



Perception of Periodontology among undergraduate dental students in Tamilnadu – A preliminary descriptive questionnaire survey

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ABSTRACT:

Background: Periodontology is one of modern dentistry's oldest and most advanced specialities. However, dental students have shown less interest in pursuing and practising periodontology as a speciality in higher education. This survey aims to analyse the perception of periodontology as a subject and speciality among undergraduate dental students.

Methods: A questionnaire study was conducted among undergraduate students in private dental colleges in the west and south districts of Tamil Nadu. Five hundred students participated in this survey. Of these, 117 were male, and 383 were female undergraduate students. The lead investigator chose the electronic questionnaire, which included 10 open-ended questions.

Results: 71.2% of students find periodontology challenging. 82% believe hands-on training and model demonstration is necessary. 68.4% haven't observed laser surgery, and 33.8% haven't seen implant surgery. Only 5.2% of students knew about periodontal journals in the undergraduate period.

Conclusions: The survey reveals that periodontology is a vast subject for undergraduate students. They require hands-on training on models to understand surgical procedures better. Students had limited exposure to laser and implant surgeries and were unaware of speciality journals. This highlights the need for change in periodontal curriculum and teaching to provide better understanding and clinical exposure during internship training.

Keywords:- Periodontology, Undergraduate students, Clinical exposure.

I. INTRODUCTION:-

Universities have different dental education and training approaches, depending on their structure, culture, and resources. In today's world, undergraduate dental education must ensure that students are equipped to work as independent, safe practitioners who can promote and enhance oral health among the general public.¹ It is crucial to

ensure that all undergraduate students achieve a similar level of proficiency upon completing their university education. To achieve this goal, undergraduate students need to receive adequate training in diagnosis and treatment techniques which will help them manage patients effectively. An "ideal" academic environment fosters personal, psychological, and social growth in students, while also preparing them for their future professional lives. During their studies, undergraduate dental colleges need to improve their teaching and learning methods. Preclinical and clinical training are crucial as they help students develop relationships with patients, emphasize patient management, and provide opportunities for reflection and improvement.^{2,3}

Periodontal diseases are becoming more prevalent worldwide, and dental students need to understand clinical concerns related to periodontics to succeed in their future dental practices. Although periodontology is one of the oldest and fastest-growing dental specialities, undergraduates are often not exposed to a range of periodontal treatment options. Therefore, the objective of this survey is to analyze undergraduate dental students' perceptions of periodontology.

II. MATERIALS & METHODS :-

The cross sectional survey was conducted on undergraduate dental students who were enrolled in a compulsory rotatory residential internship at private colleges in Tamil Nadu. A questionnaire survey was administered to the students following clearance from the institutional ethics committee. A convenience sampling method was used for selecting the sample. The questionnaire contained 10 closed-ended questions that were chosen by lead investigator and validated for their simplicity, clarity, relevance, and language by an expert panel consisting of a Periodontist and a Public Health Dentist. The questionnaire was shared through electronic links on the WhatsApp social media network, and a total of 500 responses were obtained. All participants gave their online



informed consent to ensure their voluntary participation. Responses were recorded on a 3-point Likert scale. The responses were then gathered, calculated, and analyzed using an MS Excel spreadsheet to determine the proportions.

Statistical analysis:

For each question, an independent percentage was calculated to determine the frequency of responses.

III. RESULTS:-

The results of the survey are as follows: Of 500 undergraduate CRI's included, 117 were male while 383 were females. 71.2% of the students considered periodontology to be a huge subject to study, as shown in **Figure 1**. 60.2% of the students found the terms and concepts difficult to understand(**Figure.2**). 82% of the students believed that hands-on training on models about surgical procedures would be very useful to understand and apply in clinical practice, as depicted in **Figure 3**. 55% of the students were not aware of the 2017 classification for periodontal diseases and conditions(**Figure.4**). During their course period, 36.2% of the students did not observe any periodontal surgical procedures(**Figure.5**). **Figure 6** illustrates that 68.4% of the students did not observe any laser surgical procedures. (**Figure.7**)83.4% of the students were aware that implantology is a part of the curriculum in the periodontal speciality. **Figure 8** shows that 33.8% of the students observed implant surgical procedures, irrespective of the speciality. **Figure.9** shows, Only 5.2% of the students were aware of periodontal journals during their undergraduate period. Finally, **Figure 10** shows that 57.2% of the students were uncertain about choosing periodontology as a speciality for their higher studies.

