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Oral Health Challenges in Older Adults: A Narrative Review of Oral Health Literacy Programs

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AUTHOR BIOGRAPHY

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ABSTRACT

Optimal oral health is vital for healthy aging, yet older populations face significant oral health challenges due to inadequate oral health literacy (OHL). This narrative review aims to analyze trends in current OHL programs for older adults to guide the development of effective interventions in the future. Relevant literature was identified through searches of PubMed and Google Scholar using terms related to oral health literacy and older adults, supplemented by a review of the reference lists of relevant articles. Studies were selected based on their relevance to oral health literacy programs in older populations; this review discusses 14 such studies. The review revealed significant diversity in program methodologies, ranging from direct educational interventions for older adults to indirect training for caregivers and healthcare providers. Delivery methods varied from traditional in-person sessions to technology-integrated platforms. Despite short-term successes, the literature demonstrates common limitations, including methodological weaknesses such as small sample sizes and short follow-up durations. Furthermore, implementation can also be hindered by caregiver resource constraints and older adults' cognitive or technological barriers. Future initiatives must prioritize rigorous, long-term studies, tailor educational interventions to specific vulnerable populations, and implement comprehensive caregiver training to effectively bridge the OHL gap.

Keywords: *Oral health literacy, narrative review, older adults, geriatric care, preventive dentistry, digital health interventions, Oral education program, Oral intervention program, Oral health literacy program*

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INTRODUCTION

Maintaining optimal oral health is an increasingly recognized component of healthy aging, encompassing not only physical and mental well-being but also contributing significantly to overall quality of life (Bölükbaşı & Dündar, 2024; Yu et al., 2024). Unfortunately, poor oral health is a pervasive problem within the older population, leading to a decline in their quality of life. National Health and Nutrition Examination Survey data indicated that approximately 40% of adults aged 65 and older experience significant tooth loss, with about 13% who have lost all of their teeth (Centers for Disease Control and Prevention [CDC], 2025). Oral diseases, though largely preventable, impose a significant and unduly high global burden in terms of prevalence and disability-adjusted life-years (Marcenes et al., 2013; Patel et al., 2021; Vos et al., 2020), with policy and care-scheme responses varying widely across countries (Jiang et al., 2021). A critical underlying factor exacerbating these oral health issues in the elderly population is the prevailing inadequacy in their oral health literacy. This deficit in oral health literacy stems from a lack of effective educational interventions specifically tailored for older adults, which could otherwise empower them to engage in preventive behaviors and seek appropriate care (Bashirian et al., 2023). Therefore, the purpose of this article is to identify and analyze the trends within these programs to provide a foundation for future researchers to develop universal programs that aim not just at literacy but, more importantly, at improving oral health for the elderly.

METHODOLOGY

This article is a narrative review of the literature on oral health literacy programs for older adults. A narrative review was chosen to synthesize a heterogeneous body of interventions, identify their common characteristics, and highlight gaps in current research and practice. Relevant literature was identified and synthesized based on its relevance to the review's focus.

Literature was identified primarily through searches of PubMed and Google Scholar. Search terms combined concepts related to oral health literacy (e.g., "oral health literacy," "oral health education," "oral health promotion") with terms for older populations (e.g., "older adults," "elderly," "geriatric," "aged"). The reference lists of relevant articles were also reviewed to identify additional sources, and no date restrictions were applied.

The review focuses on research involving older adults, generally defined as individuals aged 65 years and older, or studies with a mean participant age of 65 years or above. Studies were selected for the discussion based on the inclusion of components, strategies, interventions, policies, and initiatives related to an Oral Health Literacy (OHL) approach to oral health, encompassing the prevention of periodontal disease and other oral conditions. Relevant study types included randomized controlled trials, quasi-experimental studies,

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observational studies (including cohort and case studies), and qualitative studies. Only English-language publications were considered. The characteristics of the studies discussed are summarized in Table 1.

As a narrative review, this paper did not use a systematic search protocol or dual-reviewer screening. Studies were identified and selected by a single author based on relevance, which introduces potential selection bias and means some relevant studies may not have been captured. The review also did not include a formal risk-of-bias appraisal of the studies discussed.

