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Patients' perception of replacement of missing teeth – a cross sectional study

(Percepción de los pacientes sobre la reposición de dientes perdidos: un estudio transversal)

Srri Ranjani [1] ✉, Shakthi Ganesh RV [1], Prawin Nithish M [1], Gokul S [1], Balamurugan A[1], Raghunathan J[1],

[1] Department Of Prosthodontics and Implantology, Karpaga Vinayaga Institute of Dental Sciences, Madhuranthagam , Chengalpattu , India

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Abstract(english)

There are multiple options for replacing missing teeth, many patients are unaware of the full range of available choices. The aims and objectives was to assess the patients needs and awareness of replacing missing teeth with prosthesis. This cross-sectional study was conducted at Karpaga Vinayaga Institute of Dental Sciences over a period of 6 months. The study targeted patients aged 20-60 years, residing in Tamil Nadu. The inclusion criteria were patients within the specified age range and residing in Tamil Nadu, while patients below 20 years and above 60 years were excluded. The sample size was determined using the Krejicie & Morgan (1970) formula, with a required sample size calculated using t-tests for means. The study employed a pre-validated structured questionnaire consisting of 15 closed-ended questions, including multiple-choice and yes/no questions. Data collection involved administering the questionnaire to gather information on perceptions of missing teeth. 33The collected data was compiled in an Excel sheet and analysed using SPSS software version 20, with descriptive statistics performed to summarize the findings. In conclusion, most of the patients understood that the long term costs of non replacing the missing teeth would be higher than the cost of replacement.

Keywords(english)

Teeth Replacement, Prosthodontics ,Patient Perception , Awareness, Education , Dental Health, Oral Health , Quality of Life.

Resumen(español)

Existen diversas opciones para reemplazar dientes perdidos, pero muchos pacientes desconocen la gama completa de alternativas disponibles. El objetivo de este estudio transversal fue evaluar las necesidades y el conocimiento de los pacientes sobre el reemplazo de dientes perdidos con prótesis. El estudio se llevó a cabo en el Instituto de Ciencias Dentales Karpaga Vinayaga durante un período de seis meses. Se incluyeron pacientes de entre 20 y 60 años residentes en Tamil Nadu. Los criterios de inclusión fueron pacientes dentro del rango de edad especificado y residentes en Tamil Nadu; se excluyeron los pacientes menores de 20 años y mayores de 60. El tamaño de la muestra se determinó mediante la fórmula de Krejicie y Morgan (1970), y el tamaño de muestra requerido se calculó mediante pruebas t para medias. Se utilizó un cuestionario estructurado previamente validado, compuesto por 15 preguntas

✉ **Correspondence author:** Dr. Srri Ranjani Department Of Prosthodontics and Implantology, Karpaga Vinayaga Institute of Dental Sciences , Madhuranthagam , Chengalpattu , India.

cerradas, incluyendo preguntas de opción múltiple y de sí/no. La recolección de datos consistió en la aplicación del cuestionario para obtener información sobre la percepción de la ausencia de dientes. Los datos recopilados se organizaron en una hoja de cálculo de Excel y se analizaron con el software SPSS versión 20. Se realizó un análisis estadístico descriptivo para resumir los resultados. En conclusión, la mayoría de los pacientes comprendieron que los costos a largo plazo de no reemplazar las piezas dentales faltantes serían mayores que el costo de su reemplazo.

Palabras clave(español)

Reemplazo dental, Prótesis dental, Percepción del paciente, Concienciación, Educación, Salud dental, Salud bucal, Calidad de vida.

Introduction

Teeth is an important factor in our day to day life it helps us to grind food and our digestion starts from oral cavity by grinding of food. also teeth is very important in many ways as such it reflects ones personality, aesthetic , functional ability etc..(1). Loss of a teeth can be due to various reasons which includes dental caries , periodontal problems , trauma etc.. those affects the patients oral health and has negative impact on it, which causes to drifting or migration ,overeruption of opposing teeth and further loss of other teeth and may lead to temporomandibular diseases or problems (2,3). also loosing teeth is very traumatic and affects th day to day life and in extent it may lead to require psychological guidance (4), if the lost teeth is not replaced it may lead to deuteriation of oral health and also has negative influence in social activity and social life thus affects the quality of life(5). recent advances in dentistry correlates with emotional and psychology of patients in dental situations, especially aesthetics (6).

