



## **Beyond the Smile: Psychological and Psychosocial Consequences of Partial and Complete Edentulism in Contemporary Prosthodontics**

<sup>1</sup>Dr. Shivani Kapoor, MDS Student, Department of Prosthodontics, Chhatrapati Shahu Maharaj Shikshan Sanstha's Dental College and Hospital, Kanchanwadi, Chhatrapati Sambhajnagar, Maharashtra

<sup>2</sup>Dr. Nazish Baig, MDS, Professor and PG Guide, Department of Prosthodontics, Chhatrapati Shahu Maharaj Shikshan Sanstha's Dental College and Hospital, Kanchanwadi, Chhatrapati Sambhajnagar, Maharashtra

<sup>3</sup>Dr Mohammed Abdul Rafe, Dental Implantologist |Clinical Researcher | Clinic Coordinator, Swami Vivekanand Dental Hospital and Research Centre, Chhatrapati Sambhajnagar, Maharashtra

<sup>4</sup>Dr. Namrata Baste, MDS Student, Department of Prosthodontics, Chhatrapati Shahu Maharaj Shikshan Sanstha's Dental College and Hospital, Kanchanwadi, Chhatrapati Sambhajnagar, Maharashtra

<sup>5</sup>Dr Mohammed Abdul Rehman, Lecturer, Forensic Medicine and Toxicology, JIIU's IIMS&R Medical College and Noor Hospital, Warudi, Badnapur, Dist. Jalna

**Corresponding Author:** Dr. Shivani Kapoor, MDS Student, Department of Prosthodontics, Chhatrapati Shahu Maharaj Shikshan Sanstha's Dental College and Hospital, Kanchanwadi, Chhatrapati Sambhajnagar, Maharashtra

**How to citation this article:** Dr. Shivani Kapoor, Dr. Nazish Baig, Dr Mohammed Abdul Rafe, Dr. Namrata Baste, Dr Mohammed Abdul Rehman, “Beyond the Smile: Psychological and Psychosocial Consequences of Partial and Complete Edentulism in Contemporary Prosthodontics”, IJMACR – June – 2026, Volume – 9, Issue – 3, P. No. 148 – 159.

**Open Access Article:** © 2026 Dr. Shivani Kapoor, et al. This is an open access journal and article distributed under the terms of the creative common's attribution license (<http://creativecommons.org/licenses/by/4.0>). 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.

**Type of Publication:** Original Research Article

**Conflicts of Interest:** Nil

### **Abstract**

Modern dental therapies have advanced significantly, yet tooth loss remains a significant worldwide health burden. Clinicians routinely address the functional and aesthetic drawbacks of losing teeth, but the accompanying emotional and social burdens are often left unaddressed in day-to-day practice. Missing teeth not only impair chewing and speech; they fundamentally alter self-esteem, body image, and daily confidence. Patients frequently struggle with profound

embarrassment, social anxiety, and depressive symptoms that drive voluntary isolation and restrict interpersonal relationships.

This psychosocial burden is never uniform, shifting based on age, gender, socioeconomic background, social stigma, and personal support systems. Because oral health and mental well-being deeply influence one another, dental treatment must look beyond the mouth to treat the entire patient. Consequently, measuring oral health-related quality of life serves as a vital tool for

assessing the full weight of edentulism and evaluating treatment outcomes.

Rehabilitating these patients through prosthodontics goes beyond mechanical repair to drive true social reintegration. While both conventional dentures and implant-supported prostheses restore self-worth, implant therapies consistently deliver superior psychosocial benefits. Ultimately, tooth loss must be viewed as a complex biopsychosocial condition rather than a simple anatomical defect. True clinical success relies on patient-reported outcomes that actively address both the physical and emotional realities of recovery.

**Keywords:** Edentulism, Tooth Loss, Psychological Impact, Self-Esteem, Oral Health-Related Quality of Life, Prosthodontics, Dental Implants, Anxiety, Depression.

### Introduction

Tooth loss continues to represent a major global oral health challenge in prosthodontic practice despite significant progress in preventive, restorative and rehabilitative dentistry. As highlighted by Emami et al., edentulism affects both “oral and general health” and remains a persistent burden across populations worldwide <sup>1</sup>. Partial and complete edentulism are highly prevalent conditions and usually reflect the long-term cumulative effects of dental caries, periodontal disease, trauma, congenital anomalies and systemic health disorders <sup>1,2</sup>. Although modern prosthodontic care has significantly enhanced rehabilitation outcomes, the implications of tooth loss extend well beyond functional limitation.

