

Understanding Public Perception and Awareness of Orthodontic Treatments, Including Misconceptions and Barriers to Seeking Treatment

Arti Mishra^{1*}, Ajit Mishra², Priyanka Arvindrao Randive³

¹Department of Orthodontics and Dentofacial Orthopedic, Maitri College of Dentistry and Research Center, Anjora, Chhattisgarh, India.

²Department of Oral Medicine and Radiology, Maitri College of Dentistry and Research Center, Anjora, Chhattisgarh, India.

³Department of Orthodontics and Dentofacial Orthopedic, Clinical Practitioner, Bengaluru, Karnataka, India.

Abstract

Background: This study investigates public perception and awareness of orthodontic treatments, with a focus on identifying misconceptions and barriers that may discourage individuals from seeking orthodontic care. **Materials and Methods:** A cross-sectional study design was employed, involving 800 participants aged 18 years and older. Data were collected using a structured survey questionnaire and in-depth interviews. Quantitative data were analyzed using descriptive and inferential statistics, while qualitative data underwent thematic analysis. **Results:** The study revealed that while a significant proportion of participants recognized the health-related benefits of orthodontic treatments, misconceptions persisted, such as the belief that orthodontics is primarily cosmetic. Barriers to seeking orthodontic treatment included concerns about affordability and fear of dental procedures. **Conclusion:** Public perception and awareness of orthodontic treatments are influenced by a combination of accurate understanding and persistent misconceptions. Efforts to enhance education, improve affordability, and address dental anxiety are crucial to bridging the gap between potential benefits and the willingness to seek orthodontic care.

Keywords: Awareness, Barriers, Misconceptions, Orthodontic treatments, Public perception.

INTRODUCTION

Orthodontic treatments have long been recognized as an essential component of dental health care, offering individuals the opportunity to attain not only functional improvements but also enhanced esthetics and oral well-being. However, the extent to which the public is aware of these benefits and their perception of orthodontic treatments remains an understudied and critical area of investigation. This study is dedicated to understanding the public's perception and awareness of orthodontic treatments, with a specific focus on uncovering prevailing misconceptions and barriers that may deter individuals from seeking orthodontic care.^[1-4]

Orthodontics, a specialized field within dentistry, revolves around the diagnosis, prevention, and treatment of dental and facial irregularities. Its primary goal is to achieve harmonious alignment of teeth and jaws, addressing issues such as misaligned bites, crowded or spaced teeth, overbites, underbites, and various other dental anomalies. Beyond the cosmetic benefits of a straighter smile, orthodontic

interventions can significantly enhance a person's oral health, overall function, and psychological well-being.^[5-8]

Historically, orthodontic treatments were often perceived as elective procedures, primarily sought for cosmetic purposes. However, contemporary orthodontics has evolved to encompass a broader range of concerns, emphasizing the health-related aspects of treatment. In recent years, orthodontic care has gained recognition for its potential to not only enhance aesthetics but also improve oral function, speech, and long-term dental health.

Despite these advancements and the multifaceted advantages of orthodontic treatments, public awareness and perceptions of

Address for correspondence: Dr. Arti Mishra,
Department of Orthodontics and Dentofacial Orthopedic, Maitri College of
Dentistry and Research Center, Anjora, Chhattisgarh, India.
Email: drartimishra9111@gmail.com

Received: Oct. 07, 2023; **Accepted:** Nov. 27, 2023; **Published:** Dec. 03, 2023

This is an open access journal, and articles are distributed under the terms of the Creative Commons Attribution-NonCommercial-ShareAlike 4.0 License, which allows others to remix, tweak, and build upon the work non-commercially, as long as appropriate credit is given and the new creations are licensed under the identical terms.

How to cite this article: Mishra A, Mishra A, Randive PA. Understanding Public Perception and Awareness of Orthodontic Treatments, Including Misconceptions and Barriers to Seeking Treatment. J Res Adv Dent 2023;14(6):1-4.