Table 1

Characteristics of the 14 Included Studies

Study	Setting / Country	Target & Population	Delivery & Duration	Focus & Key Findings
Ayuningtyas et al. (2023)	Geriatric community (Indonesia)	Older adults — direct	In-person counseling with demonstrations + educative booklets	Aging-related oral health problems; improved knowledge
Choi et al. (2024)	Senior welfare centers, Korea (public–private–academic partnership)	Older adults — direct	Tailored hygienist-led care + self–plaque-management instruction; care given 1–2 times	General, systemic & periodontal status; self-management of dental plaque
Gu et al. (2024)	Geriatric care facilities, Shanghai, China	Healthcare providers / staff — indirect	Oral health promotion program; pre/post-implementation design	Standardizing institutional oral care; program feasibility
Jang et al. (2024)	Community, Los Angeles, USA (older Korean-American Medi-Cal enrollees)	Older adults — direct	Digital intervention via computer/Internet; self-running PowerPoint with video links	Preventive dental care; knowledge of oral disease, hygiene, insurance
Jeong et al. (2024)	Senior welfare centers, Korea	Older adults — direct	Professional oral care + daily oral-function exercises; 8 weeks	Oral health status & function; reduced halitosis, increased salivation

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Study	Setting / Country	Target & Population	Delivery & Duration	Focus & Key Findings
Ki et al. (2021)	Community-based integrated care, Korea	Older adults — direct	Mobile app (OHEMA) via 1:1 home visits; videos, workbooks, posters; 6 weeks (RCT)	Oral health & swallowing-related quality of life
Park, Jeong & Jang (2023)	Community care, Korea	Older adults with halitosis + intensive caregiver education — mixed	Home oral care; oral hygiene care + oral muscle training; 12 weeks	Reduced volatile sulfur compounds (halitosis); improved oral health
Romalee et al. (2023)	Community-dwelling older adults (Taiwan)	Older adults — direct	Mobile augmented-reality–integrated oral health education (RCT)	Effectiveness and engagement of AR-based OHL education
Shokouhi et al. (2019)	Community, Iran (healthy elderly)	Older adults — direct	15-min individual training with motivational interviewing + dental moulages; group discussion; text-message support; 6 wks, 3- & 6-mo follow-up (RCT)	Oral-health-related quality of life
Song & Hwang (2017)	Community centers, Korea	Older adults — direct	Visits with exams + individual education; scaling and fluoride plus education; 5-year program	Effectiveness of a long-term community oral health program
Sun et al. (2021)	Rural community-bas	Older adults — direct	30-min session using "EZ to read"	Improved oral health literacy via easy-to-read materials

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Study	Setting / Country	Target & Population	Delivery & Duration	Focus & Key Findings
	ed care centers (Taiwan)		PowerPoint slides (quasi-experimental)	
Wong & Leung (2024)	Long-term care institutions (Hong Kong)	Healthcare providers / nurses — indirect	Weekly lessons with educational + practical demonstration sessions; sustainability follow-up	Sustained provider knowledge and oral-care provision
Xiao et al. (2025)	Tertiary hospital, China	Older type 2 diabetes patients — direct	Periodontal health intervention (RCT)	Periodontal and oral-health outcomes in older T2DM patients
Yin et al. (2025)	Community, China (older adults with mild cognitive impairment)	Older adults with MCI — direct	Online interactive platform vs. face-to-face; 3-month intervention (RCT protocol)	Oral health behaviors (study protocol — outcomes pending)

Note. OHL = oral health literacy; RCT = randomized controlled trial; MCI = mild cognitive impairment; T2DM = type 2 diabetes mellitus. "Direct" denotes interventions delivered to older adults; "indirect" denotes interventions delivered through caregivers or healthcare providers.

ORAL HEALTH LITERACY: A KEY DETERMINANT OF ORAL HEALTH IN OLDER ADULTS

Limited oral health literacy among older adults significantly impacts their ability to maintain good oral health, leading to a range of adverse outcomes. This is because OHL encompasses the cognitive and social skills that shape an individual's motivation and ability to access, understand, and use health information to promote and maintain good health (Amoah et al., 2022). When these skills are lacking, it directly contributes to poor oral health (Amoah et al., 2022). Significant correlations have been identified between OHL and various oral health indicators in older adults. These include periodontitis, the number of remaining teeth, dental prosthesis use, oral hygiene practices, levels of dental anxiety, and overall dissatisfaction with oral health-related quality of life among men (Ju et al., 2025; King et al., 2023; Olson et al., 2022; Yu et al., 2024). This suggests that inadequate OHL hinders individuals from making appropriate oral health decisions and engaging in preventive services.