Traditionally, prosthodontic success was evaluated through objective clinical indicators such as retention, stability, support, masticatory efficiency and prosthesis longevity. These remain essential benchmarks in clinical

dentistry. However, they do not fully reflect the patient’s lived experience. Over time, there has been a gradual but important transition from a purely disease-centred model to a patient-centred philosophy that prioritises quality of life, psychosocial well-being and patient-reported outcomes <sup>3-5</sup>. This shift aligns with the broader understanding that oral health is inseparable from general health and overall quality of life, as emphasised in global oral health frameworks <sup>4,5</sup>.

Teeth play a central role in facial aesthetics, speech articulation and non-verbal communication, all of which contribute to identity and social interaction. Consequently, tooth loss can significantly alter self-perception and social confidence. Structural changes associated with residual ridge resorption may result in altered facial appearance, often making individuals feel that they “look older” or less socially acceptable than before <sup>6,7</sup>. These changes frequently translate into reduced self-esteem, altered body image and psychological distress.

The psychosocial consequences of edentulism have been increasingly documented in contemporary literature. Patients often report embarrassment while smiling, speaking or eating in public, leading to avoidance behaviours and reduced social participation <sup>8-10</sup>. Such experiences may contribute to anxiety, lowered self-worth and depressive symptoms in susceptible individuals <sup>11-14</sup>. As Fiske et al. noted, tooth loss carries a strong “emotional effect” that extends beyond functional impairment and influences everyday behaviour <sup>13</sup>. However, these psychological responses are not uniform and vary widely between individuals.

This variability reflects a complex interplay of biological, psychological and social determinants including age, gender, cultural context, socioeconomic

status, coping mechanisms and availability of social support. As Newton and Bower emphasised, oral health outcomes are shaped by “complex causal networks” rather than isolated factors<sup>21</sup>. Therefore, edentulism must be interpreted within a biopsychosocial framework, recognising that identical clinical conditions may result in very different patient experiences and levels of satisfaction.

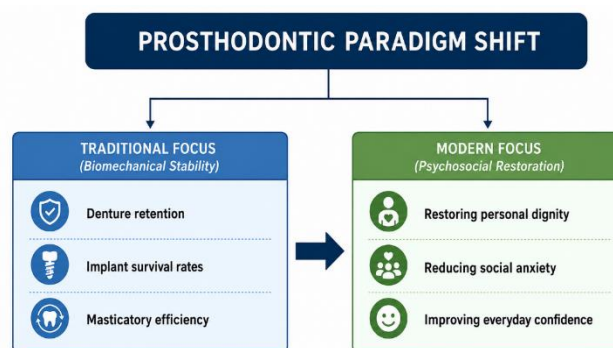
Advancements in prosthodontic rehabilitation, particularly implant-supported prostheses, have further expanded treatment possibilities. Implant therapy has been associated with improved oral function, aesthetics and patient confidence. Evidence suggests that such interventions can enhance social engagement and improve oral health-related quality of life<sup>15-18</sup>. Consensus statements such as the McGill and York recommendations further reinforce implant-supported mandibular overdentures as a standard of care for edentulous patients<sup>30,31</sup>. However, despite these advances, psychosocial outcomes are still not consistently prioritised in routine treatment evaluation.

Although a growing body of evidence has explored the relationship between tooth loss and psychosocial well-being, the literature remains fragmented across populations, methodologies and outcome measures. While tools such as OHIP and GOHAI have improved assessment of oral health-related quality of life<sup>8,9</sup>, psychosocial dimensions continue to receive less emphasis compared to biological and mechanical outcomes. This results in an incomplete understanding of how edentulism and its rehabilitation truly affect patients in everyday life.

In this context, and consistent with the evolving principles of patient-centred prosthodontics, there is a need for a comprehensive synthesis of existing evidence.

As Sischo and Broder described, oral health-related quality of life is central to understanding “what, why and how” oral conditions impact patients<sup>39</sup>. Therefore, this narrative review aims to critically evaluate the psychological and psychosocial consequences of partial and complete edentulism, assess the impact of prosthodontic rehabilitation on these outcomes and identify current gaps in the literature to guide future research and clinical practice.

Figure 1: The Paradigm Shift in Prosthodontics: Traditional Functional Outcomes Versus Patient-Centered Outcomes



## Discussion

The evidence reviewed in this narrative review demonstrates that the consequences of tooth loss extend far beyond the loss of oral structures and function. Contemporary research increasingly supports the view that edentulism should be regarded as a complex biopsychosocial condition that influences physical health, psychological well-being, social participation, and overall quality of life. Emami et al. emphasized that edentulism should be considered within a broader oral and general health framework, recognizing that oral conditions are closely interconnected with systemic health and psychosocial functioning rather than existing as isolated clinical entities<sup>1</sup>. Similarly, Polzer et al. and Felton highlighted that edentulism is frequently associated with nutritional compromise, chronic disease

burden, functional limitations, and reduced quality of life, particularly among older adults<sup>2,3</sup>. These observations support the growing recognition that successful management of tooth loss requires a holistic understanding of its multidimensional consequences.

