

Bridging Smiles: Public Knowledge and Acceptance of Dental Implant Treatment in Western Maharashtra – A Survey

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Abstract.

This survey, conducted in Western Maharashtra, aimed to assess the knowledge, attitude, and acceptance of dental implant treatment among the population. With a sample size of 300 participants, spanning various age groups and genders, the study revealed a commendable 89.9% awareness about dental implants. Dentists emerged as the primary source of information, highlighting their pivotal role in shaping public perceptions. Notably, individuals in the 21-40 age group exhibited higher awareness levels, indicative of a generational shift influenced by digital information access. While the majority acknowledged dental implants as a treatment option, the survey identified cost as a significant barrier, with 48.8% citing financial considerations as the primary reason for not undergoing the procedure. Other concerns included the perceived lengthy treatment time, lack of knowledge, and apprehensions about the surgical nature of the intervention. Interestingly, only 30% believed implants last a lifetime, emphasizing a potential gap in understanding the durability of this treatment. The results underscore the need for targeted educational initiatives to bridge the awareness gap and dispel misconceptions surrounding dental implants. Dentists, as trusted sources, can play a crucial role in disseminating accurate information, while digital platforms offer additional avenues for outreach. Addressing cost concerns and providing transparent information about the treatment process, including post-implant care, can contribute to fostering a more informed and receptive community. In conclusion, the survey provides valuable insights into the dynamics of dental implant awareness and acceptance in Western Maharashtra. By understanding the factors influencing public decisions, the findings pave the way for strategic interventions aimed at enhancing education, managing expectations, and ultimately promoting the widespread adoption of dental implant treatment in the region.

Keywords. dental implants, awareness, acceptance, knowledge, Western Maharashtra, survey, oral rehabilitation, prosthodontics.

I. Introduction:

Oral health is a fundamental aspect of overall well-being, and the field of dentistry constantly evolves to address the diverse needs of individuals facing oral challenges. One significant facet of dental care is oral rehabilitation, a discipline within dentistry that encompasses the diagnosis, treatment planning, and restoration of larger tooth defects, congenitally or acquired missing teeth, and other oral tissues. Within this realm, prosthodontics plays a pivotal role in the rehabilitation of patients who have experienced tooth loss and seek restoration of oral function.

The estimation of the need, demand, and utilization of prosthodontic services is a complex task influenced by financial conditions and patients' preferences. The absence of universally accepted rules for such estimations underscores the intricate interplay between healthcare decisions and individual circumstances. In this context, the advent of dental implants as a modality for the replacement of missing teeth has revolutionized oral rehabilitation. The concept of osseointegration, introduced in the late 1950s, marked a paradigm shift in implant dentistry, elevating its importance in oral reconstruction. The literature on dental implants attests to the significant strides made since the inception of intra-oral titanium implants. Patients treated with implant-supported prostheses frequently report improvements in their quality of life, self-confidence, and psychological

well-being. The success rates and predictability associated with dental implants have generated considerable interest among both dental professionals and the general public. Recent years have witnessed a surge in the prevalence of dental implant therapy, particularly in partially dentate and edentulous patients, driven by factors such as increased awareness of general and dental health, as well as a growing emphasis on nutrition and overall well-being.

However, despite the positive trends, challenges persist in achieving widespread acceptance and understanding of dental implants as a viable treatment option. The benefits of implant dentistry need to be effectively communicated to bridge the gap between awareness and acceptance, particularly in regions where the prevalence of implant therapy may not align with the potential demand. This brings us to the focal point of this survey study: an exploration of the knowledge, attitudes, and acceptance of dental implants among the public in western Maharashtra. Western Maharashtra serves as a unique backdrop for this investigation, offering insights into the dynamics of dental implant awareness and acceptance in a specific cultural and geographical context. While much of the existing research focuses on metropolitan cities and affluent demographics, there is a need to extend this exploration to developing cities, where factors such as socioeconomic influences and cultural perspectives may shape attitudes toward dental implants.

This survey endeavors to evaluate the level of awareness, knowledge, and acceptance of dental implants among the public in western Maharashtra. By employing a strategic questionnaire distributed through various online platforms, the study aims to capture a comprehensive range of information, including demographic details, sources of information, and socioeconomic influences on dental implant knowledge and acceptance. The significance of understanding public perceptions lies not only in assessing the current landscape but also in informing strategies for dental education. Positive attitudes toward dental implants can be cultivated through targeted efforts, dispelling myths, and addressing concerns related to cost, treatment time, and surgical procedures. The outcomes of this survey will not only contribute to the existing body of knowledge in implant dentistry but also serve as a foundation for initiatives aimed at fostering a more informed and receptive community in western Maharashtra. As we delve deeper into the survey results and analysis, we anticipate uncovering valuable insights that will shape the future landscape of dental care in this region. From the role of dentists in disseminating information to the willingness of the public to embrace dental implants, this study sets the stage for a nuanced understanding of the challenges and opportunities in oral rehabilitation in western Maharashtra.

