

Original Research

Attitude and perception of undergraduate dental students towards prosthodontics as a speciality

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ABSTRACT:

Introduction: Prosthodontics, a specialized field in dentistry, focuses on restoring the structural and functional integrity of patients' dentition by fixed and removable Prosthesis. Despite its critical role in enhancing patients' quality of life, undergraduate dental students show varying attitudes toward prosthodontics as a career option. Their choice or interest in prosthodontics is influenced by factors such as curriculum structure, clinical exposure, and personal interests. This study aimed to assess the perception of dental students towards prosthodontics and identify barriers influencing their interest in this specialty. **Materials and Methods:** A cross-sectional, questionnaire-based study was conducted among 149 undergraduate students from Adhiparasakthi Dental College and Hospital, Melmaruvathur. The questionnaire comprised 16 questions divided into demographic details, knowledge and perceptions of prosthodontics, attitudes toward the specialty, and perceived barriers. The data were analyzed for demographic patterns, interest levels, and statistically significant factors impacting students' career choices. **Results:** Among the participants, 29.5% expressed interest in prosthodontics as a postgraduate specialty. The primary motivators included practical work (28.1%) and the inclusion of implantology (25.5%). However, 79.2% reported difficulty in applying theoretical knowledge to clinical practice, and 32.2% cited a lack of confidence as a major barrier. Despite these challenges, most students (66.4%) viewed prosthodontics as a rewarding career, with 78.5% acknowledging its diverse opportunities. **Conclusion:** The study highlights the need for enhanced clinical exposure, mentorship, and curriculum modifications to improve students' confidence and interest in prosthodontics. Addressing these issues can encourage more students to pursue the specialty and meet the growing demand for reconstructive and aesthetic dental care.

Keywords: Prosthodontics, dental education, undergraduate perception, career choice, clinical exposure, restorative dentistry.

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INTRODUCTION

Most common reasons for tooth loss are pulpal, periodontal and trauma. Prosthodontics is a specialized field in dentistry that aims in replacement of missing teeth and enhancement of structural and functional integrity of the patients' dentition(1). This specialty is of utmost significance for complete dental care as it includes procedures such as crowns, bridges, dentures, implants, and full-mouth rehabilitation(2). Prosthodontics significantly contributes to enhancing patients' confidence, social life and overall quality of life. Even though it is important, the attitudes and

perceptions of undergraduate dental students towards prosthodontics as a career specialty remain varied and are often influenced by several factors, such as the curriculum structure, the student's exposure to the specialty during their training, their personal interests and career goals(3)

Multiple factors, such as the third party opinion about the specialty, career opportunities and technical challenges, can influence an individual's choice to specialize in prosthodontics. Prosthodontics requires some significant clinical skill, and understanding of dental materials and its specific use, which makes it

both rewarding and challenging for students(4). Another important factor that can change students' perception is the exposure they received in prosthodontics during their undergraduate studies. According to research, students who receive more clinical exposure and mentorship from knowledgeable faculty members are more likely to form favorable opinion of the field.

This study was done for the need of development of new curriculum that emphasizes the importance of prosthodontics and motivates students to consider it as a potential career opinion(5). This study also aims to identify the factors that interferes in choosing prosthodontics as a potential career opinion, this will help to introduce a better teaching strategies that will encourage upcoming generations of dental students to value prosthodontics.(6)

MATERIALS AND METHOD

Study Design

A cross-sectional questionnaire-based study was conducted to assess the attitude and perception of undergraduate dental students towards prosthodontics as a specialty in Adhiparasakthi Dental College and hospital, Melmaruvathur, Chengalpattu district, Tamil Nadu

Study Population

The study included undergraduate dental students from Adhiparasakthi Dental College and Hospital, Melmaruvathur. Students from all academic years (3rd year, 4rd year and Intern) were invited to

participate. The sample size is estimated as 149 undergraduate dental students Method of sample collection was a convenience sampling method.

Inclusion Criteria

- Currently enrolled undergraduate dental students of Adhiparasakthi Dental College and Hospital
- Students willing to participate voluntarily in the study.

Exclusion Criteria

- Students with incomplete responses.
- Postgraduate dental students.

