



AWARENESS OF VARIOUS TREATMENT MODALITIES TO REPLACE MISSING TEETH IN LOCAL POPULATION IN CHENNAI- A SURVEY

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ABSTRACT:

Background: Tooth loss is a common issue affecting individuals of diverse demographics and age groups, with significant implications on oral health and overall well-being. This study is aimed to assess the awareness, knowledge, attitudes, and barriers related to replacing missing teeth within the local population.

Methods: This cross-sectional survey study was conducted at a private dental college in Chennai. A total of 323 participants, comprising 52% males and 48% females, were enrolled. The survey covered various aspects, including knowledge of dental treatment options for missing teeth, sources of information, personal experiences, and preferences. Data were collected through paper forms, entered into Excel, and subsequently analysed using PSPP 3.0.

Results: 47% experienced tooth loss for 1-5 years and 41% for less than a year. Most attributed tooth loss to decay (65.5%) and periodontal problems (20.2%). While 92.2% believed replacing missing teeth was necessary, 87.3% had consulted a dentist about replacement, and 84.5% received proper information from their healthcare providers. Although 85.5% recognized the importance of replacing missing teeth, 40.7% cited a lack of awareness as a primary barrier, followed by financial constraints (36%). In terms of treatment preferences, 26.4% expressed a desire for an implant-supported bridge but had concerns about the surgical procedure, and 43.4% believed it was more expensive.

Conclusion: This study provides valuable insights into the awareness, preferences, and barriers concerning the replacement of missing teeth in the local population. Through education, accessible care, and patient-centered strategies, we can aspire to improve oral health outcomes and enhance the quality of life for individuals dealing with tooth loss within our community.

Keywords: Missing teeth, tooth replacement, awareness, dental treatment modalities, oral health, patient preferences, barriers, dental education, dental implants, fixed bridges, removable dentures, prosthodontic rehabilitation.

INTRODUCTION:

Tooth loss is a prevalent dental issue that affects individuals across various age groups and demographics, exerting a substantial influence on oral health and overall quality of life.¹ Whether due to trauma, decay, gum disease, or other factors, the loss of one or more teeth presents both functional and aesthetic challenges. In response to this challenge, the field of dentistry offers a range of treatment modalities to replace missing teeth, each with its unique advantages and considerations. These modalities include dental implants, fixed bridges, removable dentures, and other alternative therapies.² However, the success of any tooth replacement strategy is significantly contingent upon the awareness and knowledge of available options among the affected individuals.³ The level of awareness among the general population regarding these treatment modalities plays a pivotal role in shaping oral health outcomes and patient preferences. An individual's awareness, or lack thereof, can significantly influence their treatment choices, which can, in turn, impact the long-term health of their dentition and overall well-being.⁴ For instance, someone who is unaware of the existence of dental implants may opt for less durable or less aesthetically pleasing solutions, potentially compromising their oral health and overall satisfaction with their treatment. It is within this context that this study endeavours to explore the awareness of various treatment modalities for replacing missing teeth among individuals residing within our local community.⁵ By conducting a comprehensive survey, we aim to assess the extent of knowledge and familiarity with these treatment options, elucidate common misconceptions, and understand the sources from which individuals gather information when making decisions about addressing tooth loss. The findings of this research will provide valuable insights into the current state of awareness within our local population and offer a foundation for targeted oral health education initiatives. Ultimately, this study seeks to empower individuals to make informed decisions regarding their dental care, thereby improving their quality of life and overall oral health outcomes.

MATERIALS AND METHODS:

This study used a cross-sectional research survey to evaluate the awareness of various treatment modalities to replace missing teeth among people in the local population. The study was conducted within the premises of a private dental college in Chennai where participants from different age groups were enrolled between 01/06/2023 to 05/10/2023. The questionnaire covered topics such as Knowledge of dental implants, bridges, and dentures, sources of information regarding missing teeth replacement options and personal experiences or preferences related to dental treatments. The questionnaire was evaluated and approved by the department of prosthodontics of that private dental college. Approval from the Institutional Review Board (IRB) was secured, and every participant provided informed consent, signifying their willingness to engage in the study while emphasizing that their participation was entirely voluntary. The confidentiality and anonymity of participants were diligently safeguarded throughout the study, with no collection of identifiable information. A total of 323 patients participated in the study. Data was collected through paper forms, with the questionnaire being bilingual in English and Tamil. Data obtained from the questionnaires were transferred into excel and then entered into SPSS 3.0 for statistical analysis. Any p-value less than 0.005 was considered to be statistically significant.

