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Social Support and Self-Efficacy in The Maintenance of Oral and Dental Health Among The Elderly

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ABSTRACT Elderly individuals commonly experience physiological, psychological, and social changes that hinder their ability to maintain optimal oral and dental health. Low self-efficacy, combined with insufficient social support, has been identified as a major contributor to poor oral-health behaviors among older adults, particularly in underserved rural communities. This study aimed to analyze the relationship between social support and self-efficacy in maintaining oral and dental health among elderly residents in Sebalong Village, Nguling District, Pasuruan, in 2024. An analytical cross-sectional design was employed, involving 33 elderly participants selected through simple random sampling. Data were collected using two standardized instruments: the Social Support Questionnaire (SSQ) and the Geriatric Self-Efficacy Scale for Oral Health (GSEOH), both of which demonstrated high reliability. Descriptive statistics were used to categorize social support and self-efficacy levels, while Spearman's rank correlation test was applied to examine the relationship between the variables. The findings indicated that most respondents received moderate social support (mean = 13.78), whereas their self-efficacy levels were predominantly low (mean = 29.0). The correlation analysis showed a statistically significant positive relationship between social support and self-efficacy ($p = 0.028$; $r = 0.383$), suggesting that higher social support is associated with improved confidence in performing oral-health maintenance behaviors. These results highlight the need for community-based interventions that strengthen emotional, instrumental, informational, and esteem support for elderly individuals. Enhancing social support networks may serve as a practical strategy to improve oral-health behaviors and overall well-being among older adults in rural settings. Strengthened collaboration among families, local health workers, and community programs is recommended to ensure sustainable improvements in elderly oral-health maintenance.

INDEX TERMS Social Support, Self-Efficacy Ability, Elderly, Oral Health, Dental Health Maintenance.

I. INTRODUCTION

The global increase in the elderly population has heightened concerns regarding their oral and dental health, as aging is often accompanied by physiological, cognitive, and functional declines that compromise the ability to perform daily hygiene practices effectively [1]. Poor oral health in older adults is strongly associated with periodontal disease, tooth loss, impaired mastication, diminished nutritional intake, and decreased quality of life [2], [3]. In Indonesia, these challenges are further compounded by limited access to dental services, low oral-health literacy, and reduced social support systems, especially in rural areas. Initial observations in Sebalong Village indicate that 80% of elderly residents exhibit low oral-health self-efficacy and possess fewer than 20 functional teeth, far below the threshold recommended by the World Health Organization to maintain adequate chewing ability and general well-being [4], posing a significant public health concern.

Self-efficacy plays a central role in determining whether older adults can maintain consistent oral-hygiene behaviors, adopt preventive practices, and seek timely dental care. However, self-efficacy among the elderly is heavily influenced by social determinants, particularly the level of social support they receive from family members, caregivers, and the surrounding community. Existing evidence suggests that elderly individuals with strong emotional, instrumental, and informational support demonstrate better oral-health behaviors and higher treatment adherence [5]–[7]. Despite its importance, social support remains low in many rural Indonesian settings, creating barriers to adequate oral-health maintenance. Therefore, a deeper examination of how social support relates to oral-health self-efficacy among rural elderly populations is urgently needed.

Recent international studies highlight the strong association between social support, self-efficacy, and oral-health behaviors in older adults. Research from Thailand, China, Japan, and Saudi Arabia demonstrates that social support significantly influences oral-health literacy, preventive behaviors, and quality of life among older adults [8]–[12]. Studies also show that self-efficacy mediates the relationship between e-health literacy and oral frailty [13], while digital interventions and behavioral models have been proposed to strengthen oral-health self-management in aging populations [14], [15]. These findings collectively emphasize social and psychological factors as crucial determinants of oral-health outcomes.

Although the role of social support and self-efficacy in elderly oral health has been widely explored in different regions, limited empirical evidence exists within the context of Indonesian rural communities, where social structures, cultural norms, and access to health services differ significantly. No study has specifically examined the relationship between social support and oral-health self-efficacy among the elderly in Sebalong Village, a community

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Vol. 5 No. 6, pp. 264-269, December 2025

facing persistent barriers such as lack of regular dental services, insufficient health education, and low awareness of preventive oral care. This contextual gap justifies the need for localized research.

