

Original Article

Attitude toward Public Health Dentistry as a career among dental students in Odisha: A Cross-sectional study

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ABSTRACT

Background: Knowledge of dental students' expectations of their profession as well as their attitudes to study a particular specialty of dentistry is of great importance. These attitudes and expectations make studying dentistry meaningful to dental students and society and understanding these factors facilitate workforce planning in the dental sector. The aim of the 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 the 3rd year, 4th fourth year and dental interns studying in the State of Odisha. It consisted of 27 questions that were graded on 5-point Likert scale. The responses for the attitude questions toward selecting Public Health Dentistry for postgraduation were categorized into three factors, which are a negative attitude (includes score 0–21), neutral attitude (score 22–44), and positive attitude (score 45–64). Differences between groups were examined using Chi-square test for proportions. The level of statistical significance was set at $P < 0.05$.

Results: Among 886 respondents, 302 (34.08%) were males and 584 (65.91%) were females. One-third (33.52%) of them had a positive attitude toward selecting public health dentistry as their future career, and nearly two-third of them (58.23%) had neutral attitude, with very few students having a negative attitude (8.23%) toward the specialty for pursuing postgraduation.

Conclusion: Respondents had a considerable amount of interest in pursuing postgraduation in this specialty. Efforts should be intensified, both by the dental council and by the dental colleges, to develop this specialty, keeping in mind the increasing attitude of dental undergraduates toward it.

Key Words: Attitude, career choice, dental students, Public Health Dentistry

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INTRODUCTION

In recent decades, great emphasis has been placed on promoting the health of the general public by health care professionals, including dentists.^[1] Dentists occupy an important position in society as licensed health care workers. Thus, Dentistry is considered, as one of the sought after professions in the present day scenario.^[2-4]

In the field of dentistry, the number of undergraduate dental seats is increasing in many countries, resulting in an increase of the demand for specialty training, and for training and supervision at both graduate and undergraduate levels. After graduation, a dental surgeon faces a choice to go ahead with either clinical

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practice or pursue a postgraduate study to obtain a master's degree (MDS) in one of the many specialties of dentistry. In India, for example, postgraduate masters' training is offered for a minimum of 3 years for any of the specialties. The ultimate decision of choosing a specialty for postgraduation depends on various factors.

A number of studies have been undertaken on the characteristics, motivations, and aspirations of dental students across the world.^[1,2,3,5,6] Only a few studies have focused on the factors that affect one's choice of postgraduate training in the various disciplines. Results from these studies suggest that dental students are more inclined toward clinical specialties such as Conservative Dentistry and Endodontics, Orthodontics, Oral and Maxillofacial Surgery, Pedodontics and Periodontics while Oral Medicine Diagnosis and Radiology, Oral Pathology and Public Health Dentistry were not favorably considered specialties for postgraduate training.^[4,7-10]

Public Health Dentistry is unique among the specialties in that it is not primarily a clinical specialty; it is a specialty whose practitioners focus on dental and oral health issues in communities and populations rather than individual patients. It is that part of dentistry providing leadership and expertise in population-based dentistry, oral health surveillance, policy development, community-based disease prevention, and health promotion.

Among the various Disciplines of Dentistry in India, it is unfortunate that though Public Health Dentistry forms the basis of dental health care services and holds the key for developing awareness about the social aspects of the profession, it is often given less priority by the students as a choice for postgraduate training.

This study sought to explore the attitude of dental students studying in Odisha toward Public Health Dentistry as a future career. Therefore, the objectives of the study were:

- To identify preferred choices for postgraduate training among dental students in Odisha
- To determine the attitude toward choosing Public Health Dentistry for postgraduate training
- To explore demographic variables that affect student toward selecting Public Health Dentistry for postgraduate training.

MATERIALS AND METHODS

Odisha has four dental institutions of which one is government, and three are private. All the private colleges are located in the capital city, Bhubaneswar. A total of 1080 students belonging to 3rd year, final year and dental interns studying in these four institutions were approached for their participation in the survey. Institutional Review Board Approved the research protocol for the study. Informed consent was obtained from all the participants.

A 27-item questionnaire adapted from a study done by Naidu *et al.* was used to collect data in the present study.^[11] Test-retest reliability was performed to test the reliability of the questionnaire; it was found to be good with Cronbach's alpha (α) 0.75. The students were informed about the nature of the study and confidentiality was assured. The study was done during February–April in the year 2015.