One of the most consistent findings across the literature is the profound influence of tooth loss on personal identity and self-perception. Teeth play a central role in facial appearance, verbal communication, emotional expression, and social interaction. Consequently, their loss may affect how individuals perceive themselves and how they believe they are perceived by others. Newton et al. demonstrated that dental appearance significantly influences judgments regarding intelligence, social competence, attractiveness, and personal characteristics<sup>19</sup>. Likewise, Klages et al. reported significant associations between dental aesthetics, self-awareness, and oral health-related quality of life among young adults<sup>20</sup>. These findings suggest that the psychological consequences of tooth loss cannot be explained solely by functional impairment. Rather, missing teeth may challenge aspects of personal identity, self-esteem, and social confidence that are highly valued within contemporary society.

Importantly, the psychological burden associated with tooth loss does not necessarily correspond to the severity of clinical tooth loss. The literature suggests that visible tooth loss, particularly involving the anterior dentition, may produce disproportionately greater psychosocial consequences than more extensive posterior tooth loss. This observation highlights an important limitation of traditional clinical assessments based solely on the number of missing teeth. From the patient's perspective, the social visibility of tooth loss may be more significant than the extent of structural damage itself. Such findings

reinforce the need for patient-centered assessment approaches that recognize subjective experiences alongside objective clinical indicators.

The psychosocial consequences of tooth loss are particularly evident in relation to social participation and interpersonal relationships. Qualitative investigations by Fiske et al. and Davis et al. revealed that many edentulous individuals experience feelings of grief, embarrassment, loss, frustration, and diminished self-confidence following tooth loss<sup>13,14</sup>. These emotional responses often result in behavioural adaptations such as avoiding social situations, concealing the mouth while speaking or smiling, limiting interpersonal interactions, and withdrawing from previously enjoyed activities. Such reactions suggest that tooth loss may be experienced as a significant life event rather than merely a functional disability. McGrath and Bedi further demonstrated that oral health contributes substantially to older adults' perceptions of dignity, social integration, and quality of life, emphasizing that oral conditions influence broader aspects of human experience beyond clinical disease processes<sup>15</sup>.

The impact of edentulism on social participation may be particularly relevant in modern societies where facial appearance and dental aesthetics are strongly associated with youthfulness, health, professionalism, and social success. Individuals with visible tooth loss may fear negative social evaluation or perceive themselves as less attractive, competent, or socially acceptable. These concerns may contribute to social anxiety and avoidance behaviours that further reduce quality of life. Consequently, the burden of tooth loss is often shaped not only by biological impairment but also by societal expectations, cultural norms, and interpersonal experiences.

The concept of oral health-related quality of life (OHRQoL) has been instrumental in advancing understanding of these broader consequences. Traditional dental assessments focused primarily on disease, anatomy, and function. However, Locker proposed a conceptual framework recognizing that oral disease may result in functional limitation, pain, psychological discomfort, disability, and social disadvantage<sup>6</sup>. This framework represented an important shift from purely biomedical models toward a more comprehensive understanding of oral health. Building upon this work, validated instruments such as the Oral Health Impact Profile (OHIP), Geriatric Oral Health Assessment Index (GOHAI), and Oral Impacts on Daily Performance (OIDP) have enabled systematic evaluation of patient experiences and treatment outcomes<sup>8-10</sup>.

Evidence from systematic reviews consistently demonstrates that tooth loss exerts a significant negative influence on OHRQoL<sup>11,37</sup>. Gerritsen et al. reported a clear relationship between increasing tooth loss and worsening quality-of-life outcomes across diverse populations<sup>11</sup>. Similarly, Schierz et al. concluded that tooth loss substantially affects both functional and psychosocial dimensions of daily living<sup>37</sup>. These findings reinforce the notion that oral health cannot be adequately evaluated through clinical measures alone. Allen argued that patient perceptions of oral health and treatment outcomes provide essential information that may not be captured through traditional clinical assessments<sup>7</sup>. Likewise, Sischo and Broder emphasized that oral health-related quality of life has emerged as a critical outcome measure because it reflects the real-world impact of oral conditions on everyday life<sup>39</sup>.