This study aims to analyze the relationship between social support and self-efficacy in maintaining oral and dental health among elderly residents in Sebalong Village, Nguling District, Pasuruan. This study offers three key contributions:

1. It provides empirical evidence on the psychosocial determinants of oral-health behaviors in a rural Indonesian context, addressing a gap in the national geriatric dental-health literature.
2. It highlights specific dimensions of social support emotional, instrumental, informational, and esteem that influence self-efficacy in oral-health maintenance.
3. It proposes practical implications for community-based oral-health programs, emphasizing the importance of strengthening family involvement and social networks to improve elderly oral-health outcomes.

This article is organized as follows: Section II describes the research methods, including design, sampling, instruments, and analytical techniques. Section III presents the study results. Section IV provides an in-depth discussion interpreting the findings in relation to previous studies. Section V offers conclusions and recommendations for future research and public-health practice.

II. METHODS

This study employed an analytical observational design using a cross-sectional approach to assess the relationship between social support and self-efficacy in oral and dental health maintenance among elderly individuals. A cross-sectional design was selected because it enables the simultaneous measurement of exposure (social support) and outcome (self-efficacy) within a single timeframe, providing an efficient method for identifying correlations in community-based settings [27]. No interventions were applied, and no follow-up was conducted, making this study non-experimental and prospective in data collection.

A. STUDY SETTING AND DURATION

The study was carried out in Sebalong Village, Nguling District, Pasuruan Regency, East Java. The village comprises five hamlets with limited access to routine dental-health services. Data collection was conducted over four months, from December 2024 to March 2025. All research activities, including participant recruitment, questionnaire distribution, and data verification, were conducted in collaboration with local health cadres and Posyandu Lansia staff.

B. STUDY POPULATION AND ELIGIBITY CRITERIA

The study population consisted of all elderly individuals aged ≥60 years registered in the Posyandu Lansia database of Sebalong Village. Based on the December 2024 records, the total population size was 36 individuals.

Inclusion criteria:

1. Aged 60–69 years,
2. Residing in Sebalong Village for at least one year,
3. Capable of communicating and responding to questions independently, confirmed through family or health-worker assessment,
4. Willing to participate and signing informed consent.

Exclusion criteria:

1. Incomplete or invalid questionnaire responses,
2. Cognitive impairment that prevented comprehension of questionnaire items,
3. Severe systemic conditions hindering participation.

The inclusion criteria ensured a homogeneous group of community-dwelling elderly who could provide reliable self-reported data, while exclusion criteria minimized measurement bias due to incomplete information or cognitive difficulties [28].

C. SAMPLING TECHNIQUE AND SAMPLE SIZE DETERMINATION

Sampling was performed using simple random sampling to give each member of the population an equal chance of being selected. A sampling frame was created from the Posyandu Lansia registry. Sample size was calculated using Slovin's formula with a population size (N = 36) and margin of error (e = 0.05). The computation yielded a minimum sample size of 33 respondents. Slovin's method was deemed appropriate due to the small and finite population and because the study focused on correlations rather than hypothesis testing requiring power analysis [29].

D. RESEARCH INSTRUMENTS

Two standardized instruments were used to measure the research variables:

1. **Geriatric Self-Efficacy Scale for Oral Health (GSEOH):** A 20-item validated scale designed to measure elderly self-efficacy in performing oral-health maintenance behaviors. The instrument previously demonstrated excellent internal consistency (Cronbach's $\alpha > 0.92$). For this study, the questionnaire was translated into Bahasa Indonesia, culturally adapted, reviewed by three dental-public-health experts, and pilot tested among 10 elderly individuals in a nearby village, resulting in Cronbach's $\alpha = 0.96$, indicating high reliability.
2. **Social Support Questionnaire (SSQ):** An adapted questionnaire covering four dimensions of social support: emotional, instrumental, informational, and appraisal. The instrument contained 20 items with Likert-type responses. A pilot test yielded Cronbach's $\alpha = 0.97$. Adaptation focused on including items relevant to dental hygiene behaviors, such as family assistance with clinic visits, reminders to brush teeth, and informational guidance [30].