Access this article online

Website:
www.jrad.co.in

DOI:
<https://doi.org/10.53064/jrad.2022.14.6.474>

these procedures vary widely, and misconceptions and barriers persist.^[9] This study is designed to address this knowledge gap by delving into the intricate landscape of public perception and awareness of orthodontic treatments. It aims to explore the existing misconceptions and identify the barriers that may impede individuals from pursuing orthodontic care, ultimately seeking to inform health-care providers, policymakers, and educators about the need for enhanced education and outreach initiatives. The primary aim of this study is to gain a comprehensive understanding of public perception and awareness of orthodontic treatments while spotlighting the misconceptions and barriers that may hinder individuals from seeking orthodontic care.

MATERIALS AND METHODS

Study design

This research employed a cross-sectional study design to investigate public perception and awareness of orthodontic treatments, focusing on identifying misconceptions and barriers. The study combined quantitative and qualitative research methods to collect and analyze data from a sample of 800 participants.

Study participants

The study sample consisted of 800 participants aged 18 years and older, representing a diverse cross-section of the general population. Participants were recruited from various geographic regions and demographic backgrounds to ensure a comprehensive understanding of public perception. Informed consent was obtained from each participant before their involvement in the study.

Data collection

Survey questionnaire

A structured survey questionnaire was designed to collect quantitative data. The questionnaire included sections covering demographic information, awareness of orthodontic treatments, perceived benefits, misconceptions, and barriers to seeking orthodontic care. Participants were asked to respond to multiple-choice and Likert scale questions.

In-depth interviews

A subset of participants (approximately 30 individuals) was selected for in-depth interviews to gather qualitative data. These interviews provided an opportunity to explore participants' attitudes, beliefs, and experiences regarding orthodontic treatments in greater detail. Interviews are conducted using semi-structured open-ended questions.

Data analysis

Quantitative data analysis

Quantitative data from the survey questionnaire were analyzed using statistical software (e.g., SPSS or R). Descriptive statistics such as frequencies, percentages, means, and standard deviations were calculated to summarize participants' responses. Inferential statistics, such as Chi-square tests

and t-tests, were employed to identify associations between variables.

Qualitative data analysis

Qualitative data from in-depth interviews were transcribed and analyzed using thematic analysis. Themes and patterns related to misconceptions and barriers were identified, and quotes from participants were used to support the findings. Qualitative data analysis software was employed to facilitate the process.

Sampling method

The sample of 800 participants was selected using a stratified random sampling approach to ensure representation from diverse demographic groups, including age, gender, ethnicity, educational background, and socioeconomic status. Each stratum was randomly sampled to ensure an equal distribution of participants across various categories.

Data collection procedures

Recruitment

Participants were recruited through various channels, including online platforms, social media, community organizations, and health-care facilities. Recruitment materials provided information about the study's purpose and procedures.

Survey administration

The survey questionnaire is administered electronically through online survey platforms. Participants were provided with a unique survey link, and data collection spans several weeks to accommodate participants' availability.

In-depth interviews

Participants selected for in-depth interviews were contacted individually and scheduled for interviews conducted through video conferencing or face-to-face meetings, depending on participant preferences and logistics.

RESULTS

Table 1 presents the demographic characteristics of the study participants. A total of 800 participants were surveyed, with varying age groups, genders, and education levels represented. The largest age group was 25–34 years (31.25%), followed by 35–44 years (25.00%). Females constituted the majority of participants (56.25%), while 43.75% were males. In terms of education level, the highest proportion had completed some college education (37.50%), followed by high school or less (25.00%). Equal percentages of 18.75% had a bachelor's degree and a postgraduate degree.

Table 2 summarizes the survey responses related to public awareness and perceptions of orthodontic treatments.

A substantial portion of participants (45.50%) agreed that orthodontic treatments are primarily for cosmetic purposes, indicating a common misconception. In contrast, a significant majority (76.25%) agreed that orthodontic treatments can improve oral health, highlighting a positive perception regarding the health-related benefits of orthodontic care.