The relationship between edentulism and psychological health appears to be complex and potentially

bidirectional. While tooth loss may contribute to psychological distress, anxiety, depression, and social isolation, psychological disorders may also adversely affect oral health. Individuals experiencing depression or other mental health disorders often demonstrate reduced motivation for self-care, poorer oral hygiene practices, irregular dental attendance, and increased engagement in risk behaviours that may accelerate oral disease progression<sup>22-24</sup>. Consequently, oral health and psychological well-being may influence one another through reciprocal pathways rather than simple cause-and-effect relationships.

Recent evidence supports this interconnected perspective. Kunrath et al. reported significant longitudinal associations between poor oral health and depressive symptoms among older adults<sup>23</sup>. Similarly, contemporary reviews have emphasized the importance of oral health in individuals with mental health disorders and highlighted the potential consequences of neglecting oral healthcare within this population<sup>24</sup>. These findings suggest that psychological consequences of tooth loss may persist over time and may be influenced by broader mental health trajectories rather than representing short-term reactions alone.

Emerging evidence has also suggested possible associations between tooth loss and cognitive health. Studies by Okamoto et al. and Luo et al. identified relationships between reduced dentition and impaired cognitive performance among older adults<sup>25,26</sup>. Although the precise mechanisms underlying these associations remain incompletely understood, several biological and behavioural pathways have been proposed. These include nutritional compromise resulting from impaired mastication, chronic low-grade inflammation, reduced sensory and masticatory stimulation, and psychosocial

factors such as social isolation and depression. While current evidence does not establish causality, these observations further reinforce the concept that oral health should be regarded as an integral component of general health rather than a separate domain.

An important finding emerging from the literature is the substantial variability in individual responses to tooth loss. Not all patients experience equivalent levels of psychological distress or quality-of-life impairment. Steele et al. demonstrated that age significantly influences the impact of tooth loss, with younger adults frequently reporting greater psychosocial burden than older individuals with similar clinical presentations<sup>17</sup>. Younger patients may perceive tooth loss as inconsistent with societal expectations regarding attractiveness, vitality, and professional success, whereas older adults may be more likely to view tooth loss as part of the ageing process. Hugo et al. similarly identified several demographic and social factors associated with edentulism and adaptation among older populations<sup>18</sup>.

The variability in psychological adaptation observed across studies suggests that individual experiences are influenced by factors extending beyond oral health status alone. Personality traits, coping strategies, resilience, social support networks, educational attainment, healthcare access, and socioeconomic position all appear to influence adaptation to tooth loss. Newton and Bower proposed that oral health outcomes should be understood within complex social determinant frameworks rather than solely through biological explanations<sup>21</sup>. Recent evidence from Heaton et al. and Amaral Júnior et al. further supports this perspective by demonstrating important interactions among socioeconomic status, mental health, healthcare utilization, and oral health behaviours<sup>46,47</sup>. These findings indicate that successful

management of edentulism requires consideration of social and psychological contexts in addition to clinical needs.

The literature reviewed also highlights the important role of prosthodontic rehabilitation in addressing both functional deficits and psychosocial consequences of tooth loss. Conventional complete dentures remain a valuable treatment option and have been shown to improve aesthetics, speech, masticatory ability, and patient satisfaction<sup>27</sup>. Restoration of facial appearance and oral function may help reduce social anxiety and improve confidence in everyday interactions. Nevertheless, adaptation to removable prostheses varies considerably among individuals. Even technically satisfactory dentures may fail to fully address psychological concerns related to appearance, comfort, or social confidence.

Implant-supported prostheses have transformed contemporary prosthodontic rehabilitation by providing greater stability, retention, and functional performance. Randomized clinical trials conducted by Heydecke et al. and Awad et al. demonstrated significant improvements in patient satisfaction, comfort, oral function, and quality of life among individuals treated with implant-supported overdentures compared with conventional dentures<sup>28,29</sup>. Importantly, these improvements extended beyond functional outcomes and included enhanced participation in social and personal activities. Such findings suggest that implant rehabilitation may positively influence dimensions of life that are not routinely captured through traditional clinical outcome measures.

The importance of implant-supported rehabilitation is further reflected in the McGill and York Consensus Statements, which identified mandibular two-implant overdentures as the preferred standard of care for many

edentulous patients because of their demonstrated functional and psychosocial advantages<sup>30,31</sup>. Subsequent systematic reviews and clinical investigations have consistently reported improvements in oral health-related quality of life, self-confidence, comfort, and social functioning following implant rehabilitation<sup>32-36,43,44</sup>. Nevertheless, treatment outcomes remain influenced by patient expectations, financial considerations, psychological adaptation, and broader social circumstances. Therefore, the psychosocial benefits of rehabilitation should not be assumed to occur uniformly across all individuals.