II. Background:

Dental health is an integral component of overall well-being, impacting not only physical health but also an individual's social and psychological dimensions. Within the vast landscape of dental care, the field of prosthodontics plays a crucial role in addressing the challenges posed by tooth loss, offering solutions for the restoration of oral function and aesthetics. As the discipline responsible for the rehabilitation of patients with missing teeth, prosthodontics encompasses a spectrum of treatment options, including the use of dental implants. The concept of oral rehabilitation, as practiced in prosthodontics, revolves around the restoration of larger tooth defects, congenitally missing teeth, and acquired missing teeth. The aim is to enhance not only the functional aspects of oral health but also to contribute to the overall quality of life of individuals. The approaches employed in oral rehabilitation can range from the restoration of teeth with crowns to the replacement of missing teeth with implants, fixed partial dentures, or removable dentures.

In the absence of universally accepted rules for estimating the need, demand, or utilization of prosthodontic services, the field grapples with a dynamic landscape shaped by factors such as financial conditions and patient preferences. These variables contribute to the complexity of understanding the dynamics of prosthodontic care utilization, necessitating a nuanced exploration of the factors influencing the choices individuals make in pursuit of oral rehabilitation. The emergence of dental implants as a pivotal element in prosthodontic care has marked a transformative phase in the field. The concept of osseointegration, introduced in the late 1950s, laid the foundation for the use of titanium implants in oral reconstruction. Osseointegration refers to the direct structural

and functional connection between living bone and the surface of a load-bearing artificial implant. This breakthrough opened new avenues for treating patients with missing teeth, providing a more stable and durable alternative to traditional prosthetic solutions.

Since its inception, implant dentistry has evolved significantly, driven by advancements in materials, techniques, and a growing body of evidence supporting the efficacy of dental implants. The literature on dental implants consistently highlights the positive impact of implant-supported prostheses on patients' lives. Improved quality of life, enhanced self-confidence, and psychological well-being are recurrent themes in the narratives of individuals who undergo implant therapy. The success and predictability associated with dental implants have not only garnered attention within the dental profession but have also sparked considerable interest among the general public. Recognizing the potential benefits, patients increasingly seek implant therapy as a preferred option for replacing missing teeth. This shift in treatment preferences aligns with broader trends in healthcare, where a focus on preventive and restorative measures contributes to overall well-being.

Recent years have witnessed a notable increase in the prevalence of dental implant therapy, particularly in partially dentate and edentulous patients. The rising awareness of general health, dental health, and the impact of nutrition on overall well-being has further fueled the demand for tooth replacement options that prioritize both function and aesthetics. In this context, dental implants offer a compelling solution, providing not only a natural-looking appearance but also mimicking the function of natural teeth. The benefits of implant dentistry extend beyond the individual level, contributing to societal well-being by addressing oral health challenges in a comprehensive manner. As the awareness of good oral health practices grows, and individuals recognize the longevity of life associated with maintaining optimal dental health, the need for effective solutions for missing teeth becomes more pronounced.

However, despite the positive trajectory in the acceptance of dental implants, challenges persist in achieving widespread understanding and adoption of this treatment modality. Existing research predominantly focuses on metropolitan cities and populations characterized as upper-middle class, rich, and educated. While these studies provide valuable insights into the trends among specific demographics, there is a notable gap in understanding the awareness and acceptance of dental implants in developing cities and regions with distinct socioeconomic influences and cultural perspectives. Western Maharashtra, with its unique cultural and geographical context, presents an intriguing setting for exploring the dynamics of dental implant awareness and acceptance. As a region that may not align with the characteristics of urban centers, understanding the factors influencing public perceptions of dental implants becomes crucial. The socioeconomic landscape, cultural beliefs, and access to dental care resources in western Maharashtra may contribute to distinct attitudes and knowledge levels regarding implant dentistry.

This survey study aims to bridge this gap by delving into the knowledge, attitudes, and acceptance of dental implants among the public in western Maharashtra. By adopting a strategic approach that includes participants from different age groups, the survey seeks to capture a comprehensive understanding of the factors shaping the awareness and acceptance of dental implants. The use of online platforms for questionnaire distribution further enables the inclusion of diverse perspectives, ensuring a representative sample that reflects the broader population. As we embark on this exploration, it is essential to acknowledge the potential impact of cultural nuances and socioeconomic factors on oral health decisions. The outcomes of this survey are anticipated to shed light on not only the current state of awareness but also the underlying reasons influencing the attitudes toward dental implants in western Maharashtra. Through a detailed analysis of the survey results, this study aspires to contribute to the body of knowledge in implant dentistry and serve as a foundation for targeted dental education initiatives.

