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A Cross-Sectional Study on Career Options in Public Health Dentistry

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Abstract:
Background and Objectives: The purpose of this study was to assess the attitude of dental students towards considering Public Health Dentistry as their future career.
Materials and Methods: A questionnaire based, cross-sectional survey was conducted, which included dental students from different years of study. It consisted of 27 questions that were graded on five point Likert scale.
Results: A total of 293 of the 320 registered undergraduate students participated in the study, with an overall response rate of 91.5%. Among the sample, 80 (27%) were males and 213 (73%) were females. Among the total sample which was studied, it was observed that only one third (35.4%) of them had high attitude towards selecting Public Health Dentistry as a future career, and nearly two thirds of them (58.02%) had an average attitude, with very few students having low attitude (6.48%).
Conclusion: The present study concluded that there was an average attitude of 58% among dental students, which showed that they had a considerable amount of interest in pursuing post graduation in this speciality. Efforts should be intensified, both by dental council and by the dental colleges, to develop this speciality, keeping in mind the increasing attitude of dental undergraduates towards it. This also helps in increasing the number of dental personnel who are specialized in implementation of oral health policy, which does not exist in India.

Keywords: Public Health Dentistry, Career, Attitude

1. INTRODUCTION

There were merely 39 dental colleges in India before 1980, and there weren't many dentists available to provide services. However, after 1980, the number of dental institutions rapidly increased, reaching over 240 in 2007. In parallel, the nation's dental surgeon population has grown from a few hundred to approximately 80,000. Since then, the population has grown by nearly 3.5 times, while the number of dentists has expanded by more than 3,000 times [1]. Due to overstimulation, this large growth had caused concern in the minds of aspiring dentists. This sensation is strong, especially among interns, and many of them struggle to choose what path they should take in the future to establish themselves.
Studies have been done to determine the reasons people choose dentistry as a career. Studies have been conducted, among others, at the University of Toronto [2], Israel [3], India [4],

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England [5], Australia [6], Ireland [7], and the United States [8]. The main reasons people chose dentistry as a career path included financial stability, independence, becoming a specialized professional, job satisfaction, status, and serving the general public.

The only options open to aspiring dentists in India are post-graduate degrees (further education) or clinical practice, both of which must be pursued. The decision between these two possibilities is again influenced by a number of circumstances.

Only a few researches have looked into these factors. Some dental students were interviewed in order to learn more about these issues, and while the majority of them preferred higher education as their future option, the responses they gave when asked about their choice of specialization varied.

The majority of them preferred conservative dentistry and the specialties of endodontics, orthodontics, oral and maxillofacial surgery, pedodontics, and periodontics. Similar trends were observed in Nigeria, where students preferred clinical specializations more than dental radiology, dental anesthesia, dental public health, and oral medicine [9].

Although it is the foundation of dental health care services and holds the key to raising awareness of the social aspects of the profession and the duty to the community, Public Health Dentistry is among the various dental specialties in India and is given less priority by students as their choice in post-graduation. In light of this, a study was carried out at Santosh Medical College & Hospital in GHaziabad, India, with the purpose of examining dental students' attitudes about choosing public health dentistry as their future vocation.

2. MATERIALS AND METHODS

This cross-sectional survey was conducted using a questionnaire between June and July 2021. Each year, a questionnaire was handed out to students during class time with the Dean of the Institution's prior approval. To participate in the study, 310 undergraduate dentistry students who were enrolled. Prior to the start of the survey, verbal consents were sought from the participants after outlining the study's goals and objectives. Students received assurances that the information provided would be kept private. The Santosh Medical College's ethical committee in Ghaziabad, India provided approval.

Students who refused to participate in the survey and were absent on the survey days were not included.

The results were gathered using a self-administered, pretested, structured questionnaire. The survey was divided into two sections: the first section asked about demographic details, while the second section asked about dental students' opinions toward considering a career in public health dentistry. It contained 27 questions, each of which was rated on a five-point Likert scale. Minimum and maximum scores ranged between 0 and 108.

To test the hypothesis with a 95% confidence interval and 80% power to reject the null hypothesis, 283 participants are needed. When test-retest reliability was tested, it was discovered that the questionnaire's reliability was good with a Cronbach's alpha (α) of 0.75.

The results of this investigation were presented using descriptive analysis. The Chi-Square test for proportions, the t-test, the ANOVA, and post hoc testing for means were used to analyze group differences. The significance level for the statistical analysis was set at a p value of 0.05, and SPSS version 12 was used.

3. RESULTS

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A total of 283 of the 310 undergraduate students who were registered to participate in the study did so, for a response rate across the board of 88.1%.There were 283 pupils, 103 (69.6%) were female, and 70 (24.7%) were male. The range of ages was between 17 and 23. 40% of the participants in the survey were between the ages of 19 and 20, while 10.2% of them were in the 17 to 18 year old age bracket. Only 5.5% of the study population was over the age of 23, compared to 30.7% of participants who were between 21 and 22. The percentage of participants varied by year of study (first year, second year, third year, fourth year, and interns, respectively: 25.6%, 17%, 13.3%, 15.7%, and 11.2%). [Table 1] provides an illustration of this.