An important implication of these findings is that prosthodontic treatment should be viewed not only as functional rehabilitation but also as psychosocial rehabilitation. Patients frequently evaluate treatment success according to improvements in appearance, confidence, comfort, and quality of life rather than solely according to technical measures such as prosthesis retention or implant survival. This perspective aligns closely with contemporary patient-centered healthcare models and emphasizes the importance of understanding treatment outcomes from the patient's viewpoint.

The increasing use of patient-reported outcome measures reflects this paradigm shift within prosthodontics. Historically, treatment success was evaluated primarily through clinician-reported outcomes and objective technical criteria. While such measures remain important, they do not fully capture the patient's lived experience. Contemporary oral healthcare increasingly recognizes that restoration of dignity, self-confidence, social participation, and well-being are legitimate therapeutic goals. This approach is consistent with recommendations from the World Health Organization and the FDI Vision 2030 framework, both of which

advocate person-centered oral healthcare models that prioritize functionality, equity, quality of life, and integration of oral health within broader healthcare systems<sup>40,45</sup>.

Despite the growing body of evidence supporting associations between edentulism and psychosocial outcomes, several important limitations remain within the current literature. A substantial proportion of available studies are cross-sectional in design, limiting the ability to establish causal relationships. Consequently, it remains unclear whether psychological distress arises directly from tooth loss or whether both conditions are influenced by common underlying factors such as socioeconomic disadvantage, chronic disease burden, healthcare accessibility, and social inequality<sup>21,46,47</sup>. Longitudinal and prospective studies are therefore required to clarify causal pathways and better understand adaptation over time.

Methodological heterogeneity also presents challenges. Although validated instruments such as OHIP, GOHAI, and OIDP have improved standardization, differences in study design, outcome definitions, scoring systems, and theoretical frameworks continue to limit direct comparisons among investigations<sup>8-10,38</sup>. Furthermore, complex constructs such as self-esteem, social confidence, resilience, and emotional well-being may not be fully captured by existing instruments. Future development of edentulism-specific patient-reported outcome measures may therefore improve sensitivity and clinical relevance.

Cultural and geographic variability represent additional limitations. Perceptions of ageing, dental appearance, social status, and treatment expectations differ considerably across populations. Global oral health reports and contemporary public health analyses have

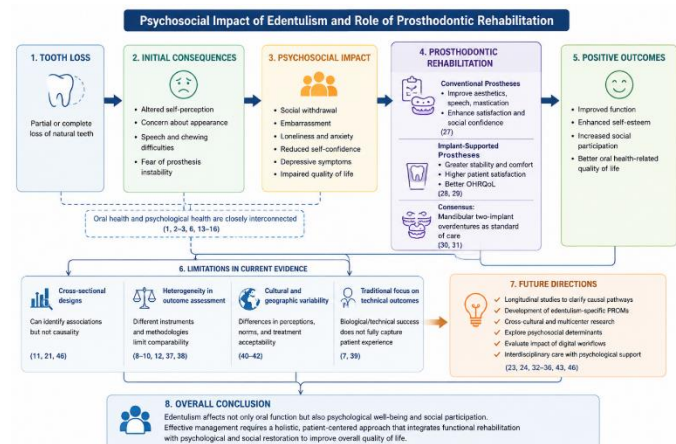
emphasized the importance of social, cultural, and structural determinants in shaping oral health experiences and outcomes<sup>40-42</sup>. Future research should therefore prioritize culturally diverse populations and international collaborations to enhance the generalizability of existing evidence.

Future investigations should also explore emerging areas including digital prosthodontics, artificial intelligence-assisted treatment planning, and interdisciplinary models integrating behavioural science with prosthodontic care. Greater understanding of psychological predictors of treatment satisfaction may facilitate more personalized approaches to rehabilitation. Additionally, incorporation of psychological support strategies may be beneficial for patients experiencing significant anxiety, depression, social withdrawal, or difficulty adapting to tooth loss and prosthodontic treatment.

In conclusion, the evidence synthesized in this review consistently demonstrates that edentulism is a multifactorial condition with consequences extending far beyond functional impairment. Tooth loss influences self-perception, emotional well-being, social participation, and oral health-related quality of life through complex interactions among biological, psychological, and social factors. Prosthodontic rehabilitation can substantially improve these outcomes, particularly when treatment successfully addresses both functional and psychosocial concerns. However, optimal management of edentulism requires a holistic, patient-centered approach that recognizes patients not merely as recipients of prosthetic treatment but as individuals whose experiences, expectations, and quality of life are fundamentally affected by tooth loss. As prosthodontics continues to evolve, restoration of confidence, dignity, social engagement, and overall well-being should be

regarded as outcomes that are equally important as restoration of oral function.