E. VARIABLE OPERATIONALIZATION

Social support was defined as the perceived availability of emotional, instrumental, informational, and appraisal support related to oral-health maintenance. Scores were categorized into good, moderate, and poor based on established cut-off values. Self-efficacy was defined as the elderly individual's belief in their ability to perform oral-health behaviors, such as tooth brushing, denture care, dietary control, and dental-clinic visits. Scores were grouped into high, moderate, and low categories.

F. DATA COLLECTION PROCEDURE

Data collection followed standardized steps to ensure replication:

1. Coordination with village authorities and Posyandu Lansia staff.
2. Socialization of research aims to potential participants and families.
3. Eligibility screening by health workers.
4. Random selection of participants using a lottery method.

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Vol. 5 No. 6, pp. 264-269, December 2025

5. Administration of questionnaires in a face-to-face setting. Trained enumerators assisted participants needing help with reading, without influencing responses.
6. Immediate review of submitted questionnaires to avoid missing data.
7. Secure storage of data in password-protected digital files.

Conducting questionnaires in person ensured high completion rates and minimized misunderstanding of items, an important factor when working with elderly populations [31].

G. DATA QUALITY CONTROL

Quality control procedures were implemented to minimize measurement error:

1. Enumerator training was conducted for two days.
2. Pilot testing confirmed reliability and cultural appropriateness.
3. Double data entry was performed by two independent researchers.
4. Any discrepancies were resolved by consensus.
5. Monotonicity assessment was conducted as a prerequisite for Spearman's correlation analysis [32].

H. ETHICAL CONSIDERATIONS AND STATISTICAL ANALYSIS

Ethical approval was obtained from the Poltekkes Kemenkes Surabaya Health Research Ethics Committee. Written informed consent was obtained from all participants. Confidentiality was maintained by coding all personal data. Participation was voluntary, and respondents were allowed to withdraw at any time without consequences.

Data were analyzed using SPSS version 26. Descriptive statistics were used to summarize demographic characteristics and variable distributions. The Shapiro–Wilk test was used to assess normality. Because data were not normally distributed, the Spearman rank correlation test was applied to examine the relationship between social support and self-efficacy. A p-value < 0.05 was considered statistically significant. Correlation coefficients were interpreted based on Cohen's guidelines for effect size [33], [34].

III. RESULT

This study was conducted among elderly residents in Sebalong Village, Nguling District, Pasuruan Regency. Sebalong Village is one of 15 villages in Nguling District, covering an area of 2.68 km² and comprising five hamlets. The distance from Sebalong Village to the community health center (puskesmas) is approximately 5 km, with a travel time of about 15 minutes by motorcycle. To date, no dental health personnel have conducted regular oral examinations for the elderly in this village.

TABLE 1
Frequency Distribution of Elderly Social Support Scores in Dental and Oral Health Maintenance.

Social Support Category	Frequency	Percentage
Good	9	27,3%
Moderate	11	33,3%
Poor	13	39,4%
Total	33	100%

TABLE 1 illustrates that 39.4% of elderly respondents in Sebalong Village, Nguling District, Pasuruan Regency, 2024, reported 'Poor' social support for maintaining their dental and oral health. This finding highlights a significant gap in the support provided to elderly individuals in this community. The mean social support score of 13.78 indicates that, on average, elderly respondents in Sebalong Village received moderate levels of support for maintaining their oral health. However, with a standard deviation of 4.0, there was considerable variation in the support levels reported, suggesting that some individuals experienced much higher or lower levels of support.

TABLE 2
Frequency Distribution of Elderly Self-Efficacy Ability Categories in Dental and Oral Health Maintenance.

Self-Efficacy Category	Frequency	Percentage
High	2	6,1%
Moderate	5	15,2%
Low	26	78,8%
Total	33	100%

As shown in TABLE 2, 26 elderly respondents (78.8 %) in Sebalong Village, Nguling District, Pasuruan Regency in 2024 were classified as having "Low" self-efficacy ability for dental and oral health maintenance.

