

Attitude Toward Public Health Dentistry Among Students of Dental Colleges of North Gujarat: A Cross-Sectional Study

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ABSTRACT

Background: To assess the attitude of students toward Public Health Dentistry as a career option and its importance in the field of Dentistry

Methodology: A cross-sectional study was conducted among the students of the Dental Colleges of North Gujarat, India. A questionnaire was distributed, which consisted of two parts; the first part included the demographic details and second part included 17 questions, graded on 3-point Likert scale. Written and ethical consent were obtained prior to start of the study. The data was analyzed using Microsoft Excel 2013 and Statistical Package for Social Science (SPSS) version 20.0. Level of Significance value was set at ≤ 0.05 .

Results: Out of total 354 participants, 34.7% were 3rd Year students, 35.3% were 4th Year students and 29.9% were interns. It was observed that 1.7% chose Public Health Dentistry as their favorite subject and 85.6% students had positive attitude toward Public Health Dentistry but not a single student was keen to choose Public Health Dentistry as their future career option.

Conclusion: Despite having positive attitude for the subject, there is a need to create interest and awareness among students by explaining future prospects of the field.

Keywords: Public Health Dentistry, Dental students, Attitude.

INTRODUCTION

Oral health problems are a burden for many developing countries such as India, especially among rural population. Research in the field of Dentistry is advancing every day, yet the oral diseases are the most common threat to mankind.¹ Prevalence of oral diseases is very high in India, estimated suggest that over 50% of school children

are suffering from dental caries while more than 90% of adults are suffering from periodontal problems.¹

The regular consumption of tobacco and its products is also an emerging an alarming threat to younger population in India leading toward cancer.

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These problems can only be solved by proper motivation, health promotion and most importantly prevention. The approach of conventional dentistry was more curative rather than preventive.² A public health approach based on the goal of prevention is the need of hour. The field of Public Health Dentistry focuses on the entire community and not on an individual patient. Public Health Dentistry is a part of Dentistry providing leadership and expertise in population- based dentistry, oral health surveillance, policy development, community-based disease prevention and health promotion, and the maintenance of the dental safety net.²

Dentists occupy an important position in society as professional health workers. In India, there are 313 Dental Colleges in 2019 as per DCI data.³ After under-graduation course, post-graduation course is offered in various field of Dentistry. Every year approximately 26,000 dentists graduate, this enormous increase leads to anxiety regarding their future career choices among budding dentists.³ A dental surgeon faces a dilemma of choosing their specialty for post-graduation. In India, post graduate course offers 3 years of learning in the particular specialty.⁴ The decision to opt for a particular field depends on various factors. Results from various factors suggest that students are more inclined towards choosing a clinical specialty such as Oral and Maxillofacial surgery, Endodontics and Conservative Dentistry.⁴ Among 6228 MDS seats in India 5461 were filled in the current academic year (2019-20).³

Among the various disciplines of dentistry in India, Public Health Dentistry is considered as a non-clinical department and is given least importance although it forms the foundation for providing dental health care services and holds the key for spreading awareness about the social aspects of the profession and the responsibility towards community.² 50% MDS seats of Public Health Dentistry were vacant in Gujarat in the year 2019-20.³ Although it is in a budding stage in India, this field has led to betterment in community oral health in developed countries.¹ School based preventive programmes, use of fluoridated toothpaste and water are some of the major reasons of decline of dental caries.³ The future prospects and importance of this field are not clear among students. Hence, the present study was conducted to evaluate the attitude of students toward Public Health Dentistry.

MATERIALS AND METHODS

➤ Selection of participants:

- A cross-sectional study was conducted among the dental students who were pursuing Dentistry in the colleges of North Gujarat, India. The study participants were selected from two Dental colleges. Ethical clearance was obtained from the review board of relevant authorities. Permission to conduct the study was taken priorly from the Dean of both the Dental colleges.

➤ Inclusion Criteria:

- Participants who were co-operative and ready to give written consent were included in the study.
- 3rd B.D.S, 4th B.D.S and Interns who were present on the day of survey when study was conducted.

