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Assessment of attitude among dental undergraduate students towards Public Health Dentistry as a career choice in Davangere city-A cross sectional survey

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Abstract

Context: Public Health Dentistry, a unique specialty, which focuses on oral health issues in communities rather than in individual patients. Among the various disciplines of dentistry, 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.

Aims: To explore the attitude of dental undergraduate students towards Public Health Dentistry as their career choice.

Methods and Material: A cross sectional questionnaire survey was done among 103 interns of Davangere city. Data regarding their attitude was collected using a Questionnaire.

Statistical analysis used: Descriptive data was generated in percentages and tables and graphs were used to describe the data and chi-square test to assess categorical data.

Results: Majority of the participants were females (61.2%) and had joined Dentistry by chance (45.6%). Oral surgery was more preferred (30.2%) followed by Conservative dentistry (24.2%). The participants found Public Health Dentistry subject to be good (66.0%) but were undecided to choose as their careers (52.4%). They agreed that this subject offered easy employment (34.0%), was essential for increasing awareness about oral health in society (51.5%), gave a chance to be a good academician (63.1%) and offered opportunities abroad (49.5%).

Conclusions: The participants found that the subject to be interesting and were also agreed on the different aspects of this subject. Efforts to increase awareness among undergraduates should be considered.

Keywords: Attitude, career choice, cross-sectional

Introduction

Health care professionals; including dentists have placed great emphasis on promoting the health of the general public [1]. The oral health care field has been expanding and importance has been placed on the healthcare delivery system and its impact on oral health status of the populations [2]. After graduation, a dental surgeon needs to either go ahead with clinical practice or pursue a postgraduate degree in any of the specialty [3].

The factors influencing the choice of a dental profession are very important in terms of identifying the expectations of the profession.³ A striking balance between dental needs and supply is inevitable as there's both an increase in demand for dental treatment and in supply of dental schools. The dilemma becomes even more profound especially when one is choosing a career in a specialty, which is still in its budding stage and is growing for eg. Public Health Dentistry. It is a subject in which the student usually develops a little interest during his graduation, perhaps reasons are many, to quote few- continuance of the trend of teaching and training of curative approach with relatively little stress on preventive and promotive approaches and the subject was taught by Department of Periodontics in most of the dental colleges [4].

A number of studies have been undertaken on the characteristics, motivations, and aspirations of dental students across the world [1, 4, 6, 7].

The factors influencing the choice of a dental profession are very important in terms of identifying the expectations of the profession. Several studies have reported that the majority of the undergraduate dental students prefer to continue their education toward a specialty degree. This helps in dental workforce planning. 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 favourably considered specialties for postgraduate training [8-10].

Public Health Dentistry is unique among the specialties that focuses 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 [2]. Competencies in Dental Public Health Adopted by American Board of Dental Public Health and American Association of Public Health Dentistry in 2018 are as follows-management oral health programs for population health, demonstration of ethical decision-making, evaluation of systems that impact oral health, design surveillance systems to measure oral health status and its determinants, communicate on oral and public health issues, lead collaborations on oral and public health issues, advocate for public health policy, legislation, and regulations to protect and promote the public's oral health, and overall health, critically appraise evidence to address oral health issues for individuals and populations, conduct research to address oral and public health problems and integrate the social determinants of health into dental public health practice [13].

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 [3]. Hence, the aim of this study is to explore the attitude of dental undergraduate students towards Public Health Dentistry as their career choice.

Subjects and Methods

Study design and participants

A descriptive cross sectional questionnaire survey was conducted among the 103 interns of the colleges after obtaining ethical approval from the Institutional review board of the college. Permission was obtained from the Principals of the colleges to conduct the survey before the start of the study and voluntary written informed consent was also obtained from the study participants.

The study involved purposive whole sample of all the interns of the two colleges. The Dental interns who gave voluntary informed written consent and who were present on the date of data collection were included in the study. The data was collected from the interns at their respective college premises.

Research instrument and brief procedure

Research questionnaire was designed based upon the available references from previous studies [2, 12]. 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 20-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 13 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.

Participants were asked to assemble in the lecture hall on pre scheduled day. The self-administered questionnaire was distributed to them by an investigator. Participants were instructed not to discuss any answers with their friends. They were also instructed to approach investigator if they had any doubts pertaining to questionnaire. The participants were 10 minutes to answer the questionnaire. Later questionnaire was collected back by checking for the complete response.

Analysis

The data obtained was compiled systematically in Microsoft Excel sheet and subjected to statistical analysis using Statistical Package for Social Sciences Software version 20.0. Descriptive statistics was generated in terms of frequencies or percentages. Data was analyzed using chi-square test to assess categorical data. Statistical significance was set at $p < 0.05$.