Methodology: Questionnaire Development:

Included questions in questionnaires was 16, all questions were framed in English .The question is divided into 4 parts.

1. Demographic Details: Age, gender, academic year.
2. Knowledge and Perception: Questions assessing awareness of prosthodontics and its scope as a specialty.
3. Attitudes: Likert-scale questions evaluating interest in prosthodontics as a future career choice.
4. Barriers and Challenges: Closed-ended questions regarding perceived obstacles in pursuing prosthodontics

Questionnaires have been verified with the staff of the prosthodontics department.

<p>1) Name of the student :</p> <p>2)Age :</p> <p>3) Gender :</p> <ul style="list-style-type: none"> • Male • Female • Other <p>4)Year of study:</p> <ul style="list-style-type: none"> • 3rd year • Final year • Intern <p>5) Do you feel that the prosthodontic education in our undergraduate curriculum adequately prepared you for independent clinical practices?</p> <ul style="list-style-type: none"> • Yes • No <p>6)What is the most important factor for you when choosing a dental speciality?</p> <ul style="list-style-type: none"> • Interested in the field • Job opportunities and financial stability • Lifestyle balance <p>7) Which speciality would you choose for your post graduation?</p> <ul style="list-style-type: none"> • Prosthodontics • Other than prosthodontics <p>8) If your choice is prosthodontics,How interested are you in this field?</p> <ul style="list-style-type: none"> • Very interested • Interested • Not interested <p>9) What makes you more interested in prosthodontics than other specialties?</p>

- Interested with practical works
 - Implantology being a part of prosthodontics.
 - More scope and opportunities
 - Motivation of staff
 - Not interested
- 10) Why haven't you chosen prosthodontics as a speciality?
- Not confident in clinical practice
 - Lack of scope and opportunities
 - Financial issues
 - Lack of interest or passion
 - Interested in prosthodontics.
- 11) How would you rate your experience in prosthodontic training at undergraduate level?
- Excellent
 - Good
 - Fair
 - Poor
- 12) Do you feel difficulty in applying theoretical knowledge of prosthodontics in clinical practice?
- Yes
 - No
- 13) Do you see prosthodontics as offering diverse career opportunities?
- Yes
 - No
- 14) Do you think prosthodontics offer a balanced lifestyle in terms of work-life balance?
- Yes
 - No
- 15) Would you consider prosthodontics to be a rewarding career in terms of job satisfaction?
- Yes
 - No
 - Not sure
- 16) Do you anticipate a high demand for prosthodontic service in the future?
- Yes
 - No, not sure

DATA COLLECTION

The questionnaire was distributed in online format (using platforms like Google Forms) over a period of 2 months. Participation was anonymous and voluntary

STATISTICAL ANALYSIS

The survey's findings were examined to assess correlations between the attitude of undergraduate dental students towards prosthodontics as speciality factors such as curriculum structure, clinical exposure, and personal interests that influences their choice of speciality. Chi Square tests were used to determine statistical significance; a p-value of less than 0.05 was deemed significant.

RESULT

Table 1: Represents Descriptive Statistics Based On The Demographic Details Of The Study Population

PARAMETERS	OPTIONS	FREQUENCY	PERCENTAGE
GENDER	Female	104	69.8
	Male	45	30.2
YEAR OF STUDY	3rd year	49	32.9
	Final year	28	18.8
	Intern	72	48.3

The descriptive statistics provide an overview of the demographic details of the study population, focusing on gender distribution and year of study.

The majority of the respondents were female (69.8%), while males constituted 30.2% of the population. Among the participants, Interns comprised the largest group of 48.3% of the study population. Third-year students accounted for 32.9%, while final-year students made up 18.8%.

Table: 2 Represents The Association Between The Year Of Study With The Questions Related To Choosing Prosthodontics As A Speciality.