III. AIMS AND OBJECTIVES:

- **Assessment of Acceptance and Knowledge:** To gauge the prevailing level of acceptance and knowledge regarding dental implant treatment among the residents of Western Maharashtra. This

involves understanding the extent to which the public is aware of dental implants as a viable treatment modality for the replacement of missing teeth.

- **Evaluation of Information Sources:** To identify and evaluate the sources of information that contribute to public awareness and knowledge of dental implant treatment. This objective seeks to discern whether individuals rely on specific channels, such as healthcare professionals, internet resources, or traditional media, to acquire information about dental implants.
- **Analysis of Factors Influencing Non-Adoption:** To investigate and analyze the major factors hindering individuals from undergoing dental implant treatment procedures. This includes exploring reasons such as cost considerations, lack of knowledge, perceived treatment duration, and concerns about surgical interventions.

IV. MATERIALS AND METHODS:

The survey was conducted in Western Maharashtra, encompassing a diverse population. A total of 300 responses were collected from individuals who voluntarily participated in the survey. The participants were selected to ensure a representative sample reflecting different age groups and genders within the region.

Survey Instrument:

A structured questionnaire served as the primary tool for data collection. The questionnaire consisted of ten questions designed to assess public knowledge, awareness, and acceptance of dental implants as a treatment procedure. In addition to inquiries about dental implants, the questionnaire incorporated basic demographic details, including age group and gender.

Demographic Groups:

For the purpose of the study, the Western Maharashtra population was categorized based on gender and age. Gender classification included male and female, while age groups were delineated as follows:

20 years and below

21-40 years

41-60 years

61-80 years

81 years and above

Survey Distribution:

The questionnaire was disseminated through various social media platforms and email channels to ensure a broad reach within the population. By utilizing online platforms, the survey aimed to capture responses from a diverse demographic, considering the prevalence of digital communication in contemporary society.

V. RESULTS:

The survey yielded insights into the public knowledge, attitude, and acceptance of dental implants as a treatment modality in the population of Western Maharashtra. A total of 300 responses were collected, with 162 (54.5%) females and 135 (45.5%) males participating. The age distribution of respondents revealed that individuals within the 21-40 age group were most well-informed about dental implants as a treatment procedure.

Demographic Data:

Table 1 summarizes the demographic data of the participating patients, highlighting the gender distribution and age groups represented in the survey.

Demographic Data (n=300)	Number
Gender, n (%)	
- Male	162(54.5%)
- Female	135(45.5%)
Age groups, n (%)	
- 20 years and below	21(7.1%)
- 21-40 years	159(53.3%)
- 41-60 years	113(38%)
- 61-80 years	4(1.3%)