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Beyond oral-specific issues, poor oral hygiene resulting from low OHL can predispose individuals to developing certain systemic health conditions, such as diabetes mellitus or cardiovascular disease (Desai & Nair, 2023). Therefore, improving oral health literacy levels among the elderly is a significant public health issue that requires targeted interventions.

CORRELATION OF POOR ORAL HEALTH AND LACK OR INEFFECTIVENESS OF OHL PROGRAMS

A demonstrable lack or ineffectiveness of existing Oral Health Literacy programs exacerbates the issue of poor oral health among older adults. A significant contributor is the scarcity and deprioritization of comprehensive, age-appropriate OHL initiatives for elderly population (Yu et al., 2024), calling the need for age-appropriate assessment tools and better integration into broader health initiatives. Furthermore, even where programs might exist, access barriers such as the cost of treatment, anxiety, and transportation hinder older adults from receiving Oral health treatment (Ghanbari-Jahromi et al., 2023), a problem particularly acute for community-dwelling frail individuals whose access to dental care is limited by chronic diseases and mobility issues (Ho et al., 2021). In a sample of 21 assisted living facilities contacted post-COVID-19, 17 (94.4%) had no oral healthcare program at all, directly linking program absence to inadequate oral disease prevention. Gatekeeper challenges (e.g., concierges unwilling to transfer calls) and feasibility concerns (e.g., uncertainty about oral health service necessity and resident safety) further impeded implementation of even no-cost, virtual dental hygiene-led educational programs (Attanasi & Raveis, 2020). Beyond this absence, the ineffectiveness of current OHL interventions also plays a critical role. Many programs suffer from methodological weaknesses, being neither comprehensive nor comparable enough to draw strong conclusions, featuring insufficient details on randomization, small sample sizes, heterogeneity, and short follow-up durations (Csikar et al., 2025; Rossi et al., 2020). While some interventions show short-term success in increasing knowledge and basic behaviors (Bashirian et al., 2023), their long-term impact on sustained behavioral change and clinical outcomes is often inadequately demonstrated (Csikar et al., 2025). Consequently, unaddressed programmatic shortcomings perpetuate poor oral health among older adults, underscoring the need for robust, evidence-based interventions.

SIMILARITIES AND DIFFERENCES OF METHODOLOGY (HOW PROGRAMS WERE CARRIED OUT)

The methodologies employed across various Oral Health Literacy programs for older adults reveal both common strategies and distinct approaches, shaped by their specific goals, target populations, and available resources.

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Target Audience and Setting

A primary differentiation in methodologies lies in the target audience: whether the intervention directly addresses older adults or indirectly reaches them through their caregivers and healthcare providers. Several programs directly targeted older adults residing in community settings. For instance, Ayuningtyas et al. (2023) and Sun et al. (2021) delivered educational content in geriatric communities and rural community-based care centers, respectively. Song & Hwang (2017) also focused on the elderly in the community through visits to various community centers, providing examinations and individual education. Shokouhi et al. (2019) targeted healthy elderly, while Choi et al. (2024) recruited older adults from senior welfare centers for a customized program. Jeong et al. (2024) similarly reached older adults at senior welfare centers with an 8-week program. Yin et al.'s (2025) study protocol and Ki et al.'s (2021) OHEMA app intervention both targeted community-based elderly, with Yin et al. (2025) specifically focusing on those with mild cognitive impairment.

In contrast, programs like Wong & Leung's (2024) and Gu et al.'s (2024) concentrated on healthcare providers and nurses in long-term care institutions and geriatric facilities, aiming to enhance their capacity to deliver oral care to residents. Park, Jeong, & Jang's (2023) intervention, while directed at older adults with halitosis in a community care project, heavily involved intensive caregiver education, bridging the gap between direct and indirect approaches.

Delivery Methods and Technological Integration

The methods of delivering OHL education varied significantly, ranging from traditional in-person sessions to advanced technological solutions. Many programs utilized direct, in-person educational sessions. Ayuningtyas et al. (2023) employed educational counseling with demonstrations and educative booklets , while Sun et al. (2021) delivered 30-minute health education courses using "EZ to read" PowerPoint slides. Wong & Leung's (2024) program for healthcare providers involved weekly lessons with both educational and practical demonstration sessions. Shokouhi et al. (2019) utilized a mixed approach, including 15-minute individual in-person training with motivational interviewing and dental moulages, as well as one-hour group discussions. Choi et al.'s (2024) customized program involved tailored oral healthcare and education, including instructions on self-dental plaque management by dental hygienists. Jeong et al.'s (2024) program combined professional oral care sessions with daily oral function exercises.