Results

Majority of the study population 45.6% were 23 years old and were females 61.2%. 77.7% of the interns did not have a parent or a family member as a dentist. Majority of the study population 45.6% had joined the dental profession by chance, 38.8% had by choice and 15.5% had joined to be financially successful health professional and to have a strong and stable future. In the future 64.7% of the study population wanted to enroll for a post-graduation course and the other 35.3% had other plans for future like either start a clinic, join some clinic. Around 30.2% of the population like oral surgery in their undergraduation followed by conservative dentistry 24.2, orthodontics 20.5% and only 1% had liked Public Health Dentistry. The study population wanted to join Conservative dentistry in their post graduation 34%, followed by oral surgery 22.3%, orthodontics 19.4% and only 7.7% wanted to join Public Health Dentistry. Majority of them 78.4% wanted to work for the community at their respective places. The participants found the subject Public Health Dentistry to be good 66.0%. The participants were undecided to choose the subject as their career 45.6% found the subject to be rewarding emotionally, 63.1% of the female found the subject to be rewarding socially 10.257, $p=0.036^*$ and financially 10.597, 0.031^* 34.0% agreed that the speciality offered easy employment, 51.5% agreed it was vital to create awareness in the society, 63.1% agreed that it helps in being a good academician. 66.0% of the participants felt that it help to achieve research oriented goals, 49.5% agreed that it helped to go abroad and 60.2% agreed that it helped to develop a good personality. (Table 1)

Table 1: Table showing the responses of the participants in Likert scale along with their association with respect to age and gender.

S. No	Questions	Strongly agree	Agree	Undecided	Disagree	Strongly disagree	Chi square Value age	Chi square Value gender
1	Public health dentistry is my career of interest	2(1.9%)	15 (14.6%)	54 (52.4%)	21 (20.4%)	11 (10.7%)	8.05 (0.78)	8.79 (0.06)
2	Speciality of public health dentistry is rewarding emotionally	13 (13.8%)	46 (45.6%)	28 (21.2%)	8 (9.7%)	8 (9.7%)	3.57 (0.61)	17.5 (0.28)
3	Speciality of public health dentistry is rewarding socially	16 (15.5%)	65(63.1%)	11(10.7%)	5 (4.9%)	6 (5.8%)	10.25 (0.036*)	10.993 (0.529)
4	speciality of public health dentistry is rewarding financially	13 (12.6%)	19 (18.45)	36 (39%)	22 (17.4%)	13 (12.6%)	10.597 (0.031*)	7.649 (0.812)
5	speciality offers easy employment	4 (3.9%)	35 (34%)	28 (27.2%)	30 (29.1%)	6 (5.8%)	5.691 (0.223)	9.606 (0.650)
6	Dentistry is vital for creating oral health awareness in the society	41 (39.8%)	53 (51.5%)	5 (4.9%)	2 (1.9%)	2 (1.9%)	4.524 (0.340)	6.386 (0.895)
7	offers a challenging job opportunity	8 (7.8%)	58 (56.3%)	20 (19.4%)	12 (11.7%)	5 (4.9%)	2.817 (0.589)	4.831 (0.963)
8	offers a chance to be responsible social health activist	19 (18.4%)	69 (67%)	8 (7.8%)	5 (4.9%)	2 (1.9%)	2.091 (0.719)	4.9 (0.961)
9	Speciality offers better financial stability	3 (2.9%)	33 (32%)	38 (36.9%)	24 (23.3%)	5 (4.9%)	4.002 (0.406)	8.006 (0.780)
10	offers a good chance to be a good academician	19 (18.4%)	65 (63.1%)	15 (14.6%)	2 (1.9%)	2 (1.9%)	6.071 (0.194)	14.265 (0.284)
11	I am inspired by my public health dentistry teacher	7.8%	57.3%	23.3%	9.7%	1.9%	2.100 (0.717)	17.420 (0.134)
12	provides a good platform to attain research oriented goals	16.5%	66%	8.7%	5.8%	2.9%	3.252 (0.517)	3.674 (0.989)
13	offers good opportunities abroad	20.4%	49.5%	22.3%	5.8%	1.9%	3.181 (0.528)	12.959 (0.372)
14	offers a chance to serve the underserved	24.3%	60.2%	6.8%	7.8%	1%	1.722 (0.787)	5.077 (0.955)
15	helps in the overall development of personality	13.6%	60.2%	20.4%	3.9%	1.9%	1.850 (0.763)	9.343 (0.673)