There are various treatment modalities for replacement of missing teeth which includes removable partial dentures, fixed partial dentures, dental implants etc...(7). Each treatment modalities has its own pros and cons (8). the final treatment is decided by various factors and is differs from patient to patient (9). To ensure the patients satisfaction , it is very important to assess the knowledge , awareness and attitude about the prostheses (10).

Materials and methods

This cross-sectional study, conducted at Karpaga Vinayaga Institute of Dental Sciences, aimed to investigate patients' perceptions of missing teeth. The study population consisted of 400 patients aged 20-60 years, residing in Tamil Nadu over a period of 6 months from February 2024 to august 2024. A pre-validated structured questionnaire with 15 closed-end questions was used to collect data. The sample size was estimated using the Krejicie & Morgan (1970) formula, with a total sample size of 373, rounded to 400. Data analysis was performed using SPSS software 20, with descriptive statistics. The study expected to provide insights into patients' perceptions of functional and aesthetic needs of missing teeth. The study was conducted over a period of 6 months, with approval from the Institutional Review Board , Institutional ethical committee (IEC) .The IEC approval no .

Results

The field of prosthodontics focuses on restoring missing teeth, a crucial aspect of maintaining oral health and overall well-being. The loss of teeth can have far-reaching consequences, including impaired nutrition and compromised dietary habits. Fortunately, various treatment options are available to address teeth loss, including removable partial dentures, fixed bridges, and dental implants. To assess public awareness of treatment options for missing teeth, we developed a questionnaire. This study builds upon existing research in the field, which has explored similar topics.

The survey revealed that 52.4% of patients reason for edentulism is due to missing teeth, while 22.1% of population due to periodontal problems and 18.6% due to dental caries (Fig 1a).

Most patients ie.91.1% of the study population are aware of the prosthodontics specialist and about 62.3% of population are aware of various treatment objectives for replacement of missing teeth. The majority (73%) of study population need prosthesis for both functional and aesthetic purposes (Figure 1b).

Patients cited fear (9.2%), cost (31.3%), and unawareness (37.2%) as these are the reasons for delaying treatment (Figure 2a).

Many patients believed that the consequences of not replacing the missing teeth are shifting of teeth

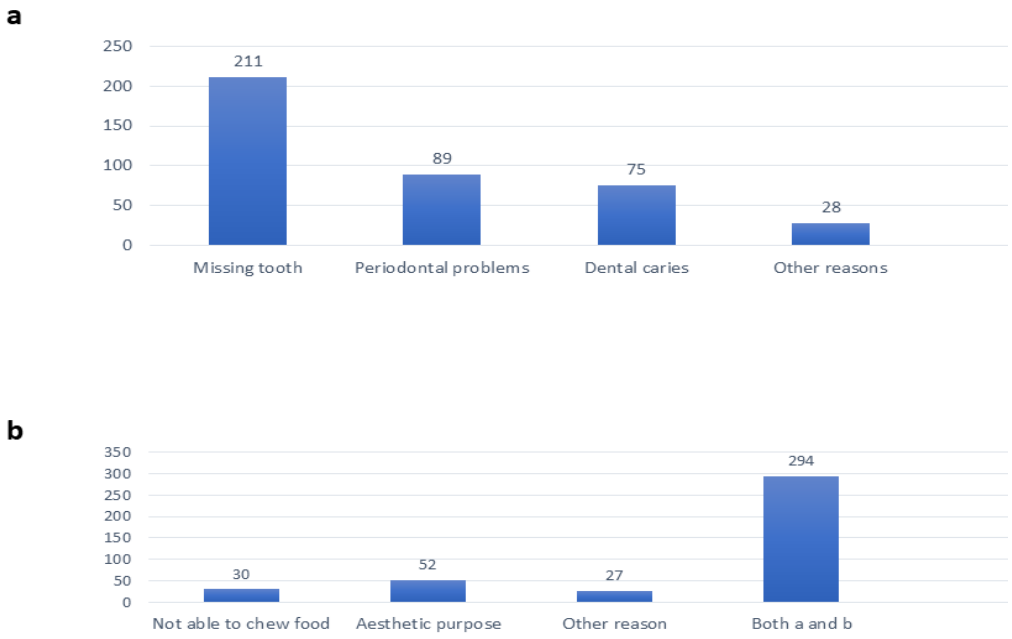


Figure 1. 1 a . Reason for Edentulism and 1b Primary Reason for you to need a prosthesis