In contrast, several studies embraced technology to enhance accessibility and engagement. Yin et al. (2025) designed a randomized controlled trial comparing an online interactive platform service with traditional face-to-face education. Ki et al. (2021) utilized a mobile app delivered through customized 1:1 home visits, incorporating videos, workbooks, and posters. Jang et al. (2024) implemented a digital oral health intervention

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via computers and the Internet, using a self-running PowerPoint presentation with links to videos and directories. Romalee et al. (2023) also explored the effectiveness of mobile augmented reality-integrated oral health education. This demonstrates a growing trend toward leveraging digital tools to overcome traditional barriers to access and deliver engaging content.

Intervention Content and Scope

The scope and specific content of the OHL programs were tailored to their objectives. Some focused on general oral health education and awareness, such as Ayuningtyas et al. (2023) on aging-related oral health problems, and Sun et al. (2021) on general OHL. Jang et al. (2024) aimed to promote preventive dental care and address knowledge gaps regarding oral diseases, hygiene, and insurance coverage. Shokouhi et al. (2019) conducted a study focused on the improvement of oral health-related quality of life among the elderly.

Other programs were more specific. Park, Jeong, & Jang (2023) concentrated on improving oral health and reducing halitosis through oral hygiene care and oral muscle training. Jeong et al. (2024) similarly aimed to improve oral health status and function, including reducing halitosis and increasing salivary secretion. Xiao et al. (2025) specifically addressed periodontal health intervention for older type 2 diabetes patients. Gu et al.'s (2024) program aimed to standardize oral care procedures in institutional settings, while Song & Hwang's (2017) community program included clinical services like scaling and fluoride application alongside education. Choi et al.'s (2024) customized program assessed general and systemic health, oral health behaviors and status, and periodontal status, offering tailored education and instruction on self-management of dental plaque.

Providers and Duration of Intervention

Intervention durations also differed, ranging from single, short educational sessions (e.g., Sun et al.'s (2021) 30-minute course to multi-week or multi-month programs. Ki et al.'s (2021) mobile app intervention lasted 6 weeks, Jeong et al.'s (2024) program was 8 weeks, Park, Jeong, & Jang's (2023) home care program spanned 12 weeks, and Yin et al.'s (2025). protocol outlines a 3-month intervention period. Follow-up was also a feature in some studies, such as Yin et al (2025), and the sustainability study by Wong & Leung (2024). Choi et al.'s (2024) program provided tailored care once or twice, indicating a flexible approach to duration. Shokouhi et al.'s (2019) intervention included a 6-week program with a 3-month and 6-month follow-up, and continuous text message support.

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COMMON LIMITATIONS AND AREAS OF IMPROVEMENT

Despite the growing number of oral health literacy programs for older adults, several common limitations and areas for improvement have been identified across the literature. These pertain to methodological aspects of the studies, challenges in program implementation, the long-term sustainability of interventions, and broader issues of access and research quality.

Methodological Limitations of Studies

A significant challenge in evaluating the effectiveness of OHL programs is the methodological quality of the research itself. Many primary studies exhibit limitations such as a lack of randomization, insufficient detail on blinding, and the absence of control groups (Csikar et al., 2025). Some studies, particularly those based on data from community programs, suffer from sampling bias due to the lack of a control group (Song & Hwang, 2017). Furthermore, studies often feature small sample sizes, heterogeneous populations, and variations in intervention design, duration, and outcome measures (Csikar et al., 2025). The duration of follow-up in many studies is short, making it difficult to assess the long-term impact and sustainability of the interventions (Csikar et al., 2025).

Challenges in Program Implementation and Engagement

Implementing effective OHL programs faces several practical hurdles related to both older adults and their caregivers or healthcare providers.