Only 3.85% of the male students had a high degree of attitude, whereas over half (43.08%) of the female students were very interested in pursuing a career in public health dentistry. This was a noteworthy finding, as it was discovered that attitudes between men and women varied greatly [Table 2]. It was discovered that there was a substantial difference in the mean of the overall attitude score between males and females, with females having higher mean levels [Table3].

When attitude was examined between academic years, it was discovered that interns and fourth-year students had higher attitudes than first, second, and third-year students, who had more of an average attitude. First-year students were shown to have lower attitudes on average than students in later years of study. Interns and fourth-year students had high attitude levels, and there was a strong correlation between the years of study for low, average, and high attitudes [Table4].

When the average attitude of students in different academic years was examined, it revealed a highly significant difference, with interns and fourth-year students having the highest average attitudes. Multiple comparisons revealed a significant difference between first-year students and interns as well as between first-year students and fourth-year students [Table 5].

Table 1: Socio-demographic characteristics of the sample. Table shows the general demographic characteristics of the sample population

Variable		n	Percentage
Gender	Male	70	23.6
	Female	203	69.6
Age	17-18	30	10.2
	19-20	117	40
	21-22	90	30.7
	>23	16	5.5
Year of study	First year	75	25.6
	Second year	50	17
	Third year	39	13.3
	Fourth year	46	15.7
	Interns	33	11.2

Table 2: Distribution of attitude scores in relation to gender

Gender	Low attitude	Average attitude	High attitude	Chi-square value	p value
Male	15 (21.4%)	51 (72.85%)	4 (5.7%)	76.82	0.001**
Female	0 (0%)	109 (53.52%)	94 (46.48%)		

*p<0.05 **p<0.001.Shows that significant difference exists in between male and female students with high percentage female students showing higher interest to choose Public health dentistry as a career

Table 3: Comparison of male and female students with respect to attitude scores (%) by t-test

Gender	Mean	SD	t-value	p-value
Male	60.3079	10.3482	-10.6992	0.0000*
Female	73.0002	8.5109		

*p<0.05; **p<0.001

Table 4: Distribution of attitude scores in relation to year of study

Year of study	Low attitude	Average attitude	High attitude	Chi-square value	p value
1st year	13	41	21	150.69	0.000**
2nd year	0	50	0		
3rd year	1	30	8		
4th year	4	20	22		
Interns	0	0	33		

*p<0.05; **p<0.001. Shows a significant difference in the student's attitude. The results clearly showed that the students had a better attitude towards the subject with the increase in the year of study

Table 5: Comparison of mean attitude between different years' of study

Year of study	Mean	S.D	F value	p value
1st year	65.13	10.96	25.19	0.000**
2nd year	66.50	4.42		
3rd year	68.58	6.30		
4th year	70.86	13.76		
Interns	81.84	4.31		

*p<0.05; **p<0.001

4. DISCUSSION

Public Health Dentistry, one of the many dental specialties, provides the foundation for dental health care services and is crucial for raising awareness among all dental professionals of the social implications of their work and their civic duty [11].

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Specialists from all facets of dentistry are needed for the effective and balanced operation of the oral health care delivery system [9]. Because clinical dental specializations are more appealing to dental students, Public Health Dentistry in India is the area of dentistry that dental colleges have devoted the least attention to. This is demonstrated by the lack of postgraduate seats that are accessible in the nation.

When one chooses to pursue a career in a specialty that is still in its infancy and is expanding, like public health dentistry, the branch-choice conundrum becomes even more significant.

In the current study, 54.6% of the sample had an average attitude toward joining public health dentistry, indicating that they were very interested in pursuing post-graduation in this field.

Male students had considerably lower attitudes toward the specialty than female students, which may be related to their misconceptions that Public Health Dentistry is a non-clinical speciality that doesn't involve clinical training and hence "lost hands" on dental practice. Other factors contributing to male students' negative attitudes toward public dental health include lower income, a lack of professionalism, inferior working conditions in communities, and a larger reliance on employment as compared to other dental specialties [12]. This outcome, however, did not line up with that of a study by Gurmukh Singh and SS Hiremath, which found that men had a higher propensity to enter the field of public health dentistry [13].

When compared to students from the first and second academic years, students from higher academic years were found to have a more positive attitude about dental public health. This might be because they were more aware than undergrads were of the value of completing a postgraduate degree, the need for it in society, and the higher pay that went along with it.

This reflected their general attitude toward life after graduation rather than just their attitude toward public health dentistry, but the majority of them believed that public health dentistry was a difficult field to work in because they had to interact with the public and address dental health issues. Because they were still in the beginning stages of the course and had not yet had the opportunity to work in a clinical setting, where they would typically learn the distinction between undergrad and postgrad, first- and second-year students had less of this awareness.

5. CONCLUSION

The Dental Council of India has made some attempts over the past 10 years to establish a post-graduate program in public health dentistry, but given the growing interest among dental undergraduates in this field, these efforts should be increased both by the council and by the dental colleges. This may also aid in the growth of dental professionals with expertise in the execution of oral health policies, which are lacking in India.

The small number of responders was a significant drawback of the current study. The present results should be regarded as preliminary due to this restriction. Additional research including a bigger sample size and the entire nation is required to understand the attitudes of dental students about choosing public health dentistry as their future profession.

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