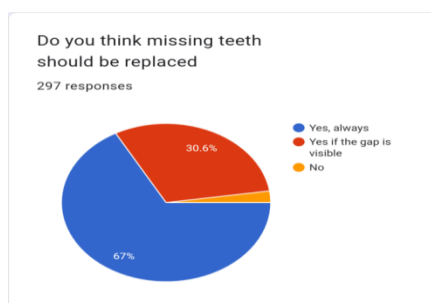


Figure 1. Replacement of missing teeth

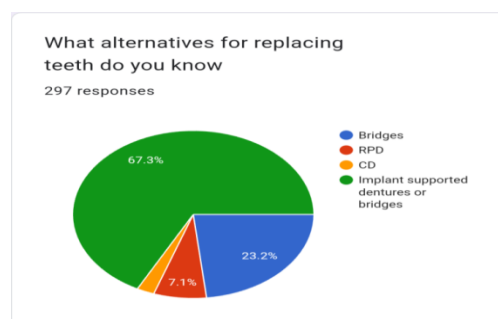


Figure 2. Options to replace the missing teeth

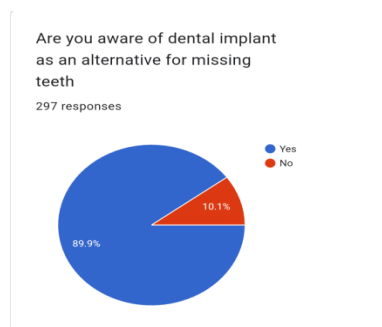


Figure 3. Dental implant an alternative for missing teeth

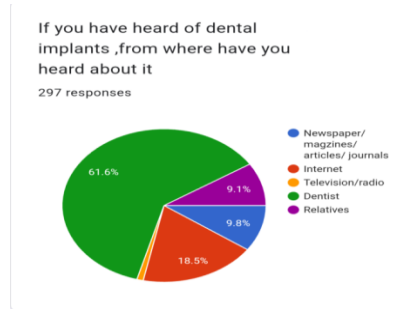


Figure 4. Source of information about dental implants

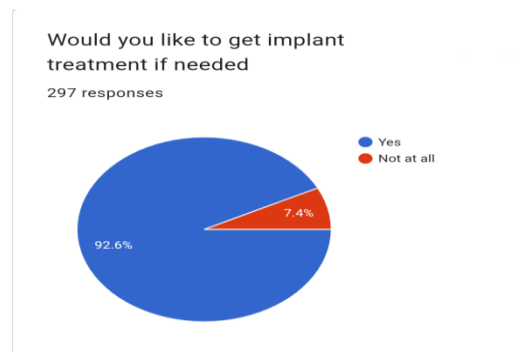


Figure 5. Willingness to get implant treatment done if needed.

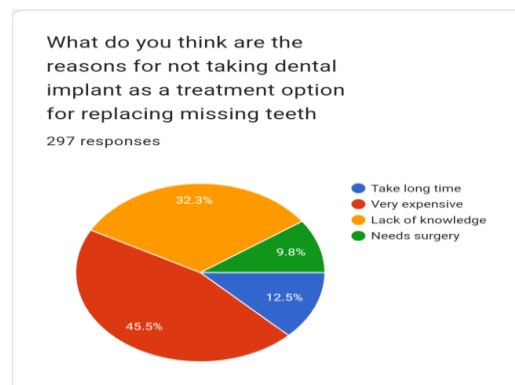


Figure 6. Reasons for refusing implant treatment.

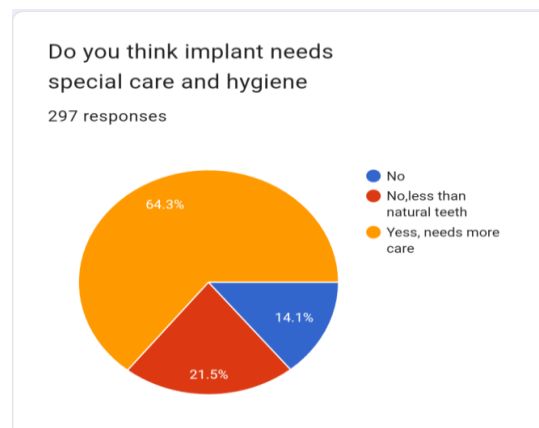


Figure 7. Need for special care and hygiene.

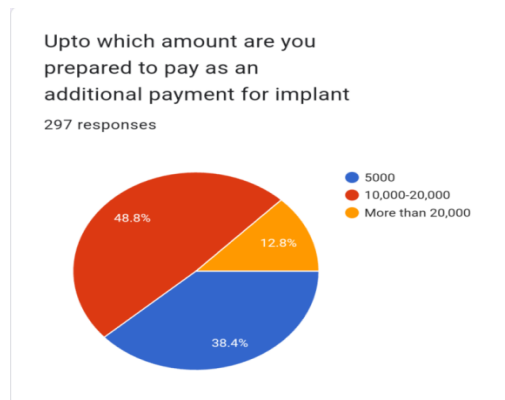


Figure 8. Additional payment for implant

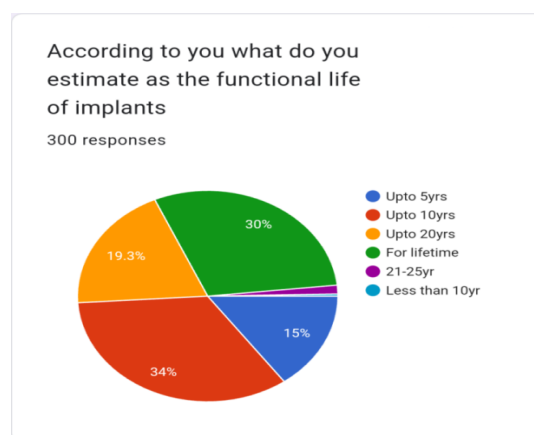


Figure 9. Life Span of Dental Implant Treatment

VI. Discussion:

The findings of the survey in Western Maharashtra shed light on crucial aspects of public awareness, knowledge, and acceptance of dental implants as a treatment modality for missing teeth. The discussion will delve into key themes, including the level of awareness, sources of information, and the factors influencing the decision-making process regarding dental implant treatment.