- ***Caregiver-Related Barriers***: Caregivers often play a crucial role in the oral care of older adults but frequently lack adequate oral health knowledge and training (Wong & Leung, 2024). Limited resources, time constraints, and a perception that oral care is a low priority contribute to poor oral hygiene practices among residents in long-term care institutions (Wong & Leung, 2024). Caregivers also report a scarcity of oral health conversations with dental and healthcare providers, highlighting a need for more education and training, especially concerning hands-on care (Crittenden et al., 2025).
- ***Older Adult-Related Barriers***: Older adults themselves may face challenges that hinder their participation and learning in OHL programs. These include potential difficulties in adopting novel technologies (Romalee et al., 2023) and age-related declines in cognitive functions such as processing speed, working memory capacity, and attentional capabilities (Romalee et al., 2023). These factors can compromise the effectiveness of traditional lecture-based educational programs, particularly those that are passive and involve single sessions (Romalee et al., 2023). For institutionalized older adults, factors like limited self-care ability, co-morbidities, multiple medications, and poor immune function further

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exacerbate poor oral health and limit the effectiveness of interventions (Gu et al., 2024). The irreversible nature of some oral health conditions, such as tooth loss, means that interventions can only mitigate further decline, not always restore full oral health (Gu et al., 2024).

Sustainability and Long-Term Impact

A recurring limitation is the difficulty in assessing and ensuring the long-term sustainability and effectiveness of OHL programs. Many studies focus on short-term outcomes, with limited evaluation of whether positive changes in knowledge, attitudes, and practices are maintained over extended periods (Csikar et al., 2025; Wong & Leung, 2024).

RECOMMENDATIONS

Based on the current landscape of oral health literacy programs for older adults, these recommendations aim to enhance the effectiveness, accessibility, and sustainability of OHL interventions.

Recommendations for Future Research

1. ***Conduct Rigorous and Long-Term Studies*:** Future research should prioritize well-designed randomized controlled trials with larger sample sizes, diverse populations, appropriate control groups, and detailed reporting of methodologies. Crucially, studies need to incorporate longer follow-up periods (e.g., 12 months or more) to accurately assess the sustained impact and effectiveness of OHL interventions on behavioral changes and oral health outcomes (Csikar et al., 2025).
2. ***Investigate Technology-Enhanced Interventions*:** Given the potential of digital platforms and mobile applications to overcome accessibility barriers and enhance engagement, further research is needed to explore the effectiveness of various technology-enhanced OHL interventions (e.g., mobile augmented reality (Romalee et al., 2023), online interactive platforms (Yin et al., 2025)). Studies should evaluate user-friendliness, technological adoption rates among older adults, and the optimal blend of digital and in-person components.
3. ***Explore Interventions for Specific Vulnerable Populations*:** More targeted research is required for specific vulnerable groups, such as older adults with mild cognitive impairment (Yin et al., 2025), those in rural settings (Sun et al., 2021), or individuals with co-morbidities like type 2 diabetes (Xiao et al., 2025). Understanding their unique needs and tailoring OHL programs accordingly can lead to more impactful interventions.

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Recommendations for Practice

1. ***Prioritize Caregiver and Healthcare Provider Training:*** Recognize and address the critical role of caregivers and healthcare providers by implementing comprehensive and ongoing OHL training programs for them. This training should include practical, hands-on demonstrations of oral care techniques, information on common oral health issues, and strategies for promoting adherence (Crittenden et al., 2025; Mata & Allen, 2023; Wong & Leung, 2024).
2. ***Tailor Educational Materials for Older Adults:*** Practitioners should ensure that all OHL educational materials are designed with the specific needs of older adults in mind. This includes using "EZ to read" guidelines (simple language, large fonts, clear visuals), employing active voice, and offering information in multiple accessible formats (Sun et al., 2021).
3. ***Leverage Community-Based and Home-Based Models:*** Expand the reach of OHL programs by utilizing community centers, senior welfare centers, and home-visit models to deliver interventions. This approach can reduce barriers to access, such as transportation and physical limitations, and provide care in familiar, comfortable environments (Akinboboye et al., 2025; Park et al., 2023; Song & Hwang, 2017).
4. ***Foster Multi-Disciplinary Collaboration:*** Encourage collaboration between dentists, dental hygienists, nurses, medical doctors, social workers, and other allied health professionals to provide holistic oral health care and OHL education for older adults.

CONCLUSION

Oral health literacy programs play an essential role in supporting the well-being of older adults. This review mapped diverse OHL interventions, spanning various settings and delivery methods, including traditional and digital approaches. Across these programs, outcomes were consistently encouraging—improvements in OHL, beneficial behavioral changes, measurable clinical and periodontal benefits, and enhanced quality of life. Interventions that trained caregivers showed similar promise in extending care to dependent older adults.

