

Analysis of Public Perception of the Size (Placement) and Color of Dentures in Health Promotion Efforts

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ARTICLE INFO	ABSTRACT
Manuscript Received: 21 Feb, 2026 Revised: 26 Jun, 2026 Accepted: 09 Jul, 2026 Date of Publication: 16 Jul, 2026 Volume: 9 Issue: 7 DOI: 10.56338/mppki.v9i7.10502	Introduction: Dentures have many functions, of course, all of which are to improve health, but there are many factors that cause people to tend not to know the function of dentures. In Banjar Regency, there has not been a maximum in the equal distribution of dentists and dental nurses, which has the largest working area in Banjar Regency, so that people are more directed to dentists who specialize in dentures. The purpose of this study is to find out the public's perception of the function of dentures. Methods: This study is a quantitative analytical research with a cross-sectional approach using structured questionnaire instruments. The determination of the number of samples here is the community in the work area of the Aranio Health Center, Banjar Regency, using the Non-Probability Sampling technique, namely Quota Sampling, totaling 100 respondents. The instruments used in this study were in the form of questionnaires/interviews containing a list of statements about respondents' perceptions of denture function, perception of size (placement), and color of dentures. The data is processed and analyzed with Fisher Exact Test tests to test the research hypothesis. Results: The results of the study show that the level of public knowledge about the function of dentures is still relatively low, with the dominant respondents (96%) in the category of not knowing, where this condition shows a gap between public perception and a more comprehensive understanding of the benefits of dentures. In terms of the size (placement) of dentures, the largest proportion of respondents were in the poor category (45%). In the aspect of denture color, the distribution of respondents was relatively balanced between the interested (45%) and uninterested (55%) categories. The results of bivariate analysis came from the variable size (placement) of dentures (p-value 0.625; OR = 1.743) and color of dentures variables (p value 1.000; OR=1.233) with the function variable of dentures, where the two variables have no meaningful relationship. Considering the limitations of statistical power, the imbalance of the data distribution and the gap of the confidence interval make the accuracy of the estimates limited. These findings indicate that low public understanding is more likely to be related to limited access to dental health information and education than to the characteristics of dentures used. Conclusion: The need to increase access to information and education on dental health so that suggestions for the provision of information about dentures as a learning medium, both from print and electronic media dedicated to the immediate families of denture users, to reduce the reluctance to seek information. Health workers maximize their knowledge about the function of dentures in carrying out health promotion.
KEYWORDS	
Denture Size (Placement); Denture Color; Public Perception; Health Promotion	

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INTRODUCTION

Tooth loss is one of the public health problems that needs attention because its impact is not only limited to the function of the oral cavity, but also affects the physical, psychological, and social aspects of individuals. Losing one or more teeth can cause chewing disorders, speech difficulties, facial aesthetic changes, and decreased self-confidence which ultimately impacts a person's quality of life. The World Health Organization (WHO) reports that tooth loss (edentulism) is still a global health problem and is estimated to affect around 350 million people worldwide. In addition, WHO emphasizes that oral health is an important indicator of overall health and well-being (1). According to the concept of oral health put forward by FDI, the ability to chew, speak, smile, and socially interact confidently is an important part of optimal oral health. Therefore, tooth loss must be positioned as a public health problem that affects chewing function, speech ability, aesthetics, oral health, confidence, and quality of life, thus requiring comprehensive prevention and rehabilitation efforts (2).

The Healthy Indonesia Program for the period 2020–2024 is the final phase of the 2005–2025 RPJPN and is a very strategic medium-term development stage. The 2020–2024 RPJMN fully integrates the principles and targets of the Sustainable Development Goals (SDGs). All indicators of the 17 sustainable development goals are an important part of the seven national development agendas. Through this approach, the government encourages regional development to reduce disparities and improve the quality and competitiveness of human resources, including strengthening health services for the community. In this phase, the RPJMN is directed to strengthen the foundation towards improving people's welfare, so that Indonesia is able to achieve a position as an upper-middle-income country with adequate infrastructure, better quality of human resources, and more optimal public services. In line with the objectives of the RPJPN, the 2020–2024 development is focused on accelerating progress in various sectors to realize an independent, advanced, fair, and prosperous society through strengthening a competitive economic structure and supported by quality human resources, namely in the form of a Business Strategic Plan (RSB) which is expected to be a guide for management to implement the annual work program for the 2025-2029 period (3).