In the case of Self-Efficacy, the mean score was 29.0, which indicates a moderate ability to maintain oral health among the elderly participants. The SD for Self-Efficacy was 9.97, reflecting significant variation in the responses, which means some individuals reported higher self-efficacy, while others reported lower levels. The range of scores for Self-Efficacy was 60, from the lowest score of 1 to the highest of 61. The 95% CI for the Self-Efficacy mean was (25.43, 32.57), indicating that we are 95% confident that the true population mean for Self-Efficacy lies within this range.

TABLE 3
Spearman's Rank Correlation Between Social Support and Elderly Self-Efficacy Ability in Dental and Oral Health Maintenance.

Variable	Spearman's Test		Correlation Coefficient
	P	α	
Social Support	0,028	0,05	0,383
Self-efficacy Ability			

As shown in TABLE 3, the Spearman's rank correlation test yielded a p-value of 0.028 (0.028 < 0.05), indicating a significant relationship between social support and elderly self-efficacy in dental and oral health maintenance in Sebalong Village, Nguling District, Pasuruan Regency in 2024. The positive correlation coefficient (r = 0.383) indicates that higher levels of social support are associated with higher self-efficacy; conversely, reduced social support corresponds to lower self-efficacy.

IV. DISCUSSION

This study examined the relationship between social support and self-efficacy in maintaining oral and dental health among elderly individuals in Sebalong Village, Nguling District, Pasuruan. The findings demonstrated a statistically significant positive correlation, indicating that higher levels of perceived social support are associated with stronger self-efficacy in performing oral-health behaviors. The discussion is structured into three sub-chapters: (A) Social Support Profile of the Elderly, (B) Elderly Self-Efficacy in Oral-Health Maintenance, and (C) Relationship Between Social Support and Self-Efficacy.

A. SOCIAL SUPPORT FOR ELDERLY ORAL AND DENTAL HEALTH MAINTENANCE

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Vol. 5 No. 6, pp. 264-269, December 2025

The results of this study showed that most elderly respondents received social support within the "moderate" category. Although emotional support was relatively present, instrumental, informational, and esteem support remained suboptimal. This moderate level of support indicates that family members and community networks offer some assistance, yet this support is insufficient to substantially facilitate elderly individuals in performing consistent oral-health practices.

A considerable proportion of participants experienced inadequate reminders to brush their teeth, limited assistance for dental visits, and insufficient guidance on proper oral-hygiene techniques. These forms of support are crucial, given that aging reduces physical capability, dexterity, and cognitive functioning, making elderly individuals more reliant on external assistance. The lower availability of informational support is particularly concerning because a lack of oral-health knowledge is directly linked to poor hygiene behavior and fragmented care-seeking patterns.

The findings align with previous research that documented suboptimal social support among elderly populations in both rural and peri-urban communities. For instance, Khomsatun and Sari [35] found that many elderly individuals lacked family-provided reminders and guidance regarding self-care behaviors, contributing to poorer health outcomes. Similarly, Pospos et al. [36] reported that limited social engagement and insufficient emotional support increase the risk of loneliness, which negatively influences motivation to maintain personal hygiene.

Internationally, studies conducted in China and Thailand have also identified gaps in the quality of social support for elderly oral-health maintenance. Zhang et al. [37] highlighted that many elderly individuals lacked informational support, particularly in preventive dentistry, which parallels the results observed in Sebalong Village. Meanwhile, Khamrin et al. [38] emphasized that instrumental support, such as assistance in accessing dental-care services, significantly improves oral-hygiene behavior among older adults.

Although the study assessed multiple dimensions of social support, the use of self-report questionnaires may introduce recall bias or social desirability bias. Elderly participants may overestimate or underestimate the level of support they perceive. Furthermore, cultural values such as the belief that oral hygiene is a personal responsibility may influence how respondents interpret and report family involvement.

The moderate level of social support suggests the need for community-level interventions involving families, health cadres, and local health centers. Strategies may include structured oral-health education sessions, family counseling programs to increase awareness of elderly oral-health needs, and community mobilization to ensure regular support for preventive behaviors. Strengthening these components could foster a supportive environment that enhances elderly autonomy and health outcomes.