These gains, however, must be weighed against recurring methodological weaknesses and practical barriers to implementation that limit how confidently the field can judge what works. Recommendations urge rigorous, long-term research (e.g., technology-enhanced, population-specific), alongside practical strategies, caregiver training, tailored education, and supportive policies (national strategies, geriatric care integration, dental access). Realizing the full potential of OHL for older adults ultimately depends on a concerted, evidence-based effort across research, practice, and policy.

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REFERENCES

Akinboboye, B. O., Malomo, B. I., Gbiri, C. A., Ogunyemi, A. O., Arikawe, A. P., & Obashoro-John, O. A. (2025). Oral health literacy: effectiveness of a homegrown intervention among community-dwelling older Nigerians. *BMC Oral Health*, *25*(1), 1119. https://doi.org/10.1186/s12903-025-06464-7

Amoah, P. A., Boateng, M. O., Koduah, A. O., & Acheampong, P. R. (2022). Interplay of health literacy, healthcare access and health behaviors with oral health status among older persons. *Frontiers in Public Health*, *10*, 997987. https://doi.org/10.3389/fpubh.2022.997987

Attanasi, K., & Raveis, V. E. (2020). Challenges, barriers, strategies implementing an oral hygiene program in assisted living facilities post COVID-19. Innovation in Aging, 4(Suppl. 1), 1063. https://doi.org/10.1093/geroni/igaa057.3426

Ayuningtyas, N. F., Parmadiati, A. E., Mahdani, F. Y., Marsetyo, R. I., Femilian, A., & Siregar, M. (2023). The impact of community empowerment programs on oral health education for knowledge improvement in the elderly. *Journal of Health and Allied Sciences NU, 13(1), 60–63.* https://doi.org/10.1055/s-0042-1748492

Bashirian, S., Khoshravesh, S., Ayubi, E., Karimi-Shahanjarini, A., Shirahmadi, S., & Solaymani, P. F. (2023). The impact of health education interventions on oral health promotion among older people: a systematic review [Review of *The impact of health education interventions on oral health promotion among older people: a systematic review*]. *BMC Geriatrics*, *23*(1). BioMed Central. https://doi.org/10.1186/s12877-023-04259-5

Bölükbaşı, G., & Dündar, N. (2024). Oral health in older adults: current insights and tips. *Journal of Gerontology and Geriatrics*, *72*(2), 96. https://doi.org/10.36150/2499-6564-n700

Centers for Disease Control and Prevention. (2025, January 31). *Adults aged 65+ who have lost all of their natural teeth due to tooth decay or gum disease (by race)*. Centers for Disease Control and Prevention. https://data.cdc.gov/Oral-Health/Adults-aged-65-who-have-lost-all-of-their-natural-/vzr2-2rzq

Choi, J., Bae, S., Shin, S., Shin, B., Yoon, H. Y., & Lee, H. (2024). Case study on an oral health care program for older adults based on a public-private-academic partnership. *Journal of Dental Hygiene Science*, *24*(2), 115. https://doi.org/10.17135/jdhs.2024.24.2.115

Crittenden, J., O'Connell, D., Cushing, C., O'Malley, K. J., & Robertson, E. (2025). Oral health education and training needs among caregivers of older adults: insights from the MOTIVATE at home program. *Journal of Primary Care & Community Health*, *16*. https://doi.org/10.1177/21501319251368704

Csikar, J., Edwebi, S., Vinall-Collier, K., Griffiths, A. W., Devi, R., Wright, J., Wilson, P., Spilsbury, K., & Douglas, G. (2025). Oral health interventions and strategies delivered by care workers to older people living in care homes: an overview of systematic reviews [Review of *Oral health interventions and strategies delivered by care workers to older people living in care homes: an overview of systematic reviews*]. *BMC Oral Health*, *25*(1), 1574. BioMed Central. https://doi.org/10.1186/s12903-025-06943-x

SCHOLARLY REVIEW JOURNAL

E-ISSN: 2996-8380
Published by Leadership & Innovation Lab

SUMMER 2026

Desai, J., & Nair, R. (2023). Oral health factors related to rapid oral health deterioration among older adults: a narrative review. *Journal of Clinical Medicine*, *12*(9), 3202. https://doi.org/10.3390/jcm12093202