Improving the quality of health services has reduced mortality and increased life expectancy. This condition contributes to the increase in the number of elderly people in various countries. Along with the aging process, the function of the body's organs decreases, including physical changes that affect oral health. Tooth loss is one of the most common problems experienced by the elderly. If many teeth are lost or left for too long, the ability to chew will be impaired and potentially cause problems in the temporomandibular (TMJ) joint (4,5).

BPS data in 2024 shows that the number of elderly people in Indonesia aged 60 years and above has reached around 12% of the total population. At the same time, the number of children under five continues to decline. This pattern indicates that Indonesia is moving towards a population structure dominated by the elderly group, a phase known as the ageing population. Long-term projections compiled by BPS and Bappenas estimate that by 2045, the proportion of the elderly will increase to around 20% or almost a fifth of the entire population. This increase illustrates the success of development, especially in the health sector, which allows people to enjoy a longer life span (6).

However, this demographic change is not only a statistical record, but also has far-reaching consequences for social life and national development systems. The growing elderly population demands adjustments in various sectors, ranging from the provision of more comprehensive health services to the formulation of sustainable social security policies, to economic strategies that are able to accommodate the needs of the elderly group. At the same time, the increase in the number of elderly people also opens up opportunities to strengthen their role as an experienced and knowledgeable group. With proper planning, the community can encourage the elderly to remain active, healthy, and productive in various aspects of life. Thus, the ongoing demographic transition is both a challenge and an opportunity for Indonesia to build a more inclusive and sustainable future (6). Dental health in Indonesia still faces major challenges, as about 60% of the population experiences dental and oral problems. One of the main factors is the low public knowledge about dental health, especially related to oral hygiene. To improve the degree of dental health, a change in people's mindset from not knowing to understanding the importance of dental care is very necessary. In this context, dental health education and counseling play an important role as a basic effort to improve public awareness and behavior (7,8).

Oral health is an important factor that affects a person's ability to understand, make decisions, and utilize dental health services appropriately. Individuals with good oral health literacy tend to be better able to maintain oral

health and seek appropriate rehabilitation when experiencing tooth loss. Tooth loss not only causes impaired chewing and speech functions, but also impacts social interactions, self-image, and quality of life. Research shows that individuals with reduced tooth counts have lower oral health-related quality of life, even when they have used dental prostheses (9). The use of dentures is a complex form of health behavior and is not only determined by the clinical needs due to tooth loss. Various studies show that the use of prosthodontic rehabilitation is influenced by predisposing factors and supporting factors such as knowledge level, attitudes towards oral health, socioeconomic conditions, access to dental health services, social support, perception of treatment needs, and trust in health workers and the treatment results that will be obtained. In addition, satisfaction with dentures and previous use experience play a role in shaping an individual's decision to accept, use, and maintain the use of dentures as part of efforts to maintain oral health-related function and quality of life (10). Riskesdas 2018 data shows that more than half of Indonesia's population still has dental and oral problems, but only a small percentage receive professional treatment. In that year, the prevalence of dental and oral complaints reached 57.6%, while only 10.2% of sufferers sought help from medical personnel. Dental hygiene behavior is also still low, as evidenced by only 2.8% of people brushing their teeth at the right time and frequency. This situation seems to have improved slightly in the 2023 Indonesian Health Survey (SKI). Although the prevalence of dental and oral problems is still high, at around 56.9%, there is an increase in behavior and access to services. The percentage of people who seek treatment from health workers increased to 11.2%, and the practice of brushing their teeth as recommended increased significantly to 6.2%. Overall, the two data show that although dental health problems are still a major national challenge, there is a trend of improvement in people's efforts to maintain dental hygiene as well as increasing awareness to seek dental health services (11,12).