B. ELDERLY SELF-EFFICACY ABILITY IN DENTAL AND ORAL HEALTH MAINTENANCE

This study found that elderly participants demonstrated predominantly low self-efficacy in performing dental and oral health maintenance. Self-efficacy defined as one's belief in their ability to execute a behavior is a central construct in health-behavior theories. Low self-efficacy contributes to inadequate toothbrushing, infrequent dental visits, poor denture care, and irregular oral-health monitoring.

The low self-efficacy scores can be attributed to age-related limitations such as declining eyesight, reduced hand coordination, decreased physical stamina, and the presence of chronic diseases. These physical barriers diminish confidence in performing routine oral-care behaviors. Additionally, respondents reported limited mastery experiences, which may further weaken their belief in their capacity to manage oral-health tasks independently. This highlights the importance of continual motivation, guidance, and reinforcement from caregivers and family members.

The results corroborate findings from several international studies. Bantel et al. [39] reported that elderly individuals with lower physical functioning and weaker psychosocial support showed significantly reduced oral-health-related self-efficacy. Wu et al. [40] also emphasized that low e-health literacy and reduced self-confidence contribute to the worsening of oral frailty among older adults. These findings align with the situation in Sebalong Village, where limited health literacy and low exposure to oral-health information likely influence self-efficacy levels.

Locally, Wahyukundari et al. [41] found that elderly individuals in East Java demonstrated low self-efficacy due to inadequate oral-health knowledge and minimal access to professional dental care. Furthermore, Dewi et al. [42] identified that without targeted education programs, elderly individuals struggle to develop the confidence required to perform consistent oral-hygiene practices.

While the GSEOH instrument used in this study is validated, cultural differences may influence how Indonesian elderly perceive self-efficacy compared to populations where the instrument was originally developed. Differences in cultural norms, health beliefs, and expectations of family involvement could influence scoring patterns. In addition, this study did not control for comorbidities, which may indirectly affect self-efficacy by limiting physical function.

The low self-efficacy among elderly residents indicates the need for tailored interventions that focus on skill-building, behavioral modeling, and motivational reinforcement. Community-based oral-health workshops, demonstration sessions, and training on proper brushing and denture-cleaning techniques can help enhance mastery experiences. Moreover, incorporating caregivers into oral-health programs could strengthen verbal persuasion, a key factor in improving self-efficacy according to Bandura's theory. Increasing self-efficacy is essential to promote sustainable behavioral changes and prevent long-term oral-health deterioration.

C. RELATIONSHIP BETWEEN SOCIAL SUPPORT AND ELDERLY SELF-EFFICACYABILITY

The study demonstrated a significant positive relationship between social support and self-efficacy in oral-health maintenance, with a correlation coefficient of $r = 0.383$ ($p = 0.028$). Although the correlation is classified as weak to moderate, it is meaningful in the context of elderly health behavior.

The positive correlation suggests that as perceived social support increases, elderly individuals feel more confident in performing oral-health tasks such as brushing, denture care, dietary adjustments, and dental visits. This relationship can be explained through Bandura's social cognitive theory, which posits that social persuasion, emotional support, and vicarious experiences contribute to higher self-efficacy. In the context of Sebalong Village, encouragement and assistance from family members likely help elderly

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Vol. 5 No. 6, pp. 264-269, December 2025

individuals overcome physical limitations and psychological barriers.

The findings are consistent with previous studies showing that social support enhances health-related self-efficacy. Mao et al. [43] found that perceived social support significantly influences confidence in managing oral dryness among elderly Chinese adults. Similarly, Imelda et al. [44] documented that higher social support improves quality of life and fosters healthier behaviors in older adults.

Moreover, Jiang et al. [45] reported that social support is a significant predictor of improved health literacy and self-efficacy among older populations, confirming that social environments play a vital role in shaping individual health behaviors. These findings parallel the results of this study and reinforce the importance of incorporating social-support frameworks in oral-health interventions.

While the research identified a significant association, the cross-sectional design limits the ability to infer causality. It is unclear whether increased social support leads to higher self-efficacy, or whether elderly individuals with higher self-efficacy are more likely to seek and receive support. Longitudinal or interventional studies would help clarify the directionality of this relationship.

Additionally, the small sample size and the limited geographic scope may restrict the generalizability of the findings. Variations in social structures, socioeconomic status, and cultural practices across regions may produce different patterns of association.