Ghanbari-Jahromi, M., Bastani, P., Jalali, F. S., & Delavari, S. (2023). Factors affecting oral and dental services` utilization among Elderly: a scoping review [Review of *Factors affecting oral and dental services` utilization among Elderly: a scoping review*]. *BMC Oral Health*, *23*(1), 597. BioMed Central. https://doi.org/10.1186/s12903-023-03285-4

Gu, L., Zhang, J., Chen, W., Weng, Y., Chen, L., & Zhang, L. (2024). Feasibility of an oral health promotion program among older people in geriatric care facilities, Shanghai, China: a pre/post-implementation study. *BMC Geriatrics*, *24*(1), 272. https://doi.org/10.1186/s12877-024-04870-0

Ho, B. V., Maarel-Wierink, C. D. van der, Rollman, A., Weijenberg, R. A. F., & Lobbezoo, F. (2021). 'Don't forget the mouth!': a process evaluation of a public oral health project in community-dwelling frail older people. *BMC Oral Health*, *21*(1). https://doi.org/10.1186/s12903-021-01884-7

Jang, Y., Park, J., Park, C. Y., Wu, S., Suarez-Durall, P., Chung, S., & Kim, M. T. (2024). Intervention to promote preventive dental care for older Korean-American Medi-Cal enrollees in Los Angeles. *BMC Oral Health*, *24*(1), 332. https://doi.org/10.1186/s12903-024-04113-z

Jeong, A.-J., Kim, N.-S., & Lee, J. H. (2024). Changes in oral health status and function among older adults through professional oral care and rehabilitation exercises. *Journal of Korean Society of Dental Hygiene*, *24*(4), 291. https://doi.org/10.13065/jksdh.20240403

Jiang, M., Chu, C. H., Duangthip, D., Ettinger, R. L., Hugo, F. N., Kettratad-Pruksapong, M., Liu, J., Marchini, L., McKenna, G., Ono, T., Rong, W., Schimmel, M., Shah, N., Slack-Smith, L., Yang, S. X., & Lo, E. C. M. (2021). Global perspectives of oral health policies and oral healthcare schemes for older adult populations [Review of *Global perspectives of oral health policies and oral healthcare schemes for older adult populations*]. *Frontiers in Oral Health*, *2*. Frontiers Media. https://doi.org/10.3389/froh.2021.703526

Ju, L., Chen, Y., Liu, F., & Wen, Y. (2025). Oral health literacy and oral health outcomes among older people: a cross-sectional study. *BMC Public Health*, *25*(1), 732. https://doi.org/10.1186/s12889-025-21965-4

Ki, J.-Y., Jo, S.-R., Cho, K.-S., Park, J., Cho, J.-W., & Jang, J. (2021). Effect of oral health education using a mobile app (OHEMA) on the oral health and swallowing-related quality of life in community-based integrated care of the elderly: a randomized clinical trial. *International Journal of Environmental Research and Public Health*, *18*(21), 11679. https://doi.org/10.3390/ijerph182111679

King, S., Thaliph, A., Laranjo, L., Smith, B. J., & Eberhard, J. (2023). Oral health literacy, knowledge and perceptions in a socially and culturally diverse population: a mixed methods study. *BMC Public Health*, *23*(1), 1446. https://doi.org/10.1186/s12889-023-16381-5

Marcenes, W., Kassebaum, N. J., Bernabé, E., Flaxman, A. D., Naghavi, M., López, A. D., & Murray, C. J. L. (2013). Global burden of oral conditions in 1990-2010. *Journal of Dental Research*, *92*(7), 592. https://doi.org/10.1177/0022034513490168

SCHOLARLY REVIEW JOURNAL

E-ISSN: 2996-8380
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SUMMER 2026

Mata, C. da, & Allen, P. (2023). Providing oral healthcare to older patients—do we have what it takes? [Review of *Providing oral healthcare to older patients—do we have what it takes?*]. *International Journal of Environmental Research and Public Health*, *20*(13), 6234. Multidisciplinary Digital Publishing Institute. https://doi.org/10.3390/ijerph20136234

Olson, A. M., Reibel, Y. G., Self, K., Lindgren, B. R., Blue, C. M., & Flynn, P. M. (2022). *Functional oral health literacy and periodontal health. Journal of Dental Hygiene, 96(5), 6.* https://pubmed.ncbi.nlm.nih.gov/36224084

Park, M.-H., Jeong, M.-S., & Jang, J.-H. (2023). Changes in concentration of VSCs after home oral care interventions based on community care in older adults. *Journal of Korean Society of Dental Hygiene*, *23*(2). https://doi.org/10.13065/jksdh.20230010