Traditional health services still play an important role in supporting public health independence. The level of public trust in traditional services as an alternative in dealing with various health complaints has caused this practice to persist and is difficult to abandon. One form of such service is the practice of dentists, which is chosen by the community as an alternative to services outside of dental services. However, dentists generally do not have formal education in the field of dental health like dentists or dental nurses. The knowledge and skills possessed by dentists are more acquired through personal experience and passed down from generation to generation (13). Although the practice of dentists is often seen as risky to health, the utilization of their services is still quite high in the community. This condition is influenced by individual characteristics, especially the level of knowledge and belief of the community in using dentures, which has been proven to have a meaningful relationship with the decision to choose dental services. In contrast, socioeconomic factors such as education level, type of employment, and income level did not show a significant relationship with the use of these services (14).

The use of dentures aims to replace missing teeth while helping to maintain the health of the oral cavity tissue, including teeth, gingival tissue, and supporting bones. Denture users are required to maintain the optimal cleanliness of dentures and natural teeth. However, the process of cleaning dentures is often not easy to do, even with the use of a toothbrush. This condition has the potential to increase the risk of oral health disorders, such as the growth of pathogenic microorganisms, including fungi and bacteria, and the appearance of various lesions in oral tissues. (15). In addition to potentially causing oral health problems, the attitude of individuals who already have and use dentures shows a relatively lower proportion of support than supportive attitudes. This condition is generally affected by the discomfort experienced in the early stages of using dentures. In fact, before using it, there was a fairly high interest, especially after seeing that the people around him looked younger and had a neater arrangement of teeth after using their teeth (16). The low public perception of the use of dentures, especially in terms of appearance, chewing function, and pronunciation ability, is influenced by various interrelated factors. Socially, some people still do not place dental and oral health as a priority need, so tooth loss is often considered a normal condition and does not require rehabilitation through the use of dentures. This condition shows that social and cultural values have an important role in shaping individual attitudes and decisions towards dental health care (17).

In addition to social factors, increasing age is also one of the main obstacles to the acceptance of dentures. Individuals in older age groups tend to have difficulties in the adaptation process, both physiologically and psychologically. Changes in oral tissue, decreased neuromuscular ability, and long habits without the use of dentures cause the adjustment process to feel uncomfortable, thus reducing motivation to use or maintain the use of dentures in the long term (18). On the other hand, the aesthetic aspect also shows a significant influence. Some respondents showed a low level of interest in the aesthetic appearance of dentures, especially in groups of people who do not

make aesthetics a primary necessity in daily life. This indicates that the perception of aesthetic benefits is not fully understood as part of quality of life, self-confidence, and social interaction (19,20). Overall, the low public perception of denture function is not only due to a lack of knowledge, but also influenced by socio-cultural factors, the aging process, individual adaptability, and low awareness of the importance of aesthetic aspects and oral function as a whole. The combination of these factors forms a tendency for people to be less interested in the use of dentures, even though the functional benefits are quite large (21).

Prosthodontic rehabilitation through the use of dentures plays a role in restoring oral, aesthetic, and self-confidence function. A recent systematic review reports that rehabilitation with partially removable dentures is able to improve oral health-related quality of life, especially in the early months after treatment. In addition to the clinical aspect, social perception of dental prostheses also affects the success of patient adaptation. Tooth loss is often associated with decreased self-esteem and social participation, whereas adequate use of prostheses can support the restoration of psychosocial function. The inequality of access to oral health services that still occurs, especially in rural communities and low socio-economic groups, makes prosthodontic rehabilitation and increasing oral health literacy an important part of efforts to improve the quality of life of the community (22).