QUESTIONS	OPTIONS	FREQUENCY	PERCENTAGE	SIG
Q5.Do you feel that the prosthodontic education in our undergraduate curriculum adequately prepared you for independent clinical practices?	No	79	53.0	0.07
	Yes	69	46.3	
Q6.What is the most important factor for you when choosing a dental speciality?	Haan no idea	1	.7	0.00
	Interested in the field	78	52.3	
	Job opportunities & financial stability	59	39.6	
	Lifestyle balance	11	7.4	
Q7.Which speciality would you choose for your post graduation?	Endodontics	1	.7	0.07
	Other than prosthodontics	104	69.8	
	Prosthodontics	44	29.5	
Q8.If your choice is prosthodontics,how interested are you in this field?	Interested	80	53.7	0.00
	Not interested	44	29.5	
	Very interested	25	16.8	
Q9.What makes you more interested in prosthodontics than other speciality?	Implantology being a part of prosthodontics	38	25.5	0.01
	Interested with practical works	42	28.1	
	More scope and opportunities	17	11.4	
	Motivation of staff	10	6.7	
	Not interested	42	28.3	
Q10.Why haven't you chosen prosthodontics as a speciality?	Financial issues	15	10.1	0.08
	Interested in prosthodontics	40	26.8	
	Lack of interest or passion	27	18.1	
	Lack of scope and opportunities	11	7.4	
	Not confident in clinical practices	48	32.2	
Q11.How would you rate your experience in prosthodontic training?	Excellent	12	8.1	0.00
	Fair	61	40.9	
	Good	71	47.7	
	Poor	5	3.4	
Q12.Do you feel difficulty in applying theoretical knowledge of prosthodontics in general clinical practice?	No	31	20.8	0.04
	Yes	118	79.2	
Q13.Do you see prosthodontics as offering diverse career opportunities?	No	32	21.5	0.80
	Yes	117	78.5	
Q14.Do you think prosthodontics offers a balanced lifestyle in terms of work-life balance ?	No	25	16.8	0.53
	Yes	124	83.2	
Q15.Would you consider prosthodontics to be a rewarding career in terms of job satisfaction?	No	24	16.1	0.13
	Not sure	26	17.4	
	Yes	99	66.4	
Q16.Do you anticipate a high demand for prosthodontic service in the future?	No,not sure	45	30.2	0.97
	Yes	104	69.8	

TABLE

explores the association between the year of study and responses to questions related to choosing prosthodontics as a specialty. The results are analyzed based on statistical significance ($p \leq 0.05$) and the overall distribution of responses.53% of respondents felt the undergraduate curriculum did not adequately

prepare them for independent clinical practice, while 46.3% believed it did. The most cited factor in choosing a career was interest in the field (52.3%), followed by job opportunities and financial stability (39.6%), with lifestyle balance (7.4%) as a less influential factor($p = 0.00$).69.8% preferred specialties other than prosthodontics, while 29.5% chose

prosthodontics. Among those who chose prosthodontics, 53.7% were interested, 29.5% were not interested, and 16.8% were very interested ($p = 0.00$). The most cited reasons for developing interest in prosthodontics included interest in practical work (27.5%) and implantology being part of prosthodontics (25.5%). However, 28.3% were not interested in prosthodontics ($p = 0.001$). The primary reasons for most students who didn't choose prosthodontics as a speciality were lack of confidence in clinical practice (32.2%), followed by financial issues (10.1%) and lack of interest (18.1%) ($p = 0.08$). 47.7% rated their experience as "Good," 40.9% as "Fair," and only 8.1% rated it as "Excellent" ($p = 0.00$). 79.2% reported difficulty in applying theoretical knowledge to clinical practice ($p = 0.04$). 78.5% believed prosthodontics offers diverse career opportunities, while 21.5% did not. 83.2% believed prosthodontics offers a balanced lifestyle, while 16.8% disagreed. 66.4% considered prosthodontics a rewarding career, while 16.1% did not, and 17.4% were not sure. 30.2% were not sure about the future demand for prosthodontics while 69.8% anticipated high demand of prosthodontics in the market.

DISCUSSION

Prosthodontics is a speciality in dentistry that focuses on restoring the function and structure of teeth through fixed and removable prosthesis thus enhancing patients' quality of life. But dental students' attitudes towards pursuing prosthodontics as a career varies as they get influenced by myriads of factors like curriculum, clinical exposure, and personal preferences. This study seeks to explore dental students' perceptions of prosthodontics and identify the barriers affecting their interest in this speciality. (7) In our study, the majority of respondents were female, which indicates increased female to male ratio in the institution. The higher representation of interns suggests that the study population mainly consisted of those nearing the completion of their academic training and likely to have greater exposure to clinical practices and better understanding.