The research instrument was a self-administered questionnaire in the English language. This survey was completed during regularly scheduled class sessions in an average time of 10 min. The 27-item questionnaire consisted of two sections; the first section included information on demographic characteristics and the second section explored the attitudes of dental students considering Public Health Dentistry as their future career. This part consisted of 16 questions that were graded on 5-point Likert scale, with the following scores; strongly agree (4), agree (3), undecided (2), disagree (1), and strongly disagree (0). The scores were given in the parenthesis. Minimum and maximum attitude scores ranged between 0 and 64.

The responses for the attitude questions toward selecting Public Health Dentistry for postgraduation were categorized into three factors, which are a negative attitude (includes score 0–21), neutral attitude (score 22–44), and positive attitude (score 45–64).

The collected data were analyzed using Statistical Package for Social Sciences (SPSS) version 20 (IBM, Chicago Inc., IL USA). Both descriptive and inferential statistics were computed. Differences between groups were examined using Chi-square test for proportions. The level of statistical significance was set at $P < 0.05$.

RESULTS

A total of 886 of the 1080 registered undergraduate students participated in the study, with an overall response rate of 82%.

Among 886 respondents, 302 (34.08%) were males and 584 (65.91%) were females. The age distribution of participants was between 20 and 25 years. Participation varied according to the years of study 36.45%, 38.14%, and 25.39% for the 3rd year, 4th year, and interns, respectively. This has been illustrated in [Table 1].

Concerning the future plans of the respondents after graduation, the majority ($n = 482$, 54.40%) wanted to pursue postgraduate specialist training followed by running a private clinic [$n = 236$, 26.63% Figure 1].

When asked about their choice of specialty for postgraduation, the top three choices were conservative and endodontics ($n = 192$), orthodontics ($n = 128$), and pedodontics [$n = 103$ Figure 2].

Among the total sample which was studied, it was observed that only one-third (33.52%) of the respondents had positive attitude toward selecting Public Health Dentistry as their future career and nearly two-third of them (58.23%) had neutral attitude, with very few students having negative attitude (8.23%) toward the specialty [Table 2].

Table 1: Sociodemographic characteristics (n=886)

Variable	n (%)
Gender	
Male	302 (34.08)
Female	584 (65.91)
Age (years)	
20-21	315 (35.55)
22-23	311 (35.10)
>23	260 (29.34)
Year of study	
3 rd year	323 (36.45)
4 th year	338 (38.14)
Interns	225 (25.39)
Family member dentist	
Yes	142 (16.02)
No	744 (83.97)
Reason behind you joining dental profession	
By chance	127 (14.33)
By choice	232 (26.18)
To be financially successful health professionals and highly respected members of their communities	279 (31.48)
Strong future, stability and security in the profession	248 (27.99)

While only 21.52% ($n = 65$) of the male students had a positive attitude toward the specialty, 39.72% ($n = 232$) of the female students expressed a high level of interest in choosing Public Health Dentistry as their future career ($P < 0.00001$). This was a significant finding, and a high level of variation in attitude between males and females was found [Table 2].

When attitude was compared between years of study, a more positive attitude was found to be more among 3rd year ($n = 98$) and 4th year students ($n = 116$), when compared to the interns ($n = 83$). However, the association between the years of study for negative, neutral, and positive attitudes was not statistically significant [Table 2].

Regarding the plans to work for their community after graduation more than half of the respondents ($n = 657$, 74%) showed interest to work for the welfare of their community [Figure 3].

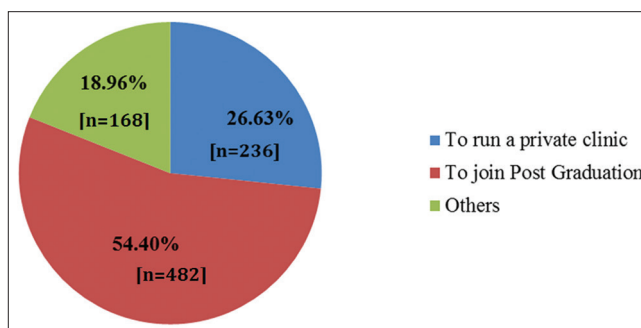


Figure 1: Respondents' plans for the future after graduation ($n = 886$).