The level of dental and oral health problems in the people of Banjar Regency shows a condition that requires more attention, where the prevalence reaches 48.6%, which is almost twice as high as the national average of only 25.9%, placing Banjar Regency as the region with the highest number in South Kalimantan Province. The distribution of dental and oral health problems also shows inequality between age groups, with the highest prevalence found in children aged 5–9 years at 43.2%, indicating that dental health disorders have occurred from an early age and have the potential to affect the quality of child growth and development. Ironically, the high number of these problems is not balanced by adequate dental health maintenance behavior, because only about 3.1% of the population has the habit of brushing their teeth with the correct technique. This proportion shows a huge gap between dental health care needs and preventive behavioral practices of the community, thus illustrating the low awareness, knowledge, and implementation of healthy living behaviors related to dental and oral health at the community level (23). In 2022, the top 3 cities/regencies with the highest number of dentists are Banjarmasin City, Banjarbaru City & Banjar Regency, which are divided into Hospitals and Health Centers. However, the distribution of dentists in the region is still uneven. This can be seen from Banjar Regency, which, despite having the third largest area, has a dentists availability of dentists that is not comparable to the cities of Banjarmasin and Banjarbaru, where the average calculation per 100,000 people is that there are 8 dentists in 2020, increasing to 12 dentists per 100,000 people in 2024 (24,25). Based on the working area, the Aranio Health Center has the widest area coverage, which is around 1,169.5 km², with the characteristics of a remote and hilly area. These geographical conditions have an impact on people's limited access to health services. Currently, the health center is only supported by one dentist, so it is a challenge in itself in an effort to distribute dental and oral health services equally. Therefore, it is necessary to strengthen the primary health service network through the optimization of Auxiliary Health Centers, Mobile Health Centers, and the role of village midwives to increase the affordability of services for the community (25).

Public understanding of the function and aesthetics of dentures is an important foundation in efforts to promote oral health. The aesthetic dimension of the smile has a great influence on social interaction and individual self-confidence, so that the public's understanding of the aesthetic perception of dentures, especially the smile line, is crucial in a patient-centered approach to care. Misconceptions regarding the placement and color of dentures can affect the acceptance and search behavior of prosthodontic services. Of the 20 edentulous participants evaluated, aesthetic satisfaction with complete dentures was influenced by socioeconomic status, with patients more satisfied with conventional dental arrangement (SD 7.0±2.0) than characterization (SD 4.8±2.7; $p=0.038$) (26). Meanwhile, of the 186 lay respondents, perceptions of the degree of incisal and gingival exposure showed the widest variation (picture) was chosen by 11.29% of respondents, while the least interesting by 12.90% reflected the complexity of the perception of denture placement in the community (27). Therefore, data-based education on public perception of the size, placement, and color of dentures needs to be integrated into a comprehensive oral health promotion strategy. Research on 70 pre-clinical students showed that the perception of tooth color was significantly related to psychosocial aspects, including social acceptance, social status, and appearance, and differed by gender ($p=0.013$). In denture users, denture color obtained a score of 330 out of 365, with 52.05% of respondents stating that they were very satisfied because it resembled natural tooth color; The average score of the aesthetic dimensions reached 335.

However, research in Indonesia that specifically assesses the perception of denture color as a single factor influencing public acceptance is still very limited, making it an important research gap to be studied further (17,28).

Based on these problems, it can be concluded that the availability of dental health workers, especially dentists, in Banjar Regency is still very limited, especially in the work area of the Aranio Health Center. The results of initial observations also show the high existence of dentists who generally focus on making dentures as an alternative service chosen by the community. Therefore, it is necessary to increase public understanding of the function of dentures, especially the right size (placement) and color of dentures so that their use does not have a negative impact and perception on dental and oral health.

METHODS

Study Design

This study is an quantitative analytical research with a cross-sectional approach with structured questionnaire instruments to obtain statistically analyzed numerical data, which aims to analyze public perception of denture size (placement) and denture color on denture functionality. This approach allows data collection to be carried out at specific times to get an idea of the relationship between public perception and efforts to promote dental and oral health. The research location is in the working area of the Aranio Health Center, Banjar Regency, South Kalimantan Province, Indonesia, from January to September 2025.

Population and Sample

The population in this study from all communities in the working area of the Aranio Health Center, Banjar Regency, South Kalimantan Province, Indonesia amounted to 9,522 people. The determination of the number of samples uses the Non Probability Sampling technique, namely Quota Sampling where the researcher determines the number of respondents based on the quota met, and refers to the calculation using the Slovin formula with a confidence level of 10% to obtain a representative sample size, so that a calculation of 99 respondents was obtained (rounded to 100 respondents). The selection of respondents was based on certain inclusion criteria, namely being able to communicate well, 1 house represented by only 1 person, productive age group (18-45 years), and willing to participate.

