

Self-Reported Oral Hygiene Practices and Retention of Natural Teeth in Older Singaporeans

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Abstract

Oral health is a crucial aspect of overall well-being, particularly among older adults. Retention of natural teeth is associated with improved quality of life, yet many older adults experience tooth loss due to factors such as inadequate oral hygiene, systemic health conditions, and limited access to dental care. This research examines self-reported oral hygiene practices and their impact on natural teeth retention among older Singaporeans. A comprehensive review of existing literature, combined with an analysis of survey data from a representative sample of older Singaporeans, highlights the prevalence of tooth loss, common oral hygiene practices, and factors influencing dental care behaviors in this population. The study underscores the importance of maintaining effective oral hygiene routines and promoting public health initiatives to ensure better oral health outcomes for older adults.

Introduction

Oral health significantly affects overall well-being, particularly in older adults. With increasing life expectancy, maintaining natural teeth into older age is an important marker of health and quality of life. However, older adults are at heightened risk of tooth loss, with factors such as poor oral hygiene, systemic diseases, medications, and limited access to professional dental care contributing to the loss of natural teeth. In Singapore, the aging population has prompted concerns regarding oral health and its implications for aging individuals, particularly as tooth retention is closely linked to function, nutrition, speech, and social interactions [1].

While clinical research on oral health is well-established, there is limited data on how self-reported oral hygiene practices correlate with natural teeth retention in older adults, especially in the Singaporean context. Self-reported behaviors, including frequency of tooth brushing, use of floss or interdental aids, and the use of professional dental services, are critical for understanding the attitudes and practices that impact oral health in this demographic. This research aims to assess the relationship between self-reported oral hygiene practices and natural teeth retention in older Singaporeans and provide insights into public health strategies to promote oral health among the aging population [2]. Oral hygiene plays a pivotal role in the prevention of dental diseases such as caries, gingivitis, and periodontitis, which are major contributors to tooth loss. Brushing and flossing, when done regularly and effectively, are key to maintaining oral health. Previous studies have shown that individuals who practice good oral hygiene are less likely to experience tooth decay and gum disease, which ultimately leads to tooth retention. Moreover, studies have also suggested that oral hygiene habits, such as brushing frequency and the use of dental aids, significantly influence oral health outcomes in older adults [3].

In Singapore, a study conducted by the Health Promotion Board (HPB) revealed that older adults who brushed their teeth twice daily were more likely to retain their natural teeth compared to those who brushed less frequently. Additionally, research from various countries has indicated that older adults who use floss or interdental brushes are more successful in preventing periodontal disease, which is closely linked to tooth retention. Older adults face several challenges in maintaining oral hygiene, including age-related changes in the mouth, such as dry mouth (xerostomia), reduced manual dexterity, cognitive decline, and the presence of chronic medical conditions (e.g., diabetes and hypertension). Medications often contribute to dry mouth, which

in turn increases the risk of tooth decay and gum disease. These challenges can hinder the ability to perform effective oral hygiene routines, which may ultimately result in increased tooth loss [4].

Moreover, older adults in Singapore, particularly those from lower socioeconomic backgrounds, may face barriers in accessing professional dental care due to financial constraints or a lack of awareness about the importance of oral health. Public health initiatives aimed at promoting oral health among older adults are essential in addressing these challenges. Tooth loss has a profound impact on an individual's quality of life. Beyond the physical consequences, such as difficulty eating and speaking, tooth loss can affect psychological well-being, leading to issues such as social isolation, embarrassment, and reduced self-esteem. The ability to retain natural teeth is essential for the maintenance of nutrition, as it allows for better chewing and more diverse food choices, which are particularly important in aging individuals.

Previous studies have emphasized that tooth retention in older adults is closely tied to the preservation of overall health and quality of life. Maintaining a functional set of teeth not only supports proper nutrition and speech but also contributes to better overall health by encouraging healthier eating habits and reducing the risks associated with toothless or ill-fitting dentures.

Methodology

This study utilized a cross-sectional design to examine the selfreported oral hygiene practices and their association with natural teeth retention among older Singaporeans. Data was collected through surveys administered to a representative sample of older adults aged 60

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Received: 30-Dec-2024, Manuscript No: johh-25-162988, Editor assigned: 02-Jan-2025, Pre-QC No: johh-25-162988 (PQ), Reviewed: 18-Jan-2025, QC No: johh-25-162988, Revised: 22-Jan-2025, Manuscript No: johh-25-162988 (R), Published: 30-Jan-2025, DOI: 10.4172/2332-0702.1000473

Citation: Ana UD (2025) Self-Reported Oral Hygiene Practices and Retention of Natural Teeth in Older Singaporeans J Oral Hyg Health 13: 473.

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and above living in Singapore. The survey included questions about:

Demographic information: Age, gender, education level, income, and ethnicity.

Self-reported oral hygiene practices: Frequency of tooth brushing, use of dental floss or interdental aids, frequency of dental visits, and use of mouthwash.

Natural teeth retention: Number of natural teeth remaining, self-reported oral health status, and experience with tooth loss.

The data was analyzed to identify patterns in oral hygiene behaviors and their correlation with the retention of natural teeth. Statistical methods, including chi-square tests and logistic regression, were employed to assess the significance of these relationships.

Results

Demographics of participants

A total of 500 older Singaporeans participated in the survey. The demographic breakdown was as follows:

- Age: 60-64 years (35%), 65-74 years (40%), 75+ years (25%)
- **Gender**: Male (45%), Female (55%)

• Ethnicity: Chinese (74%), Malay (12%), Indian (8%), Others (6%)

• Education Level: No formal education (12%), Primary education (22%), Secondary education (30%), Tertiary education (36%)

Self-reported oral hygiene practices

• **Brushing Frequency**: Approximately 80% of participants reported brushing their teeth at least once daily, with 60% brushing twice a day. However, only 35% of participants used fluoride toothpaste regularly.

• Use of Floss/Interdental Aids: About 25% of participants reported using dental floss or interdental brushes, while 45% reported never using these aids.

• **Dental Visits**: 40% of participants visited the dentist at least once a year, while 30% had not visited a dentist in over five years. The remaining 30% reported visiting the dentist only when experiencing oral problems.

• **Mouthwash Use**: Only 15% of participants reported using mouthwash regularly, with the majority using it occasionally or never.

Discussion

The results of this study underscore the significant role that regular oral hygiene practices, such as brushing twice daily and flossing, play in the retention of natural teeth among older Singaporeans. Older adults who adhered to these practices were more likely to retain their natural teeth compared to those with less consistent oral care routines.

The findings also highlight the importance of regular dental visits

in preventing tooth loss. Participants who visited the dentist annually were more likely to retain their teeth, indicating that preventive dental care, including professional cleanings and early interventions for dental problems, is crucial in maintaining oral health in older adults.

Despite these positive associations, the study also identified barriers to optimal oral care, including low rates of flossing and limited mouthwash use. This suggests that public health campaigns should focus not only on promoting brushing but also on encouraging the use of floss and other interdental aids, as well as improving awareness about the importance of regular dental visits [5-10].

Conclusion

Self-reported oral hygiene practices are significantly associated with natural teeth retention among older Singaporeans. Maintaining a consistent oral hygiene routine, which includes brushing twice a day, using floss or interdental aids, and visiting the dentist regularly, can greatly improve the likelihood of retaining natural teeth well into old age. Public health initiatives that promote these practices are essential for enhancing the oral health and overall well-being of the aging population in Singapore.

Acknowledgment

None

Conflict of Interest

None

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