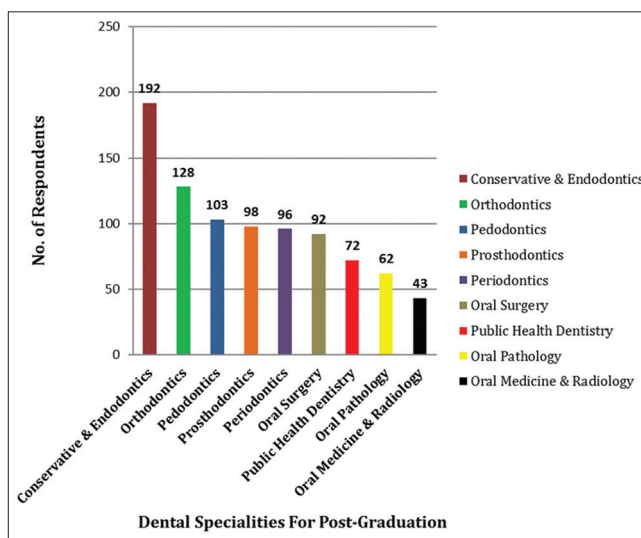


Figure 2: Respondents specialty of interest for postgraduation in dentistry ($n = 886$).

Table 2: Distribution of attitude scores in relation to gender and year of study (n=886)

Socio-demographic variables	Negative attitude	Neutral attitude	Positive attitude	χ^2	P
Gender (%)					
Male	32 (10.59)	205 (67.88)	65 (21.52)	30.078	<0.00001*
Female	41 (7.02)	311 (53.25)	232 (39.72)		
Year of study					
3 rd year	34	191	98	6.2526	0.181061
4 th year	27	195	116		
Interns	12	130	83		

*P<0.05 is statistically significant

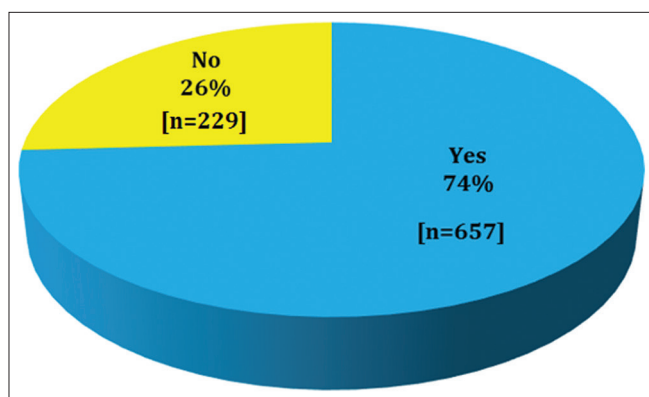


Figure 3: Respondents plans to work for the community after they graduate (n = 886).

DISCUSSION

The oral health care field has been expanding in scope and complexity with more emphasis being placed on the healthcare delivery system and its impact on oral health status of the populations. Efficient functioning of a meaningful and balanced oral health care delivery system requires specialists from all aspects and Disciplines of Dentistry.

Education has evolved over the years and with each step, specialization is creeping in. The field of dentistry is no exception. In the quest for success in the business of dentistry, it is been realized that postgraduation has become the need of the hour. Majority of the participants in our study wanted to pursue postgraduation preferably in one of the clinical specialties of dentistry. This finding is common to studies done by Al-Dlaigan *et al.*,^[9] Dosumu *et al.*,^[12] Scarbecz and Ross,^[13] Orenuga and da Costa,^[14] and Ohaeri *et al.*^[15]

Among the various Disciplines in Dentistry, Public Health Dentistry, forms the basis for oral health care services as it holds the key for developing awareness on the social aspects of the profession and the responsibility toward community, amidst all those who are engaged in the profession.^[11] Public health dentists

promote oral health by assessing the oral health needs of the community, working toward developing and implementing oral health policy, providing programs, and services that address oral health issues.^[16]

Unfortunately in India, of all the various Disciplines of Dentistry, Public Health Dentistry is the one which is often given least importance by dental colleges, which is evident from the paucity of postgraduate seats which are available in the country^[17] because of the attraction of clinical dental specialties for dental undergraduates for various reasons.^[4,11] The situation is no different in the field of medicine where the medical students are more attracted toward clinical specialties such as Surgery, Obstetrics and Gynaecology and Pediatrics whereas preclinical and para-clinical subjects were not favorably considered for postgraduate training.^[18-20]

Keeping this in view, the present study was conducted to determine the attitudes of dental students toward choosing Public Health Dentistry as their future career, which can help in establishing and strengthening postgraduation courses in various Public Health Dentistry departments among existing universities.

The present study found a neutral attitude toward joining Public Health Dentistry among 58% of the respondents, which suggested that the respondents were uncertain of whether to pursue postgraduate training in the said specialty.

Attitude toward the specialty was significantly less among male students as compared to females. Possible reasons for this negative attitude toward dental public health among male students may be lower income, poorer working conditions in communities and greater challenges associated with the concerned specialty to provide optimal oral health for widely diverse groups as compared to other specialties of dentistry. However, this result was not in accordance with that of study conducted by Singh *et al.*, in which higher inclination to join Public Health Dentistry was seen among

males.^[4] This can be attributed to the difference in working condition and opportunities available to the dental students in these two different regions where the study was conducted.