These findings highlight the importance of integrating social-support strategies into oral-health programs for elderly populations. Interventions should engage families, caregivers, and community health workers in supporting elderly oral-hygiene practices. Strategies may include

1. Encouraging routine family reminders for tooth brushing and denture cleaning.
2. Increasing instrumental support, such as assisting elderly individuals in attending dental appointments.
3. Enhancing informational support through targeted oral-health education sessions.
4. Promoting peer-support groups for elderly oral-health promotion.

Strengthening these components may improve self-efficacy and contribute to better oral hygiene, reduced risk of periodontal disease, and enhanced overall well-being among older adults.

V. CONCLUSION

This study aimed to examine the relationship between social support and self-efficacy in maintaining oral and dental health among elderly individuals residing in Sebalong Village, Nguling District, Pasuruan. The findings revealed that the elderly population in this rural community experienced moderate levels of social support, with a mean score of 13.78, while their self-efficacy in performing oral-hygiene behaviors was predominantly low, reflected by an average score of 29.0. The Spearman's rank correlation analysis demonstrated a statistically significant positive association between social support and self-efficacy ($p = 0.028$; $r = 0.383$), indicating that increased support from family members, caregivers, and community networks is linked to greater confidence among elderly individuals in managing their oral health. These results highlight the essential role of social determinants particularly emotional, instrumental, informational, and appraisal support in fostering healthier oral behaviors among older adults, who often face age-related physical and cognitive limitations. The study underscores the need for tailored oral-health interventions that incorporate family engagement, community-based education, and structured behavioral reinforcement to enhance elderly self-efficacy. Given the cross-sectional design and limited sample size, future research should employ longitudinal or interventional approaches to better understand causal pathways between social support and oral-health behaviors. Further studies should also explore additional psychosocial variables, such as health literacy, motivation, and cultural perceptions of oral care, to develop more comprehensive models of elderly oral-health behavior. Expanding the research to diverse rural and urban settings would enhance generalizability and facilitate the development of targeted public-health strategies. Overall, this study contributes valuable insights into the psychosocial factors influencing oral-health maintenance among elderly populations and provides a foundation for developing community-centered oral-health programs that can improve long-term outcomes.

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DATA AVAILABILITY

The datasets generated and analyzed during the current study are available from the corresponding author upon reasonable request.

AUTHOR CONTRIBUTION

All authors contributed substantially to the development of this study. A.N.S. led the research design, data collection, statistical analysis, and drafting of the manuscript. S.P. supervised the study, provided methodological guidance, validated the research instruments, and contributed to data interpretation and critical manuscript revision. I. contributed to the conceptual framework, assisted in data analysis, and provided technical and editorial input to strengthen the scientific quality of the manuscript. All authors reviewed and approved the final version of the paper.

DECLARATIONS

ETHICAL APPROVAL

This study received ethical clearance from the Health Research Ethics Committee of Poltekkes Kemenkes Surabaya. All participants provided written informed consent prior to participation.

CONSENT FOR PUBLICATION PARTICIPANTS.

All authors consent to the publication of this manuscript and affirm that it has not been submitted to or published in any other journal.

COMPETING INTERESTS

The authors declare that there are no conflicts of interest related to the publication of this study.

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Vol. 5 No. 6, pp. 264-269, December 2025