Figure 2: Psychological impact of edentulism and role of prosthodontic rehabilitation



## Conclusion

Edentulism should be understood as a multifactorial condition whose implications extend well beyond the mere absence of teeth and loss of oral function. As highlighted in the literature, it represents a state that affects both oral and general health, with Emami et al. describing its “impact on oral and general health” as clinically significant and far-reaching<sup>1</sup>. Evidence consistently shows that partial and complete tooth loss can negatively influence self-esteem, body image, and social participation, while also diminishing overall quality of life. However, these outcomes are not uniform; they vary considerably depending on individual resilience, cultural expectations, and social support systems<sup>2,5,6</sup>.

Prosthodontic rehabilitation plays a central role in restoring not only oral function but also psychological and social well-being. Studies indicate that appropriately designed prosthetic treatment can improve confidence, social interaction, and patient satisfaction, particularly when both functional and aesthetic concerns are addressed. Allen and McMillan emphasized that

edentulousness affects “functional and psychosocial outcomes,” reinforcing the idea that rehabilitation must go beyond mechanical replacement of teeth<sup>27</sup>. Similarly, implant and conventional prosthodontic interventions have been shown to improve social engagement and treatment satisfaction in edentulous populations<sup>28,29</sup>. Nonetheless, treatment success is shaped by a complex interplay of biological status, psychological adaptation, and socio-cultural context, highlighting the limitations of purely clinician-centred outcome assessment.

Overall, the evidence supports a shift toward a more holistic, patient-centred model of prosthodontic care in which psychosocial outcomes are considered alongside traditional clinical indicators of success. Contemporary frameworks increasingly recognize oral health as integral to general health and well-being, as emphasized in global perspectives on oral disease burden and health policy directions<sup>41,45</sup>. As Sischo and Broder note, oral health-related quality of life is central to understanding “what, why, and how” oral conditions impact daily living<sup>39</sup>. Future research should therefore prioritise longitudinal study designs, culturally diverse populations, and standardized outcome measures to better clarify the long-term relationship between edentulism, rehabilitation, and psychological health outcomes<sup>11,32</sup>.

## Reference

1. Emami E, de Souza RF, Kabawat M, Feine JS. The impact of edentulism on oral and general health. *Int J Dent*. 2013;2013:498305. doi:10.1155/2013/498305
2. Polzer I, Schimmel M, Müller F, Biffar R. Edentulism as part of the general health problems of elderly adults. *Int Dent J*. 2010;60(3):143-155.
3. Felton DA. Complete Edentulism and Comorbid Diseases: An Update. *J Prosthodont*. 2016;25(1):5-20. doi:10.1111/jopr.12350.
4. Petersen PE, Yamamoto T. Improving the oral health of older people: the approach of the WHO Global Oral Health Programme. *Community Dent Oral Epidemiol*. 2005;33(2):81-92. doi:10.1111/j.1600-0528.2004.00219.x
5. Kandelman D, Petersen PE, Ueda H. Oral health, general health, and quality of life in older people. *Spec Care Dentist*. 2008;28(6):224-236. doi:10.1111/j.1754-4505.2008.00045.x
6. Locker D. Measuring oral health: a conceptual framework. *Community Dent Health*. 1988;5(1):3-18.
7. Allen PF. Assessment of oral health related quality of life. *Health Qual Life Outcomes*. 2003;1:40. Published 2003 Sep 8. doi:10.1186/1477-7525-1-40
8. Slade GD, Spencer AJ. Development and evaluation of the Oral Health Impact Profile. *Community Dent Health*. 1994;11(1):3-11.
9. Atchison KA, Dolan TA. Development of the Geriatric Oral Health Assessment Index. *J Dent Educ*. 1990;54(11):680-687.
10. Adulyanon S, Vourapukjaru J, Sheiham A. Oral impacts affecting daily performance in a low dental disease Thai population. *Community Dent Oral Epidemiol*. 1996;24(6):385-389. doi:10.1111/j.1600-0528.1996.tb00884.x
11. Gerritsen AE, Allen PF, Witter DJ, Bronkhorst EM, Creugers NH. Tooth loss and oral health-related quality of life: a systematic review and meta-analysis. *Health Qual Life Outcomes*. 2010;8:126. Published 2010 Nov 5. doi:10.1186/1477-7525-8-126