Attitude toward dental public health was found to be more positive among students from the fourth year as compared to those from the 3rd year. This may be due to their increased awareness on the importance of postgraduate studies, demand for it in the society and better income which is associated with it in general, as compared to working as a general dentist. The other possible reason could be their greater exposure to the subject Public Health Dentistry in the fourth year. Public Health Dentistry is in the 3rd and 4th year dental curriculum. Although both theory and practical classes begin in the 3rd year itself, the students appear for the examinations in the 4th year and so are more serious about the subject. Furthermore, maybe they become more aware of the need to look at communities as the unit of interest rather than individual patients, developing more positive attitudes toward the field. Similar findings were also reported by Naidu *et al.*^[11]

Academic dental institutions are the Fundamental Foundation of the Nation's Oral Health. As providers of care, academic dental institutions are a safety net for the underserved, centers of pioneering tertiary care, and contributors to the well-being of their communities through accessible oral health care services. The interlocking missions of education, research, and patient care are the cornerstones of academic dentistry that form the foundation on which the dental profession rises to provide care to the public.^[21]

In India, it is very saddening to note that the identity of Public Health Dentistry as a specialty is mistaken by most of the academic dental institutions. Most of the institutions consider the specialty as an advertisement agency and as a means of increasing number of patients visiting the institution.^[16] The scenario needs to change. Dental schools in India should expand opportunities for dental students to care for patients with complex oral health needs in community-based settings to improve the students' comfort levels in caring for vulnerable and underserved populations.

Despite their levels of attitude toward choosing Public Health Dentistry as their specialty for postgraduation, it was heartening to note that more than half of the respondents ($n = 657$, 74%) had plans and interest to work for their community after graduation.

This study explores attitude of dental students toward Public Health Dentistry as a choice for postgraduate training which has not been extensively studied in Odisha previously. It helps to know the unique perspectives of students on selecting dental public health as a career. This evaluation adds to a very limited body of literature which seeks student's perspective concerning higher dental education.

A few study limitations merit mention. First, the cross-sectional study design used did not allow us to establish whether the students' future career intentions concerning Public Health Dentistry changed over time. Second, the sample was recruited from dental universities located in the State of Odisha, and the results cannot be generalized to all dental students in India. However, this study had a high response rate and included renowned institutions in the state. Therefore, it provides an overview of the future dental workforce trained by these institutions. The questionnaire was pretested; however, since it was close-ended, there may have been factors which we did not include that might influence their attitudes.

Although we cannot completely rule out the possibility of measurement errors, several measures of quality control were included to increase the validity of the data.

It is likely that a balance of factors operating before, during and after dental school is involved in any individual's career decision. In the past one decade, Dental Council of India has made some efforts in establishing postgraduation in Public Health Dentistry, but these efforts should be intensified further, both by the council and by the dental colleges, to develop this specialty, keeping in mind the increasing attitudes of dental undergraduates toward it.

There is a need to broaden the scope of the specialty and to make it more practical. There is a need to create awareness and inculcate interest for the specialty among the students during their graduation. Proper orientation on the subject from the under graduation level is the need of the hour.

CONCLUSION

Need for being constantly updated for professional and economic stability in today's competitive world has made a specialization in dentistry very essential.^[22] Majority of the participants in this study wanted to pursue postgraduation preferably in one of the clinical

specialties of dentistry. The top three choices being Conservative and Endodontics, Orthodontics and Pedodontics. The present study concluded that 58% of dental students had a neutral attitude toward the specialty, which suggested that they were ambivalent about pursuing postgraduate training in Public Health Dentistry. Thus, the specialty needs to be projected well among dental students increasing their interest in the discipline as lucrative career option. A high level of variation in attitude between males and females was found in our study which was also statistically significant.

Suggestion and recommendations

Postgraduate Dental Education Programs for specialization in dentistry should be developed on a planned basis by giving appropriate weight to factors, such as the need, and the stage of professional development and related social and economic factors in a given country.^[23] In a developing country like India where oral health awareness is limited and disease burden high, a specialty like dental public health dedicated toward working for the masses becomes all the more important.

Although it is in a nascent stage in India, the specialty is very much advanced in most of the developed countries and has led to the improvement of population oral health.^[24] Dental schools should devote considerable time and effort in compiling information on postgraduate education programs, counseling students, and providing them with information that will assist them in making career decisions.^[9]

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Conflicts of interest

The authors of this manuscript declare that they have no conflicts of interest, real or perceived, financial or non-financial in this article.

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