RESULTS:

A total of 323 participants took part in the study, comprising 52% males and 48% females. The age range of the participants was quite extensive, with the oldest individual being 90 years old and the youngest being 17 years old. The average age of the participants was 57 years. Notably, 99% of the participants had missing teeth, with 47% having experienced tooth loss for 1-5 years and 41% for less than 1 year. A smaller percentage, 9%, had more than 5 missing teeth, while the majority, at 54%, had 1 or 2 teeth missing. Regarding the reasons for tooth loss, 65.5% of participants attributed it to decay, followed by 20.2% who cited periodontal problems. The remaining participants mentioned trauma and congenital factors. A significant 92.2% of the participants believed that replacing missing teeth was necessary, and 90.4% expressed their willingness to undergo such replacement. Furthermore, 87.3% had consulted a dentist about replacing their missing teeth, and 84.5% reported receiving proper information from their doctors about tooth replacement. When it came to awareness of treatment options, 28% were familiar with all three options, including removable partial dentures, fixed dentures, and dental implants. A notable 85.5% recognized the importance of replacing missing teeth. Interestingly, 75.5% indicated that they would consider replacement only if they faced difficulties in their daily activities. A significant 64.3% cited both appearance and function as reasons for wanting to replace their teeth. Regarding barriers to tooth replacement, 40.7% cited a lack of awareness as the primary reason, followed closely by financial constraints at 36%. On the positive side,

54.3% agreed that replacing missing teeth improved their appearance, while 57.1% acknowledged that it helped with eating. However, 47.2% agreed that removable prosthesis made them feel less sociable with their friends, while 47.8% neither agreed nor disagreed. In terms of fixed prosthesis treatment options, most participants expressed a preference for implant-supported prosthesis as the best choice. Specifically, 26.4% expressed a desire for an implant-supported bridge but had concerns about the surgical procedure, and 43.4% indicated they wanted an implant-supported bridge but believed it to be more expensive compared to other treatment options.

DISCUSSION:

The study reveals that while nearly all participants (99%) had missing teeth, the awareness of available treatment modalities varied. Around 28% of the participants were aware of all three common options: removable partial dentures, fixed dentures, and dental implants. This suggests that a substantial portion of the population might not be well-informed about their choices when it comes to addressing tooth loss. The study found that the majority of participants (65.5%) attributed tooth loss to decay, followed by periodontal problems (20.2%). A study conducted in the UK found that 64% of their study population had lost their teeth to caries, 28% to periodontal reasons and 5% to other unknown factors.⁶ This underscores the need for better oral hygiene and preventive measures to combat the leading causes of tooth loss. A high percentage (92.2%) of participants believed it was necessary to replace missing teeth, indicating a strong understanding of the importance of addressing tooth loss for oral health and overall well-being. The study found that 90.4% of participants were willing to replace their missing teeth while 47.45% of individuals were willing to replace their missing teeth with prosthetics in a study conducted by Nirmal Raj et al.⁷ This willingness is crucial, as it suggests that the majority of individuals are open to seeking treatment when needed. One notable finding was that 40.7% of participants cited a lack of awareness as a barrier to replacing missing teeth. This indicates a clear need for better education and information dissemination regarding available treatment options. Additionally, financial constraints were a concern for 36% of participants, highlighting the need for accessible and affordable dental care options. In the study led by Haidar Alalawi, the majority of respondents (66.7%) indicated that the loss of teeth had an impact on their appearance, while a significant portion (83.3%) noted that it influenced their ability to effectively chew food.⁸ Our study found that a significant percentage of participants agreed that replacing missing teeth improved appearance (54.3%) and helped with eating (57.1%). However, concerns were raised about the impact of removable prosthesis on socialization (47.2% agreed it made them feel less sociable) similar to Kumar's study, approximately 47.1% of patients expressed the perception that they engaged in less social interaction when using a removable prosthesis due to its inadequate stability and retention.⁹ This suggests that while individuals recognize the functional and aesthetic benefits of tooth replacement, there may be concerns about the comfort and convenience of certain treatment options. In terms of fixed prosthesis treatment options, a substantial percentage expressed a preference for implant-supported prosthesis (the best option according to 46.6%). However, concerns about the surgical procedure (26.4%) and perceived higher costs (43.4%) were noted as barriers. A study conducted by Palmqvist and colleagues showed that patients might be more discouraged by their financial circumstances than by the actual implant therapy procedure.¹⁰ While in the study by Nirmal Raj et al 51.8% mentioned financial constraints the reason of not replacing teeth.⁶ The study underscores the importance of oral health education initiatives within the community. Increasing awareness about tooth replacement options, their benefits, and preventive measures can contribute to improved oral health outcomes. Addressing financial constraints as a barrier to treatment is crucial. Efforts should be made to provide affordable dental care options or insurance coverage for tooth replacement procedures. The study highlights the need for dental professionals to engage in patient-centered discussions, addressing individual concerns and preferences when recommending tooth replacement options. Dentists and healthcare providers should ensure that they effectively communicate information about tooth replacement options to patients, ensuring they make informed decisions. Further research can explore the specific reasons behind the lack of awareness and the concerns about certain treatment options, helping to tailor educational and outreach efforts more effectively.