Although prosthodontics has significant scope and promising future, many dental students are often choosing other specialties because of insufficient clinical practice and challenges in applying theoretical knowledge to clinical practice (8). Important factors for choosing a speciality were determined by interest in the field (52.3%) and job satisfaction and financial stability (39.6%).

One of the primary factors influencing students' perception of prosthodontics is the lack of adequate clinical experience during their undergraduate training. As a result, students might feel less confident in their abilities and that might influence the students' to choice of other specialties (69.8%) (9). Clinical exposure is a more important factor in building confidence, which is needed to handle the complex procedures involved in prosthodontics, including

crown and bridge work, dentures with multiple missing teeth and implants. Without sufficient clinical experience, students may not fully realize the challenges and rewards that are associated with this speciality.

Prosthodontics involves a high degree of technical knowledge and accuracy, required for students' to integrate theoretical concepts with practical skills. However, many students report that applying theoretical knowledge in clinical practices is challenging (79.2%) (10). Research by Khan, S., & Zafar, M. S. (2020) also emphasized in their study that many students feel difficulty in applying theoretical knowledge with practical skills. Prosthodontic procedures require attention to detail and a thorough understanding of the subject and its applications. The complexity of most topics can make students feel overwhelmed, especially if they do not have enough opportunities to practice. This difficulty in bridging the gap between more theoretical training in dental institutions and practice applications in clinics could have discouraged some students from pursuing prosthodontics as a speciality (11).

Many dental students' choice is to pursue master degrees in other specialties, as these specialties are frequently viewed as more demanding by the patient. In comparison, prosthodontics involves marathon treatments requiring multiple visits (12). Research by Kassim, N. F., & Abdul-Rahman, P. (2019) highlighted that the immediate satisfaction offered by other specialties leads many students to choose other departments than prosthodontics. This slower pace may not attract students seeking faster rewards or career progress. But students' who were more interested with laboratory procedures (28.1%) and as Implantology being a part of prosthodontics (25.5%) showed more interest in choosing prosthodontics as a speciality.

Despite the challenges, Most of the students' agreed that prosthodontics remains a specialty with a promising future (69.8%) and rewarding career (66.4%). With the increasing demand for aesthetic dentistry, increased life expectancy and advances in dental technology (such as digital dentistry and implantology), prosthodontics will continue to play a crucial role in restorative dental care (13). Research by Sailer, I., & Zembic, A. (2020) emphasized that cosmetic dentistry has a positive impact on future of prosthodontics and its career opportunities. The rise in cosmetic dentistry increases the demand for prosthodontic services. Additionally, the field provides numerous paths for career growth, encompassing academic positions, private practice, or focusing on sub specialties like maxillofacial prosthetics (14).

While comparing with study given by Enabulele JE et al, but the demand for cosmetic dentistry is mainly depends on patient factors such as socioeconomic status and whether the patient is socially active or not, making it impossible to predict whether the speciality

will be in low or high demand. This could also be the reason why most students did not pursue prosthodontics as a career (15).

To enhance the importance of prosthodontics among dental students, dental institutions should provide more clinical training and exposure to the practical aspects of the specialty (16), which includes increasing the number of prosthodontic clinical sessions, conducting workshops, creating mentorship opportunities with experienced prosthodontist (17) and hands-on training with the latest technologies such as virtual learning with AI based technology that can change students' attitude about prosthodontics and will help many students in pursuing prosthodontics as a specialty (18). Limitation of the study includes study population was predominantly female and includes a significant proportion of interns, which may influence the responses based on their clinical exposure and understanding of subject. The research was conducted only at Adhiparasakthi Dental College and Hospital, limiting the applicability of the findings to other dental institutions. Differences in prosthodontic training across institutions were not considered, which may affect the comparability of the results.

CONCLUSION

In conclusion, although prosthodontics offers a bright future with ample career prospects, numerous undergraduate dental students get discouraged due to limited clinical experience, difficulties in utilizing theoretical knowledge and patient's demand for other specialties. By overcoming these concerns with enhanced training and awareness, dental schools can promote a more favorable view of prosthodontics and motivate more students to see it as a viable and fulfilling career choice.

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