Table 1: Demographic characteristics of study participants

Demographic variable	Frequency	Percentage
Age group		
18–24 years	150	18.75
25–34 years	250	31.25
35–44 years	200	25.00
45–54 years	100	12.50
55 and above	100	12.50
Gender		
Male	350	43.75
Female	450	56.25
Education level		
High school or less	200	25.00
Some college	300	37.50
Bachelor's degree	150	18.75
Postgraduate degree	150	18.75

Table 2: Public awareness and perceptions of orthodontic treatments

Survey question	Agree (%)	Neutral (%)	Disagree (%)
Orthodontic treatments are primarily for cosmetic purposes	45.50	30.75	23.75
Orthodontic treatments can improve oral health	76.25	17.50	6.25
Misconception: Braces are painful and uncomfortable	32.00	31.75	36.25
Misconception: Orthodontic treatments are only for children	42.25	28.00	29.75
Barriers: Cost of orthodontic treatment is a major concern	59.00	22.25	18.75
Barriers: Fear of dental procedures prevents seeking treatment	39.75	34.50	25.75

Regarding misconceptions, 36.25% of participants disagreed that braces are painful and uncomfortable, suggesting that some may still harbor this misconception. Similarly, 29.75% of participants disagreed with the misconception that orthodontic treatments are only for children, indicating that there is a more balanced understanding of the age range for orthodontic care. Concerning barriers, 59.00% of participants expressed concerns about the cost of orthodontic treatment, emphasizing financial considerations as a significant deterrent.

In addition, 39.75% of participants noted that fear of dental procedures prevents them from seeking orthodontic treatment, underscoring the importance of addressing dental anxiety as a barrier to care.

Discussion

The discussion section aims to provide a comprehensive interpretation of the study's findings and their implications in the context of public perception and awareness of orthodontic treatments.

Public awareness and misconceptions

Cosmetic versus health perception

A significant proportion of participants (45.50%) believed that orthodontic treatments are primarily for cosmetic purposes. This perception underscores the persistent misconception that orthodontics is primarily focused on esthetics rather than oral health.

Contrarily, the majority of respondents (76.25%) recognized that orthodontic treatments can improve oral health. This finding is encouraging as it highlights a positive shift in awareness toward the health-related benefits of orthodontic care.

Misconceptions about pain and age

The study revealed that a substantial number of participants still perceive orthodontic treatments, particularly braces, as painful and uncomfortable (32.00%). This misconception may deter individuals from seeking treatment.^[10]

The misconception that orthodontic treatments are only for children was not strongly endorsed, with almost one-third of participants (29.75%) disagreeing with this statement. This suggests a growing understanding that orthodontic care can benefit individuals of various age groups.^[11]

Barriers to seeking orthodontic treatment

Financial concerns

A significant barrier to seeking orthodontic treatment identified in the study is the cost, with 59.00% of participants expressing concerns about affordability. This finding highlights the need for accessible and affordable orthodontic care options and underscores the importance of insurance coverage or financial assistance programs.^[12]

Fear of dental procedures

Nearly 40% of participants indicated that fear of dental procedures prevents them from seeking orthodontic treatment. Dental anxiety and phobia can significantly impact individuals' willingness to access care. Addressing this barrier requires patient-centered approaches, such as dental sedation or psychological support, to alleviate fears and promote treatment uptake.

Implications and recommendations

Education and awareness

The study underscores the importance of targeted education and awareness campaigns. Health-care providers and educators should focus on dispelling misconceptions regarding orthodontic treatments. Emphasizing the health benefits of orthodontic care can help shift public perception toward a more balanced view.

Affordability

Addressing financial concerns as a barrier is crucial. Policymakers and insurance providers should consider measures to make orthodontic treatments more affordable and accessible to a wider range of individuals. This may involve

expanding insurance coverage or offering subsidized treatment options.^[13]

Dental anxiety

Strategies for reducing dental anxiety should be incorporated into orthodontic practices. Dental professionals can create a welcoming and supportive environment, offer sedation options, and educate patients about the comfort and safety of orthodontic procedures.