Patel, J., Wallace, J., Doshi, M., Gadanya, M. A., Yahya, I. B., Roseman, J. M., & Srisilapanan, P. (2021). Oral health for healthy ageing. *The Lancet Healthy Longevity*, *2*(8). https://doi.org/10.1016/s2666-7568(21)00142-2

Romalee, W., Tsai, F., Hsu, Y.-C., Hsu, M., & Wang, D. (2023). Effectiveness of mobile augmented reality–integrated oral health education for community-dwelling older adults: A randomized controlled trial. *Archives of Gerontology and Geriatrics*, *117*, 105277. https://doi.org/10.1016/j.archger.2023.105277

Rossi, J. G., Hertrampf, K., Abraham, J., Gaßmann, G., Meyer, G., Schlattmann, P., Göstemeyer, G., & Schwendicke, F. (2020). Interventions to improve oral health of older people: A scoping review [Review of *Interventions to improve oral health of older people: A scoping review*]. *Journal of Dentistry*, *101*, 103451. Elsevier BV. https://doi.org/10.1016/j.jdent.2020.103451

Shokouhi, E., Mohamadian, H., Babadi, F., Cheraghian, B., & Araban, M. (2019). Improvement in oral health related quality of life among the elderly: a randomized controlled trial. *BioPsychoSocial Medicine*, *13*(1), 31. https://doi.org/10.1186/s13030-019-0170-3

Song, E.-J., & Hwang, S. (2017). Effectiveness of a 5-year community oral health program for the elderly in Korea. *Journal of Dental Hygiene Science*, *17*(3), 202. https://doi.org/10.17135/jdhs.2017.17.3.202

Sun, K., Shieh, T., Hsia, S., Ningrum, V., Lin, X., & Shih, Y.-H. (2021). Easy to read health education material improves oral health literacy of older adults in rural community-based care centers: a quasi-experimental study. *Healthcare*, *9*(11), 1465. https://doi.org/10.3390/healthcare9111465

Vos, T., Lim, S. S., Abbafati, C., Abbas, K., Abbasi, M., Abbasifard, M., Abbasi-Kangevari, M., Abbastabar, H., Abd-Allah, F., Abdelalim, A., Abdollahı, M., Abdollahpour, I., Abolhassani, H., Aboyans, V., Abrams, E. M., Abreu, L. G., Abrigo, M. R. M., Abu-Raddad, L. J., Abushouk, A. I., ... Asghari, B. (2020). Global burden of 369 diseases and injuries in 204 countries and territories, 1990–2019: a systematic analysis for the Global Burden of Disease Study 2019. *The Lancet*, *396*(10258), 1204. https://doi.org/10.1016/s0140-6736(20)30925-9

SCHOLARLY REVIEW JOURNAL

E-ISSN: 2996-8380
Published by Leadership & Innovation Lab

SUMMER 2026

Wong, F. M. F., & Leung, W. K. (2024). Sustainability of an educational program on oral care/hygiene provision by healthcare providers to older residents in long-term care institutions: a follow-up study. *Geriatrics, 9(3), 84.* https://doi.org/10.3390/geriatrics9030084

Xiao, C., Zhang, L., Li, Z., Xu, Q., Lin, S., Zheng, S., & Shi, H. (2025). Periodontal health intervention for oral health-related outcomes in older type 2 diabetes patients: a randomized controlled trial in a Chinese tertiary hospital. *Scientific Reports*, *15*(1), 28014. https://doi.org/10.1038/s41598-025-13434-0

Yin, Q., Chai, Z., Tao, B., Liu, P., Luo, Y., Zhao, Q., & Yang, B. (2025). The impact of online interactive platform services on oral health behaviors in older adults with mild cognitive impairment: protocol for a randomized controlled trial. *Journal of Multidisciplinary Healthcare*, 663. https://doi.org/10.2147/jmdh.s508247

Yu, S., Huang, S., Song, S., Lin, J., & Liu, F. (2024). Impact of oral health literacy on oral health behaviors and outcomes among the older adults: a scoping review [Review of *Impact of oral health literacy on oral health behaviors and outcomes among the older adults: a scoping review*]. *BMC Geriatrics*, *24*(1), 858. BioMed Central. https://doi.org/10.1186/s12877-024-05469-1