Statistically significant $p \leq 0.05$

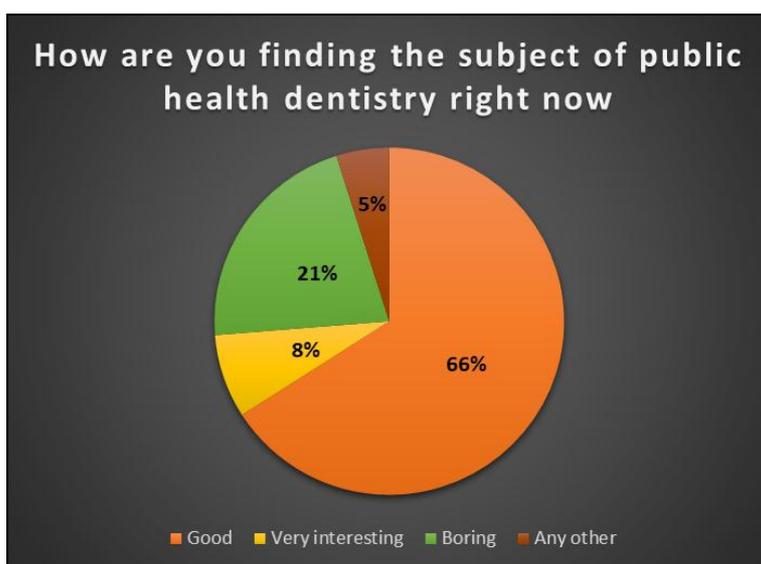


Fig 1: A pie chart showing the percentage distribution of the participants on how they felt the subject of Public Health Dentistry

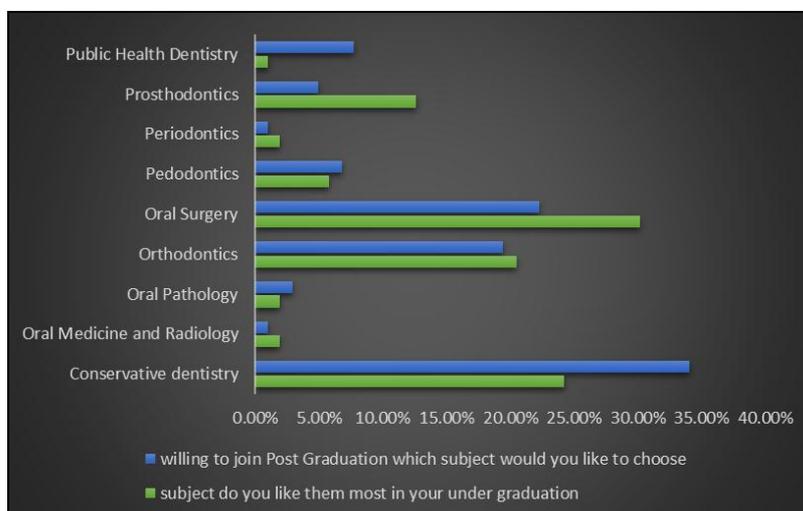


Fig 2: A bar graph showing the percentage distribution of the participants on how their willingness to join PHD and their subject of choice

Discussion

Literature is scarce on studies which have evaluated the attitude among dental undergraduate students towards public health dentistry as a career choice. The age of the students ranged from 22-more than 24 years with maximum being in the 23 years age group (45.6%). Among the respondents 61.2% were females and this was in accordance with the study done by Bhagwani *et al.*^[18]

Few students had chosen dentistry as their first career choice (38.8%), and the majority of them had chosen this profession by chance (45.6%). On further asking the respondents have said the inability to get a medical seat was the reason behind joining dentistry. This is in accordance with the study done by Priya *et al.*^[15] where 47% of the participants joined dentistry as they were unable to get a seat in medicine and few joined the course out of interests (37%). Most popular reason for student's enrolling in this course was due to their prior interest in medicine and its similarity to medicine and to get a prestigious position in the society, similar results were found by the study done by Bhagwani *et al.*^[18]

When participants were asked about their future plans 64.7% wanted to pursue post-graduation and 25.5% wanted to join or start a clinic. The reason for this could be better income and job opportunity, in-depth knowledge of the subject. This was also found in a study done by Bhagwani *et al.* were 51% of the respondents wanted to pursue post-graduation^[18].