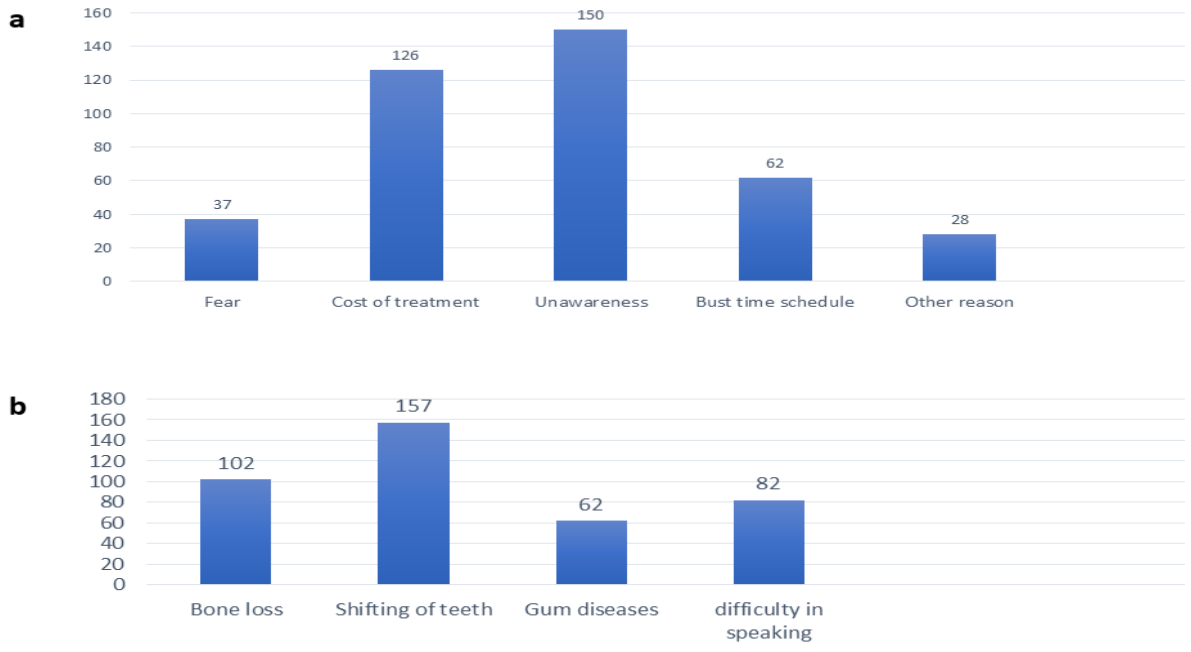


Figure 2. 2 a . Possible reason for the treatment getting delayed and 2b Consequences of not replacing missing teeth