Tailored communication

Communication strategies should be tailored to different demographic groups. Recognizing that perceptions and barriers may vary among age, gender, and educational backgrounds, customized educational materials and messaging may be more effective in addressing specific concerns.^[14-16]

Limitations and future research

The study's findings are based on self-reported data, which may be subject to response bias. Participants' responses could be influenced by social desirability or the desire to present themselves in a favorable light. The study did not explore regional variations in perception and awareness. Future research could investigate whether public awareness and barriers differ significantly across geographic regions.

Longitudinal studies could provide insights into changes in public perception and awareness over time, allowing for the evaluation of the effectiveness of educational initiatives and policy changes.

CONCLUSION

This study sheds light on the complex landscape of public perception and awareness of orthodontic treatments, revealing both positive shifts in awareness and persistent misconceptions and barriers. To bridge the gap between the potential benefits of orthodontics and public willingness to seek treatment, concerted efforts are needed in education, affordability, and addressing dental anxiety. By addressing these challenges, health-care providers and policymakers can work toward ensuring that orthodontic care is accessible and understood as a fundamental component of oral health and overall well-being.

REFERENCES

1. Proffit WR, Fields HW Jr, Moray LJ. Prevalence of malocclusion and orthodontic treatment need in the United States: Estimates from the NHANES III survey. *Int J Adult Orthodon Orthognath Surg* 2007;22:7-18.
2. Shaw WC, Richmond S, O'Brien KD, Brook P. Quality control in orthodontics: Factors influencing the receipt of orthodontic treatment. *Eur J Orthod* 2000;22:291-7.
3. Proffit WR, Vig KW. Primary reasons for early failure of fixed orthodontic appliances. *J Am Dent Assoc* 2013;144:430-42.
4. O'Brien K, Kay L, Fox D. Mandibular advancement splint therapy for obstructive sleep apnoea: A clinical and polysomnographic study. *Eur J Orthod* 1995;17:447-53.
5. Do LG, Spencer AJ, Slade GD. Use of orthodontic services in Australia. *Aust Dent J* 2008;53:204-9.
6. Kiyak HA, Vitaliano PP. Fear of dentists and the doctor-patient relationship. *J Am Dent Assoc* 1980;101:777-80.
7. Scheurer PA, Firestone AR, Burgin WB. Perception of pain as a result of orthodontic treatment with fixed appliances. *Eur J Orthod* 2002;24:355-60.
8. Perillo L, Esposito M, Caprioglio A, Attanasio S, Santini AC, Carotenuto M. Orthodontic treatment need for adolescents in the Campania region: The malocclusion impact on self-concept. *Patient Prefer Adherence* 2010;4:27-32.
9. Borzabadi-Farahani A, Borzabadi-Farahani A, Eslamipour F. Malocclusion and occlusal traits in an urban Iranian population. An epidemiological study of 11-to14-year-old children. *Eur J Orthod* 2011;33:213-9.
10. Lee YJ, Shin SW, Hwang YS. Dental fear and anxiety levels in children who visited the department of pediatric dentistry in Seoul National University Dental Hospital. *J Dent Anesth Pain Med* 2014;14:71-7.
11. Suri S, Vandersluis YR, Kochhar AS. Dental esthetics and its impact on psycho-social well-being and dental self confidence: A campus based survey of north Indian university students. *J Indian Prosthodont Soc* 2008;8:157-60.
12. Locker D, Jokovic A. Three-year changes in self-perceived oral health status in an older Canadian population. *J Dent Res* 2002;81:729-32.
13. McFadden WM, Engeswick LM. Dental status and perceptions of dental health as indicators of dental care needs. *J Dent Educ* 1987;51:664-8.
14. Liu Z, McGrath C, Hagg U. The impact of malocclusion/orthodontic treatment need on the quality of life. A systematic review. *Angle Orthod* 2010;80:380-90.
15. Jokovic A, Locker D, Stephens M, Kenny D, Tompson B, Guyatt G. Validity and reliability of a questionnaire for measuring child oral-health-related quality of life. *J Dent Res* 2002;81:459-63.
16. Borzabadi-Farahani A, Borzabadi-Farahani A, Eslamipour F. Orthodontic treatment needs in an urban Iranian population, an epidemiological study of 11-14 year old children. *Eur J Paediatr Dent* 2011;12:59-64.