➤ Exclusion Criteria:

- The participants who were absent on the day of study.
- 1st B.D.S and 2nd B.D.S students as they are not exposed to the subject.

➤ Data Collection:

A written consent was obtained from the participants before the filling of questionnaire.

The study participants were given a questionnaire, which consisted of two parts. First part included demographic details of participants viz. Name, Age, Gender and Academic Year. Second part included the questionnaire based on the attitude of dental students toward Public Health Dentistry. The responses were graded on a 3- point Likert scale.

➤ Statistical Analysis:

The collected data was entered in to Microsoft excel 2013 and subjected to statistical analysis by using Statistical package for Social Sciences (SPSS version 20.0).

The results evaluated by using; Percentages and Chi-square test.

RESULTS

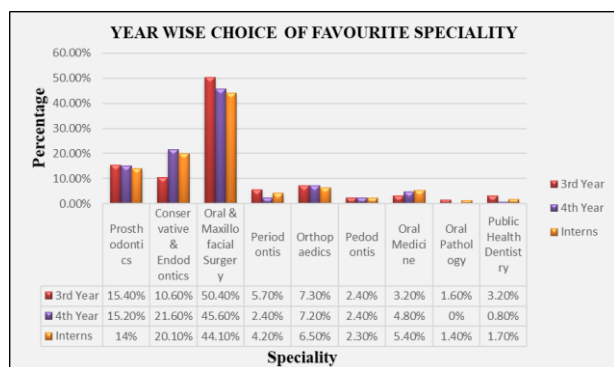
Table 1: Distribution of study subjects according to their gender and academic year.

YEAR	GENDER N (%)		TOTAL
	Male	Female	
3 RD YEAR	38 (30.9%)	85(69.1%)	123(34.7%)
4 TH YEAR	26(20.8%)	99(79.2%)	125(35.3%)
INTERNS	20(18.9%)	86(81.1%)	106(29.9%)
TOTAL	84(23.7%)	270(76.3%)	354 (100%)
P-VALUE: ≥ 0.05			CHI-SQUARE VALUE: 5.46

Level of significance: ≤ 0.05 , Chi-square test applied

Table 1: Shows the gender-wise distribution of Dental students. Out of 354 participants, 270 (76.3%) were female and male 84 (23.7%)

Graph 1: Distribution of the year wise choice of Favourite Dental Speciality



Level of significance: ≤ 0.05 , Chi-square test applied

Graph 1: Shows the choices of participants regarding their favorite Dental speciality. It was observed that 44.1% students chose Oral and Maxillofacial Surgery, 20.1% selected Conservative and Endodontics, 14% chose Prosthodontics, 6.5% chose Orthodontics and Dentofacial Orthopedics, 5.4% chose Oral Medicine and Radiology, 4.2% chose Periodontics and Implantology, 2.3% chose Pediatrics and preventive Dentistry, 1.4% chose Oral Pathology and 1.7% chose Public Health Dentistry as their favourite speciality. This result was statistically non-significant (P value ≥ 0.05).

Table 2: Distribution based on study participants plan after BDS

Plan after BDS	Academic Year			Total
	3 rd Year	4 th Year	Interns	

Clinic	5(4.1%)	9(7.2%)	29(27.4%)	43(12.1%)
Post-graduation	51(41.5%)	69(55.2%)	32(30.2%)	152(42.9%)
Abroad	35(28.5%)	19(15.2%)	31(29.2%)	85(24%)
Others	32(26%)	28(22.4%)	14(13.2%)	74(20.9%)
Total	123(100%)	125(100%)	106(100%)	354(100%)
P-value: ≤ 0.05			Chi-square value: 48.7	

Level of significance: ≤ 0.05 , Chi-square test applied

Table 2: Shows the distribution of choices of future plans of the Dental students after the completion of graduation. It was observed that 43% of the participants want to pursue Post- graduation, 24% participants were planning for Abroad, 12% were planning to start or join Private clinic whilst 21% participants had other plans. This result was statistically significant (P value ≤ 0.05).