Level of Awareness:

The survey reveals a promising level of awareness among the population of Western Maharashtra regarding dental implants. With nearly 90% of respondents indicating awareness of dental implants, it suggests that information about this treatment modality has permeated the public domain. The higher awareness levels among individuals in the 21-40 age group may be indicative of a generational shift, possibly influenced by increased access to information through digital channels.

Despite the overall positive trend, it is noteworthy that a segment of the population remains unaware of dental implants. This underscores the importance of targeted educational initiatives to bridge the awareness gap, ensuring that individuals of all ages and backgrounds have access to accurate information about the benefits and feasibility of dental implant treatment.

Sources of Information:

The survey identifies dentists as the primary source of information for a majority of respondents, followed by the internet and traditional media channels. This highlights the pivotal role of oral health professionals in

shaping public perceptions and disseminating information about dental implants. The trust placed in dentists underscores the importance of effective communication between healthcare providers and patients in conveying the benefits and considerations associated with dental implant treatment.

The influence of digital platforms, such as the internet and social media, in disseminating information about dental implants is a reflection of changing communication dynamics. It also indicates an opportunity for targeted online campaigns and educational content to enhance awareness further. Leveraging the reach and accessibility of digital platforms can contribute significantly to reaching a broader audience and dispelling potential misconceptions.

Factors Influencing Non-Adoption:

Understanding the factors that deter individuals from undergoing dental implant treatment is crucial for addressing barriers to adoption. The survey identifies the high cost of the procedure as the primary reason for not pursuing dental implants, cited by almost half of the respondents. This resonates with global trends where the perceived financial burden remains a significant obstacle to accessing advanced dental care.

Additionally, a notable percentage of respondents expressed concerns related to the duration of treatment and the surgical nature of the procedure. These factors highlight the need for comprehensive patient education, emphasizing the long-term benefits of dental implants and addressing misconceptions surrounding the treatment process. Implementing transparent communication about the stages involved, potential discomfort, and post-treatment care can contribute to managing patient expectations and reducing apprehensions.

Conclusion and Implications:

In conclusion, the survey outcomes underscore the positive trajectory of awareness and acceptance of dental implants in Western Maharashtra. The engagement of dentists as key influencers and the recognition of digital platforms as effective information channels provide valuable insights for targeted interventions. To enhance public knowledge and foster greater acceptance, strategic initiatives should focus on cost-effective communication channels, emphasizing the long-term value of dental implants. Additionally, addressing specific concerns related to treatment duration and surgery through educational campaigns can contribute to a more informed and receptive population. Ultimately, the survey outcomes serve as a foundation for collaborative efforts between oral health professionals, policymakers, and the public to create a supportive environment for the widespread adoption of dental implant treatment in Western Maharashtra. By prioritizing education and mitigating barriers, the region has the potential to witness a positive shift in attitudes toward dental implants, thereby advancing the overall landscape of oral rehabilitation and healthcare.

VII. Conclusion:

The survey conducted in Western Maharashtra illuminates the landscape of awareness and acceptance of dental implant treatment among its diverse population. The commendable level of awareness, with almost 90% of respondents being cognizant of dental implants, signifies a positive trend. Dentists emerged as influential sources of information, emphasizing their crucial role in shaping public perceptions and disseminating knowledge. Noteworthy is the demographic variation, particularly the heightened awareness among individuals in the 21-40 age group, suggesting the impact of digital information access and evolving communication dynamics. This generational shift underscores the importance of leveraging online platforms for targeted educational initiatives to reach a broader audience. Despite the overall positive outlook, the survey revealed cost as a substantial barrier to the adoption of dental implants, cited by nearly half of the respondents. This highlights a critical area for intervention, where strategies to address cost concerns and emphasize the long-term value of dental implants can contribute to breaking down barriers. Concerns related to treatment duration, the surgical nature of the procedure, and misconceptions about the durability of implants surfaced as additional factors influencing non-adoption. These findings underscore the need for comprehensive patient education campaigns, ensuring transparent communication about the treatment process, potential discomfort, and post-implant care. In

conclusion, the survey outcomes provide a foundation for targeted initiatives aimed at enhancing public knowledge, managing expectations, and fostering greater acceptance of dental implants in Western Maharashtra. Collaborative efforts involving oral health professionals, policymakers, and the public can contribute to creating an environment conducive to the widespread adoption of dental implant treatment. By addressing barriers and dispelling misconceptions, the region has the potential to witness a positive shift in attitudes, ultimately advancing the landscape of oral rehabilitation and healthcare.

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