CONCLUSION:

In conclusion, this study sheds light on the awareness levels, preferences, and barriers related to replacing missing teeth among the local population. By addressing these findings through education, affordable care options, and patient-centered approaches, it is possible to improve oral health outcomes and enhance the quality of life for individuals with missing teeth in the community.

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QUESTIONNAIRE:

1. Do you have missing teeth in your mouth?

- a) Yes
- b) No

2. How long have you been toothless?

- a) 0-1 year
- b) 1-5 years
- c) More than 10 years

3. How many teeth have you been missing?

- a) 1
- b) 2
- c) 3
- d) 4
- e) 5
- f) More than 5

4. What is the reason for your tooth loss?

- a) Decay
- b) Congenitally missing
- c) Periodontal problem
- d) Trauma

5. Do you feel it is necessary to replace the missing teeth?

- a) Yes
- b) No

6. Are you willing to replace your missing teeth?

- a) Yes
- b) No

7. Have you been to the Dentist to replace your missing teeth?

- a) Yes
- b) No

8. Did the doctor give you a Proper information about the replacement of tooth?

- a) Yes
- b) No

9. What do you think are the options to replace the missing teeth?

- a) Removable Dentures
- b) Fixed dentures/bridges
- c) Implant

10. Are you aware of the importance of replacement of missing teeth?

- a) Yes
- b) No

11. Would you replace your teeth only if you find some difficulties in your daily activities?

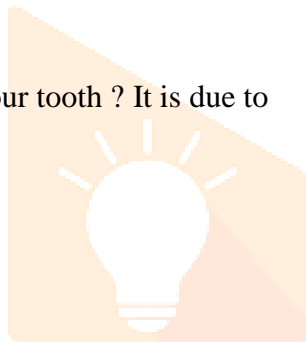
- a) Yes
- b) No

12. What is your reason for your replacement of tooth?

- a) Appearance
- b) Function
- c) Both

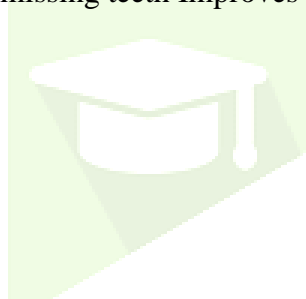
13. Why are you not replacing your tooth? It is due to

- a) Financial problem
- b) Lack of awareness
 - a. Do not need
 - b. Questions



14. Do you agree replacement of missing teeth improves appearance?

- a) Strongly disagree
- b) Disagree
- c) Neither /Nor Agree
- d) Agree
- e) Strongly agree



15. Do you agree replacement of missing teeth helps in eating?

- a) Strongly disagree
- b) Disagree
- c) Neither /Nor Agree
- d) Agree
- e) Strongly agree

16. I believe removable prosthesis makes me feel less socialize with my friends

- a) Strongly disagree
- b) Disagree
- c) Neither /Nor Agree
- d) Agree
- e) Strongly agree

17. I think fixed prosthesis is better than Removable prosthesis?

- a) Strongly disagree
- b) Disagree
- c) Neither /Nor Agree
- d) Agree
- e) Strongly agree

18. In fixed prosthesis treatment options, I Want implant-supported prosthesis because It is best option than others?

- a) Strongly disagree
- b) Disagree
- c) Neither /Nor Agree
- d) Agree
- e) Strongly agree

19. I want implant-supported bridge but I Am afraid about the surgical procedure?

- a) Strongly disagree
- b) Disagree
- c) Neither /Nor Agree
- d) Agree
- e) Strongly agree

20. I want implant supported bridge but I think it is more expensive than other Treatment options?

- a) Strongly disagree
- b) Disagree
- c) Neither /Nor Agree
- d) Agree
- e) Strongly agree