Maximum of the subjects liked oral surgery 30.2% followed by conservative dentistry 24.2% and orthodontics 20.5%. Only 1% of the participants liked Public Health Dentistry in their undergraduation. 34% of the participants had chosen conservative dentistry as the subject of choice in their postgraduation followed by oral surgery 22.3%, orthodontics 19.4% and only 7.7% wanted to join public health dentistry. The reason could be due to preference of the clinical subjects over the non clinical ones, traditional choices as Public Health Dentistry is still a less explored branch among the undergraduates. A study done by Sharma *et al.* found that Oral surgery was the most preferred speciality (35.77%) followed by orthodontics and endodontics and conservative dentistry (15.45%) as their most preferred branches to study in their post graduation^[3]. Another study done by Halawany *et al.* found that Restorative and Aesthetic Dentistry was the most preferred speciality (n = 98; 17.7%) followed by Endodontics (n = 78; 14.1%); Prosthodontics (n = 65; 11.7%) and Orthodontics (n = 63; 11.4%). A study done by Naidu *et al.* 35.4% of the participants had high attitude of joining Public Health Dentistry as their subject of choice in their postgraduation which is contrary to the results found in this survey^[19].

Around 78.4% of the participants had plans to work for the community and this was line with the results of the study done by Singh *et al.* where 78.8% have one or other plan working for the community at their place after finishing course^[11]. This would overcome geographic imbalance between rural and urban healthcare and reorient the urban practice. 66% found the Public Health Dentistry good as a subject and in the study done by Singh *et al.* similar results were found. This could be used to translate the student preference for post graduate course in the future. Maximum of the participants were undecided if they wanted Public Health Dentistry as their career of interest (52.4%) and this was not associated with age or gender. A study done by Naidu *et al.* found that female students expressed high level of interest (46.48%) in choosing Public Health Dentistry as their future

career^[12]. Attitude towards the specialty was less, this could be due to, their assumptions and misinterpretations about Public Health Dentistry as a non clinical specialty, that doesn't include clinical training and so "loss of hands" on dental practice. Other reasons for this low attitude towards public dental health among male students may be lower income, lower professionalism, poorer working conditions in communities and greater dependency on the job as compared to other specialties of dentistry. The dilemma of choosing a branch becomes even more profound, especially when one is choosing a career in a specialty which is still in its budding stage and is growing 54.7% of the population found the subject of Public Health Dentistry to be rewarding emotionally, 63.1% of the females agreed that it was socially rewarding and this result was statistically significant $p \leq 0.036$ but was not associated with age. 39% of the females were undecided that the speciality was rewarding financially and this result was statistically significant $p \leq 0.03$.

34% and 56.3% of the participants agreed that this speciality offered easy employment as among the various disciplines in dentistry and offered good job opportunities respectively. The reason could be that Public Health Dentistry forms the basis for dental health care services, research and also teaching jobs availability with universities. A study done by Singh *et al.* found that job security was the second reason for choosing the subject 27.1%.^[12] 51.5% of the participants agreed that Public Health Dentistry was important in creating oral health awareness in society as Public Health Dentistry forms the basis for dental health care services and the responsibility towards community.

67% of the population agreed that it offered a chance to be responsible social health activist. 57% agreed that they were inspired by their Public Health Dentistry teacher as the teachers motivated them, sensitized them regarding community welfare. The speciality offers a good chance to be a good academician and this was confirmed by this survey as 63% of the participants agreed and 49.5% agreed that it offered good opportunities abroad and 66% agreed that it provided a good platform to obtain research oriented goals. A study done by Singh *et al.* found that academics and teaching remained on the forefront 48.2% as future prospects of the subject in the minds of the students before counselling representing the lack of practical field oriented jobs (with good incentives). 12.9% had research and going abroad in their mind and was seen as an upcoming trend for the future of specialty. 60% of the subjects found that the speciality helped in the overall development of personality.

This study could be a baseline for establishing and improving the undergraduate programs. There is a need to promote mentoring activities and provide guidance and encouragement to under graduate dental students in selecting the most appropriate specialty and career within their capability domain. The limitation of the study is that it is done among a small sample of population. Further studies with larger sample sizes is needed to know the attitude of dental students towards choosing public health dentistry as their future career. There is a need to broaden the scope of the specialty and to make it more practical. Proper orientation on the subject from the undergraduation level is required. Counselling of the students on this subject should be done as maximum is unaware of the future prospects of this specialty. There is scope for research and this could be highlighted as research forms an important domain of this specialty. Emphasis can also be given to the clinical aspect of this subject.

Conclusion

The present study showed that the interns has chosen dentistry as a career by chance and maximum of the participants were females. Majority of the interns wanted to pursue post-graduation as they believed that it would offer better income and job opportunities. The interns preferred conservative dentistry as subject of choice for their post-graduation but were undecided for Public Health Dentistry. Majority of the participants felt that they wanted to work for the community and helped in increasing oral health awareness. They felt that the subject offered easy employment, had good opportunities abroad, was emotionally and socially rewarding and could also help them in careers in research.

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