IJCRT.ORG ISSN : 2320-2882

INTERNATIONAL JOURNAL OF CREATIVE RESEARCH THOUGHTS (IJCRT)

An International Open Access, Peer-reviewed, Refereed Journal

Complete Edentulism and Its Association with Sociodemographic Variables: A Review

[1]Dr.Nazish Baig, [2]Dr.Namrata Baste, [3]Dr.Babita Yeshwante, [4]Dr.Shivani Kapoor, [5]Dr.Rutuja Rajmane

[1]MDS, Professor and PG Guide, Department of Prosthodontics, Chhatrapati Shahu Maharaj Shikshan Sanstha's Dental College and Hospital, Kanchanwadi, Chhatrapati Sambhajinagar, Maharashtra.

[2]MDS student, Department of Prosthodontics, Chhatrapati Shahu Maharaj Shikshan Sanstha's Dental College and Hospital, Kanchanwadi, Chhatrapati Sambhajinagar, Maharashtra.

[3]MDS, Professor and Head of the Department, Department of Prosthodontics, Chhatrapati Shahu Maharaj Shikshan Sanstha's Dental College and Hospital, Kanchanwadi, Chhatrapati Sambhajinagar, Maharashtra.

[4]MDS student, Department of Prosthodontics, Chhatrapati Shahu Maharaj Shikshan Sanstha's Dental College and Hospital, Kanchanwadi, Chhatrapati Sambhajinagar, Maharashtra.

[5]MDS student, Department of Prosthodontics, Chhatrapati Shahu Maharaj Shikshan Sanstha's Dental College and Hospital, Kanchanwadi, Chhatrapati Sambhajinagar, Maharashtra.

Abstract: Complete edentulism remains a significant public health concern worldwide, posing adverse functional, aesthetic, and psychosocial consequences. Its prevalence, however, exhibits striking variability across different populations, influenced by a multitude of sociodemographic determinants such as age, gender, socioeconomic status, educational attainment, geographical location, and systemic health conditions. This review looks into how being fully edentulous is connected with different social and demographic factors. It brings together global data to show how these relationships can shape real-world dental care and influence public health efforts. An understanding of these associations is essential for the formulation of targeted preventive strategies and equitable prosthodontic care delivery.

INTRODUCTION:

Complete edentulism, defined as the total loss of natural dentition, represents an irreversible oral health condition that significantly compromises mastication, phonetics, facial aesthetics, and quality of life. Despite advancements in preventive dentistry and prosthetic rehabilitation modalities, the global burden of edentulism remains substantial, particularly among aging populations. While the biological factors of tooth loss, such as caries and periodontal disease, are well-documented, the overarching influence of sociodemographic factors warrants nuanced exploration.

The prevalence of edentulism reflects not only individual oral health behaviors but also broader societal disparities. Sociodemographic variables—including age, sex, education, income, employment status, cultural norms, and access to healthcare—have emerged as potent determinants of tooth loss. These factors may modulate health-seeking behaviors, patterns of dental service utilization, and adherence to preventive regimens, thereby influencing the onset and progression of oral diseases culminating in edentulism.

EPIDEMIOLOGY OF COMPLETE EDENTULISM:

Globally, the prevalence of complete edentulism exhibits considerable heterogeneity, with marked variations across nations and socioeconomic strata. Developed nations have witnessed a gradual decline in edentulism prevalence due to enhanced preventive strategies, fluoride exposure, and improved oral health literacy. Conversely, low- and middle-income countries continue to grapple with high rates of edentulism, driven by limited access to dental services and suboptimal health infrastructure.

According to the World Health Organization (WHO), approximately 30% of individuals aged 65–74 years are edentulous globally[1]. However, regional studies reveal divergent patterns; for instance, in Scandinavian countries, edentulism among older adults has decreased significantly over recent decades[2], whereas several Asian and African nations report persistently elevated rates[3,4].

.

SOCIODEMOGRAPHIC VARIABLES INFLUENCING EDENTULISM:

1. Age-

Age remains the most consistent predictor of edentulism. The cumulative effects of dental diseases over a lifetime, compounded by diminishing regenerative capacity and increased systemic comorbidities, render older individuals more susceptible[5,6] .

2. Gender-

Sex-specific disparities in edentulism have been reported, although findings are often conflicting. Some studies indicate higher prevalence among women, attributed to greater longevity, differential health behaviors, and hormonal influences on periodontal health[7,8]. Conversely, other reports associate higher edentulism rates with men, linked to higher tobacco usage and occupational risks[9].

3. Socioeconomic Status-

Socioeconomic gradients profoundly impact edentulism prevalence. Individuals with lower income and occupational status are disproportionately affected due to reduced access to preventive care, poor dietary patterns, and limited health literacy[10,11].

4. Educational Attainment-

Education exerts an independent protective effect against tooth loss. Higher educational levels correlate with greater health awareness, better oral hygiene practices, and increased utilization of dental services[12,13].

5. Geographic Location (Urban vs. Rural)-

Urban-rural disparities in edentulism persist globally. Rural populations frequently encounter barriers such as scarcity of dental professionals, infrastructural deficiencies, and reduced health-seeking behavior[14,15].

6. Ethnicity and Cultural Factors-

Ethnic minorities and indigenous populations often exhibit heightened vulnerability to tooth loss, reflecting historical marginalization, socioeconomic inequities, and culturally specific dietary habits[16,17].