Instrumentation or Tools

In this study, questionnaires were used to collect data. The questionnaire contained questions about the respondents' identity (name, age, mobile phone number), respondents' characteristics (occupation, gender, last education), families who used dentures, and respondents' perceptions of denture function. The questionnaire from the function variables of dentures, namely the respondent chose the tendency of any function known to the respondents, consisted of 8 functions, namely chewing, phonation, aesthetics, health, confidence, youthfulness, stability, and headache prevention where the score threshold of 5–8 refers to the median cut-off point principle (29), which determines the perception of respondents tending to "know" when answering correctly $\geq 56\%$ of the total question items. The variables of perception of size (placement) and color of dentures use the Likert scale with the assessment of always (4), often (3), sometimes (2), and never (1).

Table 1. Assessment of Validity and Reliability in the Research Questionnaire Variable: the perception of size (placement) and color of dentures

No	List of Question Variables: the perception of size (placement)	Validity	Reliability
1	Be able to distinguish between natural teeth and dentures from other people	0,612 ^{a*}	0,91 ^{b*}
2	Be able to see the size of the real teeth and the dentures of the interlocutor	0,645 ^{a*}	0,909 ^{b*}
3	Can see the placement of natural teeth and dentures of the interlocutor	0,701 ^{a*}	0,906 ^{b*}
4	Interested in paying attention to the color of the teeth of the interlocutor	0,689 ^{a*}	0,907 ^{b*}
5	Determination of the color of dentures, including the stage of making dentures	0,733 ^{a*}	0,905 ^{b*}
6	Can distinguish the color of natural teeth and dentures from that of others	0,618 ^{a*}	0,911 ^{b*}

Source: Primary Data, 2025.

^{a*}Correlation Coefficient ≥ 0.3 indicates statistically significant correlation in the validity test (items considered valid);

^{b*}Cronbach's Alpha ≥ 0.60 indicates the item is reliable.

Table 2. Operational definition of variables, scores & categories

No.	Variable	Operational Definition	Methods & measuring tools	Measurement Results	Scale
1.	Function of dentures	Respondents' knowledge of denture function was based on the propensity of chewing, phonation, aesthetics, health, confidence, youthfulness, stability, and headache prevention.	Questionnaire	1. Know (5-8) 2. Don't know yet (0-4)	ordinal
2.	Size (placement) of dentures	Respondents' perception of seeing the dentures worn by their family from the size (placement) in the mouth.	Questionnaire	1. Good (9-12) 2. Less (3-8)	Ordinal
3	Color of dentures	Respondents' perception to tend to be interested in paying attention/comparing denture colors	Questionnaire	1. Interested (9-12) 2. Lack of interest (3-8)	Ordinal

Data Collection Procedures

The data collection process in this study was carried out during the period from January to September. The research is focused on understanding how and why denture function can affect public perception of improving health status. In addition, this study also examines the dynamics of the relationship between various risk factors and their impact through a single measurement that is carried out simultaneously, in accordance with the characteristics of the cross-sectional approach. The researcher was assisted by 6 enumerators who were divided into 2 teams, where previously simulations were carried out in the implementation process in the field, such as filling out questionnaires, probing questions, and improvements related to traditions or customs in the research place.

Data Analysis

Data analysis was carried out using the Statistical Package for the Social Sciences (SPSS) version 26. Univariate analysis was conducted to display the frequency distribution of respondent characteristics and research variables. Bivariate analysis was performed using the Fisher's Exact Test to test the relationship between the size (placement) of dentures and the suitability color of dentures with denture function.

Ethical Approval

This research has been approved by the Health Research Ethics Committee, Idaman District Hospital of Banjarbaru City, with ethical information No. 075/KEPK-RSDI/V/2026.

RESULTS

Table 3. Frequency Distribution of Respondent Characteristics Based on age, employment status, gender, and use of dentures.