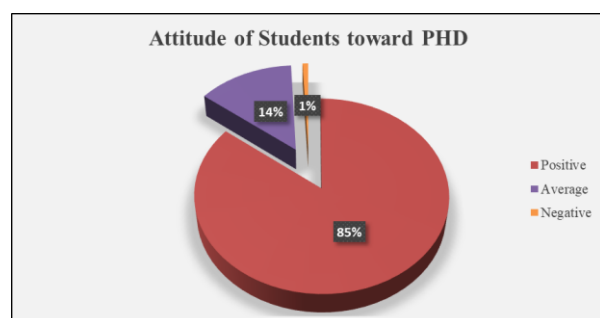
Table 3: Distribution of attitude of Dental students towards various peculiarities of Public Health Dentist (comparison between 3rd BDS/4th BDS/Interns)

QUESTIONS	AGREE	UN-DECIDED	DISAGREE	P-VALUE
1. UNDERSTANDING OF PUBLIC HEALTH DENTIST TOWARDS RURAL POPULATION	301	31	22	$\leq 0.05^{**}$
2. PUBLIC HEALTH DENTISTRY AS FINANCIALLY STABLE BRANCH	117	151	86	$\geq 0.05^*$
3. PUBLIC HEALTH DENTISTRY IN PROVIDING EMPLOYMENT	177	83	94	$\leq 0.05^{**}$
4. BETTER SCOPE OF PUBLIC HEALTH DENTISTRY ABROAD	269	55	30	$\leq 0.05^{**}$
5. PUBLIC HEALTH DENTIST AS HEALTH PROMOTERS	339	9	6	$\geq 0.05^*$
6. PUBLIC HEALTH DENTIST AS HEALTH ACTIVIST	315	27	12	$\leq 0.05^{**}$
7. PUBLIC HEALTH DENTISTS ARE ONLY LIMITED TO ACADEMICS	93	46	215	$\leq 0.05^{**}$
8. PUBLIC HEALTH DENTIST CAN CARRY OUT RESEARCH PROGRAM	263	58	33	$\leq 0.05^{**}$
9. SCOPE FOR GROWTH IN PUBLIC HEALTH DENTISTRY	243	64	47	$\leq 0.05^{**}$

10. PUBLIC HEALTH DENTIST CAN CARRY OUT COMPREHENSIVE DENTAL TREATMENT	208	52	94	$\leq 0.05^{**}$
11. PUBLIC HEALTH DENTIST AS POLICY MAKERS	321	18	15	$\leq 0.05^{**}$
12. DUTY OF PUBLIC HEALTH DENTIST IS TO ONLY PROVIDE PATIENTS TO OTHER DEPARTMENTS	214	56	84	$\geq 0.05^{*}$
13. PUBLIC HEALTH DENTISTRY BEING THEORY BASED	219	33	102	$\leq 0.05^{**}$
14. PUBLIC HEALTH DENTIST AS TOBACCO CESSATION COUNSELLOR	320	16	18	$\leq 0.05^{**}$

(**) Statistically significant, (*) Statistically not significant, Chi-square test applied

Graph 2: Attitude of Dental Students towards Public Health Dentistry



Level of significance: ≤ 0.05 , Chi-square test applied

Graph 2: shows the overall attitude of the Dental students towards Public Health Dentistry. It was observed that 303 (85.6%) participants had positive attitude, 48 (13.6%) participants had average attitude and 3 (0.8%) participants had negative attitude. A statistically significant difference was observed (P value ≤ 0.05).

DISCUSSION

Amongst the various fields of dentistry, Public Health Dentistry forms the root for dental health care services and it holds the key for creating responsiveness on the social aspects of the profession and the obligation towards community.⁴ Public Health Dentistry provides leadership and expertise in community-based dentistry, oral health surveillance, policy making, disease prevention and oral health promotion, and the preservation of the dental safety net.²

In this study a total of 354 students participated. The attitude of the participants was assessed by evaluating their responses in the questionnaire. In this study, female participants were more as compared to male participants. After the completion of BDS, students are given choices to opt for a particular Dental specialty for post-graduation. These choices are mainly based on their exposure to the particular subject.