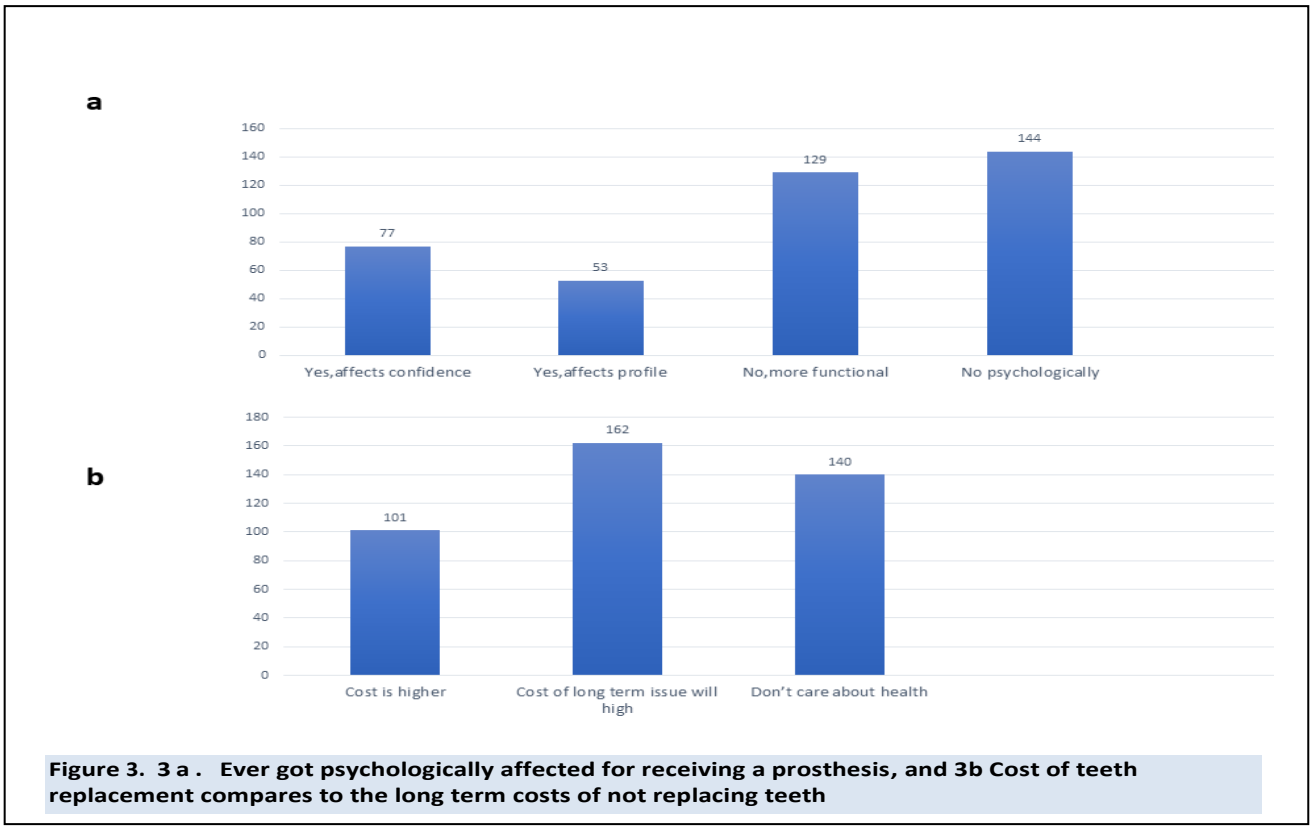


Figure 3. 3 a . Ever got psychologically affected for receiving a prosthesis, and 3b Cost of teeth replacement compares to the long term costs of not replacing teeth

(38.9%), bone loss (25.3%) , gum diseases (15.4%) and difficulty in speaking (20.4%) (Figure 2b) .

However 19 % of patients are psychologically affected by teeth loss, and 13.2% of patients reported to being embarrassed (Figure 3a).

Most patients received positive feedback from other patients who had undergone similar treatment , and also about facial aesthetics after visiting prosthodontist . whereas 67% of patients are aware of oral hygiene procedure , 58.8% believed that treatment options depend on the underlying or per treatment conditions .

Finally about 40.2% of patients of study population thought that long term costs of non replacing the missing teeth would be higher than the cost of replacement (Figure 3b).

Discussion

Reasons for teeth loss: The majority of patients (52.4%) lost teeth due to missing teeth, followed by periodontal problems (22.1%) and dental caries (18.6%). Awareness of prosthodontics: Most patients (91.1%) were aware of the prosthodontics specialty, indicating a high level of awareness among patients. Treatment options: A significant proportion of patients (62.3%) knew about various treatment options for edentulous areas, including RPD, FPD, CD, and implants. Psychological impact: A considerable number of patients (19.1%) reported feeling psychologically affected by teeth loss, highlighting the need for emotional support and counselling. The most common barriers to timely treatment were cost (31.3%), unawareness (37.2%), and fear (9.2%).

In conclusion, the study highlights the importance of awareness and education among patients regarding teeth replacement options. While most patients were aware of the prosthodontics specialty, there is still a need to educate patients about the consequences of not replacing missing teeth and the available treatment options. The study also emphasizes the need for emotional support and counseling for patients who have experienced teeth loss. Furthermore, the findings suggest that cost, unawareness, and fear are significant barriers to timely treatment, and efforts should be made to address these issues and improve access to care.

Conflict of interest

None to declare.

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