Based on the findings of this survey, we identified certain factors that could be changed in teaching and training methods to encourage future generations to pursue periodontics as a master's degree and practice periodontology in clinical settings similar to other specialities.

IV. DISCUSSION:-

Among the variety of specialties in dentistry, periodontology is the baseline for oral healthcare delivery and services, as it is associated with developing awareness of oral hygiene aspects as well as its maintenance among the general public.¹⁰

In the present survey, the major findings is: that 82% of participants preferred hands-on training on models and workshops about surgical

procedures would be very useful to understand and apply in clinical practice. 68.4% of the students did not observe any laser surgical procedures&66.2% of the students not observe implant surgical procedures, irrespective of the speciality during their course period. The reason behind it could be due to the common practice of doing only hand & ultrasonic scaling at the UG level, having absolutely none/minimal exposure to advanced procedures at the UG level, and not realising/explaining that all procedures are based on sound periodontium. This led to the fact that little interest is developed during graduation in the subject.¹⁰

The 2009 consensus workshop provided recommendations on the appropriate competencies, teaching and assessment methods for periodontal undergraduate education. ⁴ The consensus report suggested that modern learning approaches, such as the use of information technology, networking, and small group activities, should be incorporated into dental education along with traditional methods like lectures. Clinical training is vital for periodontal education, as it requires manual skills and clinical experience with suitable patients. ⁵

Across Europe, there has been a trend towards adopting more up-to-date teaching and assessment methods. The Nordic and British regions are more likely to use case- and problem-based methods and assessment tools that are suitable for evaluating professional competencies and abilities compared to other European areas.⁴ Students should be encouraged to participate in OSCEs (Objective Structured Clinical Examination) or similar clinical examination methods that allow them to demonstrate their clinical behaviours and skills.⁶

According to Miller's pyramid,⁷ students should demonstrate their knowledge and ability by performing the required skill. Therefore, well-established tools like record analysis, direct observation, and multisource feedback should be implemented to assess what the student does in practice. ⁸ The acquisition of dental surgical skills still follows the combination of bench-top and phantom head training, which has been in use since the early 1900s and still exists in an updated form in dental schools today. ⁹

V. CONCLUSION:-

The results of the survey indicate that students have a better understanding of surgical procedures when they learn through hands-on training. However, students felt that their clinical experience was lacking in exposure to laser and implant surgical procedures, and they were not



aware of periodontal journals during their undergraduate studies. This information provides insight into how undergraduate students perceive periodontology. There is a need to implement more advanced and standardized teaching strategies in the undergraduate curriculum, such as conducting hands-on training on various surgical procedures and advancements and modifying clinical quotas like OSCEs and OSPEs (Objective Structured Practical Examination). By doing so, it will bring a change in students' perception and attitude towards periodontics as a speciality.

Prospects: The survey highlights dental students' perception of periodontology as a subject and speciality. We aim to modernize teaching methods by conducting OSCEs and OSPEs for third and final-year students and providing hands-on training for interns. This will increase students' confidence and awareness about periodontal procedures, encouraging them to pursue periodontology in postgraduation.

Limitations: Our survey was confined to Tamil Nadu, India, and may not fully represent dental students nationwide due to different educational agendas, college infrastructure, patient flow, and teaching methods. Conducting nationwide research would provide a more comprehensive understanding of students' perceptions of periodontology as a subject and speciality.

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QUESTIONNAIRE:-

1. Periodontology is a vast subject

a. Yesb. Noc. Don't Know

2. The new terms& concepts in Periodontology are difficult to learn

a. Yesb. Noc. Don't Know

3. Phantom model demonstration and hands-on training during undergraduate will enhance understanding of the surgical techniques

a. Yesb. Noc. Don't Know

4. Are you aware of the Recent 2017 American Association of Periodontology classification for Periodontal diseases



a. Yesb. Noc. Don't Know

5. Have you observed any periodontal surgical procedures

a. Yesb. No

6. Have you had exposure to LASER periodontal therapy

a. Yesb. No

7. Periodontology and Implantology are closely related specialities

a. Yesb. No

8. Have you been part of any team that performed implant surgery

a. Yesb. No

9. Are you aware of any speciality Journals in Periodontology

a. Yesb. No

10. Are you willing to specialize in Periodontology

a. Yesb. Noc. Maybe

FIGURES:-