7. Systemic Health Conditions-

Chronic conditions such as diabetes mellitus, cardiovascular disease, and osteoporosis are associated with increased tooth loss due to their influence on periodontal health and healing capacity[18,19].

PSYCHOSOCIAL IMPLICATIONS OF EDENTULISM:

Beyond functional limitations, edentulism exerts profound psychological consequences, including depression, social withdrawal, and impaired self-esteem[20,21]. These effects are frequently exacerbated among socioeconomically disadvantaged groups, who may lack access to high-quality prosthodontic rehabilitation.

CLINICAL IMPLICATIONS FOR PROSTHODONTISTS:

Recognition of sociodemographic determinants is imperative for prosthodontists in tailoring treatment plans and preventive interventions. Culturally sensitive, patient-centered approaches should be integrated into prosthodontic care to address disparities. Moreover, collaboration with public health policymakers can foster initiatives aimed at reducing edentulism through targeted outreach and education programs

FUTURE DIRECTIONS AND RESEARCH NEEDS:

Despite considerable epidemiological evidence, significant gaps remain in understanding the longitudinal dynamics of edentulism and its modifiable risk factors. Future research should prioritize:

- Longitudinal cohort studies assessing the causal pathways between sociodemographic variables and edentulism.
- Intervention trials evaluating community-based preventive strategies.

Qualitative investigations exploring patient perceptions of tooth loss across diverse sociocultural settings.

CONCLUSION:

Complete edentulism remains a significant health challenge, disproportionately affecting vulnerable groups and contributing to broader social and clinical disparities.. The interplay between sociodemographic variables and edentulism is complex, encompassing economic, educational, geographic, and cultural dimensions. Addressing these determinants through integrated clinical and public health strategies is pivotal for mitigating the global edentulism burden and enhancing the quality of life for edentulous individuals.

REFERENCES:

1. World Health Organization. Oral Health Report 2022.
2. Müller F, Naharro M, Carlsson GE. What are the prevalence and incidence of tooth loss in the adult and elderly population in Europe? Clin Oral Implants Res. 2007;18(S3):2–14.
3. 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.
4. Glick M et al. The Oral Health Atlas: Mapping a Complex and Global Issue. FDI World Dental Federation, 2015.
5. Kassebaum NJ et al. Global burden of severe tooth loss: a systematic review and meta-analysis. J Dent Res. 2014;93(7_suppl):20S–28S.
6. Slade GD et al. Major correlates of tooth loss among older adults in the United States. J Aging Health. 2014;26(5):927–948.
7. Peres MA et al. Gender differences in tooth loss trends among Brazilian adults: 1986–2010. Community Dent Oral Epidemiol. 2015;43(6):490–498.
8. Lukacs JR. Sex differences in dental caries rates with the origin of agriculture in South Asia. Curr Anthropol. 2011;52(4):566–573.
9. Al Agili DE et al. Socioeconomic indicators and edentulism prevalence among adults in Saudi Arabia. Saudi Dent J. 2020;32(2):85–91.
10. Dye BA et al. Tooth loss among adults aged ⩾65 years—United States, 2011 – 2016. MMWR Morb Mortal Wkly Rep. 2019;68(34):765 – 770.
11. Sanders AE et al. Social determinants of edentulism among older adults in Australia. Aust Dent J. 2006;51(2):124–130.
12. Silva-Junior MF et al. The influence of socioeconomic and clinical variables on tooth loss among Brazilian adults. Braz Dent J. 2017;28(3):314–320.
13. Holmlund A et al. Socioeconomic factors and tooth loss in an adult Swedish population. Community Dent Oral Epidemiol. 2013;41(4):321–329.
14. Vargas CM et al. Oral health status of older rural adults in the United States. J Am Dent Assoc. 2001;132(4):487–495.
15. Bali RK et al. Rural-urban disparities in tooth loss among older adults in India. Gerodontology. 2018;35(2):148–155.
16. Mejia GC et al. Inequalities in dental caries experience among Indigenous and non-Indigenous Australian children. Community Dent Oral Epidemiol. 2014;42(6):546–553.
17. Jamieson LM et al. Indigenous disparities in oral health in Australia: a scoping review. BMC Oral Health. 2020;20(1):1–11.
18. Taylor GW et al. Diabetes, periodontal diseases, tooth loss, and oral functional disability in US adults. J Dent Res. 2004;83(2):115–121.

19. Al-Shammari KF et al. Risk indicators for tooth loss due to periodontal disease. J Periodontol. 2005;76(11):1910–1918.
20. Gerritsen AE et al. Tooth loss and oral health-related quality of life: a systematic review and meta-analysis. Health Qual Life Outcomes. 2010;8:126.
21. Brennan DS et al. Oral health impacts of tooth loss and dentures among older adults in Australia. Int J Prosthodont. 2008;21(4):310–312.
22. Emami E et al. The impact of edentulism on oral and general health. Int J Prosthodont. 2013;26(2):117–119.
23. Kiyak HA. Reducing barriers to dental care for the aging population. Public Health Dent. 1991;51(4):232–245.
24. Zitzmann NU, Hagmann E, Weiger R. What is the prevalence of various types of prosthetic dental restorations in Europe? Clin Oral Implants Res. 2007;18(S3):20–33.
25. MacEntee MI et al. Prosthodontic interventions for edentulous elders: Part 1. Quality of life outcomes. Int J Prosthodont. 2001;14(2):102–108.