	24.46	75	25.00
Total	112	37.00	188	63.00	300	100

Table 2 depicts the mean empathy level across gender based on the year of study, Independent samples t-test showed that the difference in the mean empathy level was found to be statistically significant where the ($P < 0.05$) and there is no difference in the mean empathy level across gender among the students from the other years of study.

Table 2. Comparison of empathy levels across gender

Gender	Total	Mean	t-value	df	p-value
Male	112	84.4	0.071	207.149	0.941
Female	188	84.5	0.074	298	

Table 3 depicts the mean empathy level of the study subjects across the year of study, mean empathy level for the first year

was found to be 85.3, for second year was found to be 87.0, for third year was found to be 82.2, for final year was found to be 80.6 which is the least value and for interns it was found to be 87.6 which is the maximum value. One way ANOVA test showed that the difference in mean empathy level across the year of study was statistically significant ($P < 0.05$).

Table 3. Comparison of mean empathy levels across year of study

Year	N	Mean empathy score	f-value	Df	P-value
First Year	40	85.3	3.356	299	0.010
Second Year	55	87.0			
Third Year	70	82.2			
Final Year	60	80.6			
Interns	75	87.6			
Total	300	84.5033			

Table 4 shows the comparison of mean empathy score among the years of study among dental students using Tukey's post hoc test. Mean difference in empathy score was found to be significant between the fourth years vs interns ($P < 0.05$).

Table 4. Comparison of mean empathy across year of study

Year	First Year	Second Year	Third Year	Final Year	Interns
First year	-	0.973	0.767	0.418	0.901
Second year	0.973	-	0.268	0.078	0.999
Third year	0.767	0.268	-	0.960	0.106
Final year	0.418	0.078	0.960	-	0.021
Interns	0.901	0.999	0.106	0.021	-

DISCUSSION

The present cross-sectional descriptive study was done with the aim to assess the empathy level among Indian undergraduate dental students, the mean empathy score among them was 84.5 and the results of the present study are in accordance with the studies conducted by Prabhu *et al.* (2015). The mean empathy score in this study is much lower than the average empathy score by the previous studies conducted by Carilynne *et al.* (2009). The difference in empathy level could be a result of their different cultural beliefs, religious status or traditions. It has been reported earlier that cultural differences, ethnicity, religious beliefs, and stereotyping may lead to empathy score disparity and can also influence clinical encounters (Prabhu *et al.*, 2015). Comparison of the mean score across gender showed that the male students had a very less variation in score when compared to the female dental students. The geographic shift in the selection of dental degree course and recent trends had shown that dentistry is commonly chosen and preferred by the female students than male dental students (Daniel Chen *et al.*, 2007). Comparison of empathy scores across years of study showed that there is a significant difference in the empathy level among dental students with the second year students and the interns having the higher score compared to other years of study. This maybe due to the vulnerability that second year dental students who are exposed to the general medicine subjects makes them feel and realize much about the patients' pain and there is gradual fall in empathy level from second year to final year (CarilynneYarascavitch *et al.*, 2009). And there is again a rise

in level of empathy among the interns which is a virtue to the responsibilities given for the interns towards patient care and their desire to start their clinical practice which makes them to understand the necessity for a successful dental practice.

Conclusion

The present study shows that there is a low empathy level among dental students when compared to other studies and the empathy level of male students did not show much difference when compared to the female students. It is necessary to instil the role of empathy in dentist-patient relationship among the dental students for improving their professional persona. Empathy is of equivalent importance to intelligence and perpetual motor skill.

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