12. John MT, Reissmann DR, Feuerstahler L, Waller N, Baba K, Larsson P, Celebić A, Szabo G, Rener-Sitar K. Exploratory factor analysis of the Oral Health Impact Profile. *J Oral Rehabil.* 2014 Sep;41(9):635-43. doi: 10.1111/joor.12192. Epub 2014 Jun 9. PMID: 24909881; PMCID: PMC4138231.
13. Fiske J, Davis DM, Frances C, Gelbier S. The emotional effects of tooth loss in edentulous people. *Br Dent J.* 1998;184(2):90-79. doi:10.1038/sj.bdj.4809551
14. Davis DM, Fiske J, Scott B, Radford DR. The emotional effects of tooth loss: a preliminary quantitative study. *Br Dent J.* 2000;188(9):503-506. doi:10.1038/sj.bdj.4800522
15. McGrath C, Bedi R. The importance of oral health to older people's quality of life. *Gerodontology.* 1999;16(1):59-63. doi:10.1111/j.1741-2358.1999.00059.x
16. McGrath C, Bedi R. Can dental attendance improve quality of life?. *Br Dent J.* 2001;190(5):262-265. doi:10.1038/sj.bdj.4800944
17. Steele JG, Sanders AE, Slade GD, et al. How do age and tooth loss affect oral health impacts and quality of life? A study comparing two national samples. *Community Dent Oral Epidemiol.* 2004;32(2):107-114. doi:10.1111/j.0301-5661.2004.00131.x
18. Hugo FN, Hilgert JB, de Sousa Mda L, da Silva DD, Pucca GA Jr. Correlates of partial tooth loss and edentulism in the Brazilian elderly. *Community Dent Oral Epidemiol.* 2007;35(3):224-232. doi:10.1111/j.0301-5661.2007.00346.x
19. Newton JT, Prabhu N, Robinson PG. The impact of dental appearance on the appraisal of personal characteristics. *Int J Prosthodont.* 2003;16(4):429-434.
20. Klages U, Bruckner A, Zentner A. Dental aesthetics, self-awareness, and oral health-related quality of life in young adults. *Eur J Orthod.* 2004;26(5):507-514. doi:10.1093/ejo/26.5.507
21. Newton JT, Bower EJ. The social determinants of oral health: new approaches to conceptualizing and researching complex causal networks. *Community Dent Oral Epidemiol.* 2005;33(1):25-34. doi:10.1111/j.1600-0528.2004.00190.x
22. Kisely S, Quek LH, Pais J, Laloo R, Johnson NW, Lawrence D. Advanced dental disease in people with severe mental illness: systematic review and meta-analysis. *Br J Psychiatry.* 2011;199(3):187-193. doi:10.1192/bjp.bp.110.081695
23. Kunrath I, Silva AER. Oral health and depressive symptoms among older adults: longitudinal study. *Aging Ment Health.* 2021;25(12):2265-2271. doi:10.1080/13607863.2020.1855104
24. Skallevoid HE, Rokaya N, Wongsirichat N, Rokaya D. Importance of oral health in mental health disorders: An updated review. *J Oral Biol Craniofac Res.* 2023;13(5):544-552. doi:10.1016/j.jobcr.2023.06.003
25. Okamoto N, Morikawa M, Tomioka K, Yanagi M, Amano N, Kurumatani N. Association between tooth loss and the development of mild memory impairment in the elderly: the Fujiwara-kyo Study. *J Alzheimers Dis.* 2015;44(3):777-786. doi:10.3233/JAD-141665
26. Luo J, Wu B, Zhao Q, et al. Association between tooth loss and cognitive function among 3063 Chinese older adults: a community-based