In the present study, students were asked about their favorite Dental specialty so far, and majority of them opted for clinical subjects such as Oral and Maxillofacial Surgery, Conservative and Endodontics, Prosthodontics, Orthodontics and Dentofacial Orthopedics. Similar results were found in studies carried out by Nupur S et al⁷, Al-Dlaigan et al⁸, Dosumu et al⁹, carbecz and Ross et al¹⁰, Orenuga and da Costa¹¹ and Ohaeri et al¹². The reason for choosing clinical speciality might be the fear of "loss of hand" in a non-clinical speciality, which creates an incorrect mindset about Public Health Dentists.

Public health specialists emphasize on the public. They are concerned with the education of the community, with applied dental research, and with the management of group dental care plans, as well as the anticipation and regulation of dental diseases on a community level. These specialists are required to have broad information and skills in public health administration, research methodology and the delivery and financing of oral health care².

The present study also concluded that the Interns felt that Public Health Dentistry cannot provide better employment opportunities. The results were contrasting to the studies carried out by Janakiram C¹³. As the latter study was carried out among the Public Health Dentists themselves, so they had better idea about employment potentials in the field.

In this study the students were asked about their liking towards Public Health Dentistry and it was observed that the interest gradually decreased with the upgrade in the academic year. These results were similar to study carried out by Singh G et al¹⁴. Also, the opinions of students regarding Public Health Dentistry being more theoretical, to which the interns replied positively while the 3rd Year students denied this statement, reason being less

exposure of the 3rd Year students with the subjects. Indeed, Public Health Dentistry syllabus includes more theory but proper orientation on the subject should be carried out by the Professors and Dental Council of India to make it more practical and interesting for the students.⁵

Operation of a meaningful and balanced oral health care delivery system requires specialists from all aspects of dentistry ⁶. The participants also enquired whether there will be growth in the field of Public Health Dentistry, the results suggested that there are chances of advancement and growth in this field. These results were opposing to the study carried out by Janakiram C et al ¹³, in which the study group the Public Health Dentists themselves thought that there is lack of advancement. In developing countries like India, this field is at very nascent stage and many changes in the health care system are required to open new horizons for the upcoming dentists.

In India, Public Health Dentistry is the field which is given slightest importance by dental colleges, as it is obvious from the scarcity of post graduate seats which are available in the country; the reason being less number of staff appointed in the department of Public Health Dentistry and the attraction towards clinical dental specialties by dental undergraduates.⁴

Majority of participants in the study agreed that role of Public Health Dentists is not only limited to academics. The study conducted by Singh A et al ¹⁵ concluded different results wherein the study participants believed that Public Health Dentistry is more of a teaching profession. To overcome such barriers measures should be made to provide more opportunities such as to become a Public Health consultant, Policy makers, Epidemiologists etc. The overall attitude of the participants was assessed in the study which concluded the majority of the students i.e. 85.6% had positive attitude towards the field of Public Health Dentistry. Similar study was carried out by Naidu G et al⁴, which concluded the majority of the students had average attitude towards Public Health Dentistry. From this it can be determined that there is not a complete negative attitude of the students. By making necessary changes in the field, students' interest can be improved.

CONCLUSION

The findings from this study helps in better understanding of student's career expectations and difficulties in choosing Public Health Dentistry as a career option. Despite having positive attitude for the subject, there is a need to create interest and awareness among students by explaining future prospects of the field.

Appropriate orientation on the subject from the under-graduation level is the need of the hour. Role of the Public Health Dentists in providing optimum healthcare to the community should be explained well in advanced. Public Health Dentists focus on the community and are concerned with the oral health education, prevention and promotion of the population.

Collaborations with other field of dentistry and medicine should be encouraged for the betterment of specialty. Public Health Dentists should be recruited in government programmes such as National Oral Health Mission. Public Health Dentists can also be appointed as an epidemiologist, in policy development and as a district health officer.

CONFLICTS OF INTEREST

The authors declare they have no potential conflict of interests regarding this article.

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