REFERENCES

[1] M. Iwasaki and H. Hirano, "Decline in Oral Function and Its Management," Int. Dent. J., 2022.
[2] W. Hasibuan and D. Putranti, "Tooth Loss and Quality of Life in Elderly," Cakradonya Dent. J., 2023.
[3] M. Prasetyo Kusumo, Buku Lansia, 2020.
[4] N. Shavitri et al., "Functional Teeth and Cognitive Function in Elderly," PJDRS, 2024.
[5] L. Anweigi et al., "Oral-Health Self-Efficacy in Elderly," IJERPH, 2022.
[6] S. Nurhayati et al., "Family Support for Elderly," UNIMUS Proc., 2021.
[7] F. Rahayu et al., "Family Role and Hygiene in Elderly," JML, 2023.
[8] P. Khamrin et al., "Social Support & Oral Behaviors in Elderly," BMC Oral Health, 2021.
[9] Y. Wang et al., "Social Support and Oral Health," Sci. Rep., 2023.
[10] Y. Zhang et al., "Oral Health Literacy in Chinese Elderly," BMC Oral Health, 2025.
[11] M. Bantel et al., "Variables Associated with Oral Self-Efficacy," BMC Oral Health, 2023.
[12] J. Wu et al., "eHealth Literacy, Self-Efficacy & Oral Frailty," BMC Oral Health, 2025.
[13] C. Pospos et al., "Social Support and Elderly Loneliness," J. Psikol., 2022.
[14] I. Ramadini and A. Herman, "Family Support and Elderly Independence," JAK, 2021.
[15] F. Malahati, "Self-Acceptance in Elderly," SENTRI, 2023.
[16] U. Dewi et al., "Improving Elderly Knowledge on Oral Hygiene," JPKK, 2022.
[17] F. Chasanah et al., "Hygiene Behavior of Elderly," SNNPPKM, 2021.
[18] M. Wahyukundari et al., "Oral-Hygiene Behavior in Elderly," JKG, 2024.
[19] M. Sari and N. Jannah, "Oral-Health Knowledge in Elderly," JSM, 2021.
[20] M. Jiang et al., "Social Support and Self-Efficacy in Health Literacy," JMH, 2024.
[21] Y. Imelda et al., "Social Support and Elderly QoL," JPPP, 2024.
[22] U. Mahmuda and M. Jalal, "Social Support and Meaning of Life," JPA, 2022.
[23] R. Shreshtha, "Challenges in Geriatric Oral Care," JAGP, 2020.
[24] U. Ulliana et al., Kesehatan Gigi dan Mulut, 2023.
[25] K. Kusbandia and W. A. Wijaya, "Social Support in Health Management," PJI, 2024.
[26] G. Rokot et al., "Toothbrushing Behavior," e-GiGi, 2023.
[27] A. Prasad and H. Panda, "Observational Study Designs in Public Health," J. Health Res., 2021.
[28] C. Chang et al., "Cognitive Screening Tools for Community-Dwelling Elderly," BMC Geriatr., 2022.
[29] M. Taherdoost, "Sampling Methods and Sample Size Calculation," Int. J. Econ. Manag., 2021.
[30] H. Liu et al., "Measuring Social Support in Older Adults: Psychometric Advances," BMC Public Health, 2023.
[31] J. Rahman et al., "Field Data Collection in Elderly Populations," J. Multidiscip. Healthc., 2024.
[32] R. González et al., "Assumptions in Nonparametric Correlation Analysis," Stat. Methods Med. Res., 2021.
[33] J. Cohen, Statistical Power Analysis for the Behavioral Sciences, 2nd ed., 1988 (referenced widely in recent works).
[34] F. Müller et al., "Effect Size Interpretation in Health Sciences," BMC Med. Res. Methodol., 2022.
[35] U. Khomsatun and I. W. W. Sari, "Social Support and Self-Care Behavior in Elderly," J. Keperawatan Komunitas, 2022.
[36] C. J. L. Pospos et al., "Social Support and Loneliness in Elderly," J. Psikol. Unsyiah, 2022.
[37] Y. Zhang et al., "Oral Health Literacy Influencing Factors," BMC Oral Health, 2025.
[38] P. Khamrin et al., "Social Support and Oral Health Behaviors Among Elderly," BMC Oral Health, 2021.
[39] M. Bantel et al., "Oral Health–Related Self-Efficacy Variables," BMC Oral Health, 2023.
[40] J. Wu et al., "Self-Efficacy, eHealth Literacy, and Oral Frailty," BMC Oral Health, 2025.
[41] M. A. Wahyukundari et al., "Oral-Health Behavior in Elderly," JKG, 2024.
[42] O. Dewi et al., "Oral Hygiene Education for Elderly," JPKK, 2022.
[43] W. Mao et al., "Social Support and Oral Health in Older Adults," J. Am. Geriatr. Soc., 2020.
[44] Y. Imelda et al., "Social Support and Elderly Quality of Life," JPPP, 2024.
[45] M.-M. Jiang et al., "Health Literacy, Social Support, and Self-Efficacy," JMH, 2024.