- study. PLoS One. 2015;10(3):e0120986. Published 2015 Mar 24. doi:10.1371/journal.pone.0120986
27. Allen PF, McMillan AS. A review of the functional and psychosocial outcomes of edentulousness treated with complete replacement dentures. J Can Dent Assoc. 2003;69(10):662.
28. Heydecke G, Thomason JM, Lund JP, Feine JS. The impact of conventional and implant supported prostheses on social and sexual activities in edentulous adults Results from a randomized trial 2 months after treatment. J Dent. 2005;33(8):649-657. doi:10.1016/j.jdent.2005.01.003
29. Awad MA, Lund JP, Shapiro SH, et al. Oral health status and treatment satisfaction with mandibular implant overdentures and conventional dentures: a randomized clinical trial in a senior population. Int J Prosthodont. 2003;16(4):390-396.
30. Feine JS, Carlsson GE, Awad MA, et al. The McGill consensus statement on overdentures. Mandibular two-implant overdentures as first choice standard of care for edentulous patients. Gerodontology. 2002;19(1):3-4.
31. Thomason JM, Feine J, Exley C, et al. Mandibular two implant-supported overdentures as the first choice standard of care for edentulous patients--the York Consensus Statement. Br Dent J. 2009; 207(4):185-186. doi:10.1038/sj.bdj.2009.728
32. Ali Z, Baker SR, Shahrbaq S, Martin N, Vettore MV. Oral health-related quality of life after prosthodontic treatment for patients with partial edentulism: A systematic review and meta-analysis. J Prosthet Dent. 2019;121(1):59-68.e3. doi:10.1016/j.prosdent.2018.03.003
33. Müller F, Duvernay E, Loup A, Vazquez L, Herrmann FR, Schimmel M. Implant-supported mandibular overdentures in very old adults: a randomized controlled trial. J Dent Res. 2013;92(12 Suppl):154S-60S. doi:10.1177/0022034513509630
34. Thomason JM, Kelly SA, Bendkowski A, Ellis JS. Two implant retained overdentures--a review of the literature supporting the McGill and York consensus statements. J Dent. 2012;40(1):22-34. doi:10.1016/j.jdent.2011.08.017
35. Schimmel M, Srinivasan M, McKenna G, Müller F. Effect of advanced age and/or systemic medical conditions on dental implant survival: A systematic review and meta-analysis. Clin Oral Implants Res. 2018;29 Suppl 16:311-330. doi:10.1111/clr.13288
36. Srinivasan M, Meyer S, Mombelli A, Müller F. Dental implants in the elderly population: a systematic review and meta-analysis. Clin Oral Implants Res. 2017;28(8):920-930. doi:10.1111/clr.12898
37. Schierz O, Baba K, Fueki K. Functional oral health-related quality of life impact: A systematic review in populations with tooth loss. J Oral Rehabil. 2021;48(3):256-270. doi:10.1111/joor.12984
38. John MT, Feuerstahler L, Waller N, et al. Confirmatory factor analysis of the Oral Health Impact Profile. J Oral Rehabil. 2014;41(9):644-652. doi:10.1111/joor.12191
39. Sischo L, Broder HL. Oral health-related quality of life: what, why, how, and future implications. J Dent Res. 2011;90(11):1264-1270. doi:10.1177/0022034511399918
40. World Health Organization. Global Oral Health Status Report. Geneva: WHO; 2022.
41. Peres MA, Macpherson LMD, Weyant RJ, et al. Oral diseases: a global public health

- challenge. *Lancet*. 2019;394(10194):249-260. doi: 10.1016/S0140-6736(19)31146-8
42. Watt RG, Daly B, Allison P, et al. Ending the neglect of global oral health: time for radical action. *Lancet*. 2019;394(10194):261-272. doi:10.1016/S0140-6736(19)31133-X
43. Linn TT, Khaohoen A, Thu KM, Rungsiyakull P. Oral-Health-Related Quality of Life in Elderly Edentulous Patients with Full-Arch Rehabilitation Treatments: A Systematic Review. *J Clin Med*. 2024 Jun 10;13(12):3391. doi: 10.3390/jcm13123391. PMID: 38929921; PMCID: PMC11204181.
44. I.İşıl Buyukhatipoglu, Derya Doğan Evlice, Fatih Sarı, Derya Gürsel Sürmelioglu. Evaluation of the Oral Health-Related Quality of Life in Edentulous Patients Treated with Implant-Supported Prostheses: A Cross-Sectional Study. *Cumhuriyet Dent J*. 2025 Dec. 1;28(4):475-82. doi:10.7126/cumudj.1683953
45. Glick M, Williams DM. FDI Vision 2030: Delivering Optimal Oral Health for All. *Int Dent J*. 2021 Feb;71(1):3-4. doi: 10.1016/j.identj.2020.12.026. Epub 2021 Jan 18. PMID: 33478782; PMCID: PMC9188664.
46. Heaton LJ, Santoro M, Tiwari T, et al. Mental Health, Socioeconomic Position, and Oral Health: A Path Analysis. *Prev Chronic Dis*. 2024;21:E76. Published 2024 Oct 3. doi:10.5888/pcd21.240097
47. Amaral Júnior OLD, Fagundes MLB, Bastos LF, et al. Dental visits and depression mediating the association of socioeconomic status with oral health behaviors. *Braz Oral Res*. 2023;36:e094. Published 2023 Jan 16. doi:10.1590/1807-3107bor-2022.vol36.0094