Characteristic	Description	f	%
Age	15 – 35	42	42
	36 – 55	43	43
	56 – 75	15	15
Employment status	Not Working	59	59
	Work	41	41
Gender	Female	70	70
	Male	30	30
Use of Dentures	Does not use	79	79
	Using	21	21
Total		100	100

Source: Primary Data, 2025.

Based on the data in Table 3, the age distribution shows that the largest proportion is in the age group of 36–55 years, which is as many as 43 respondents (43%). This proportion is slightly higher than the age group of 15–35 years old, which amounted to 42 respondents (42%), with a difference of 1%. Meanwhile, the age group of 56–75 years is the smallest proportion, with 15 respondents (15%). These findings indicate that the respondents in this study were dominated by the adult to pre-elderly age group, which cumulatively accounted for 85% of the total sample. Based on employment status, most respondents did not work, namely 59 respondents (59%), while respondents who worked amounted to 41 people (41%). This difference in proportion of 18% shows that the majority of respondents are in the category of not having an active job. Judging from gender, female respondents dominated with 70 people (70%), while male respondents were 30 people (30%). With a proportion difference of 40%, this data shows that women's participation in this study is more than double that of men. In the variable of the use of dentures, the majority of respondents did not use dentures, namely 79 people (79%), while those who used dentures were only 21 people (21%). This considerable proportion difference (58%) shows that the level of denture use in the study population is still relatively low.

Table 4. Variable frequency distribution of denture function, size (placement) of dentures, and color of dentures

Variable	n	%
Function of Dentures		
Know	4	4
Don't know yet	96	96
Size (placement)		
Good	37	37
Less	63	63
Color of Dentures		
Interested	45	45
Lack of interest	55	55
Total	100	100

Source: Primary Data, 2025.

Based on the data presented in Table 4, the variable function of dentures shows that the majority of respondents are still in the unknown category, with a very dominant proportion of 96%, which makes the main findings reflect a substantial gap in oral health literacy in the community. In the variable of size (placement) of dentures, most of the respondents were included in the less category, which was 37%, which was higher than the other categories. Meanwhile, in the color of dentures variable, the distribution of respondents was relatively balanced between the interested and lack of interest categories, with proportions of 45% and 55%, respectively, although the disinterested category was slightly higher.

Table 5. Bivariate Analysis Results

Variable	Function of Dentures				P-value	OR	95% CI
	Know		Don't know yet				
	n	%	n	%			
Size (placement)							
Good	2	1.5	35	35.5	0.625	1.743	0.235–12.924
Less	2	2.5	61	60.5			
Denture color							
Interested	2	1.6	43	43.2	1.000	1.233	0.0167–9.115
Lack of interest	2	2.2	53	52.8			

Source: Primary Data, 2025.

Based on Table 5, most of the respondents do not have an adequate understanding of the function of dentures from the perspective of size (placement). This is reflected in the proportion of respondents who are in the good and less categories, which cumulatively reached 60.5% or as many as 61 respondents, greater than the good category. In

the variable color of dentures, respondents also tend not to know the function of dentures optimally, with the proportion of the lack of interest category of 52.8% (53 respondents), which is slightly higher than the interested category. Although the perceptions of size (placement) ($OR=1.743$; 95%CI: 0.235–12.924) and color of dentures ($OR=1.233$; 95%CI: 0.167–9.115) indicated a positive association direction, very wide confidence intervals indicated estimation instability due to inequality in cell distribution where the results were less precise.

DISCUSSION

Function of Dentures

The results showed that most of the respondents, namely 96 people or 96%, did not have a comprehensive understanding of the function of dentures. Limited access and exposure to information cause respondents in general to only recognize dentures as a tool for chewing and as a means of increasing confidence. Meanwhile, other functions that are no less important, such as their role in helping pronunciation clarity, supporting facial aesthetic aspects, maintaining the stability of the tooth arrangement, and supporting the maintenance of overall dental and oral health, are still not widely understood by respondents. This low knowledge is not just a reflection of indifference, but a logical consequence of the lack of exposure to structured dental health information, limited interaction with professionals, and the lack of optimal community-based oral health promotion programs in the research area. These findings affirm the urgency of contextual, sustainable, and accessible educational interventions at all levels of society.

The aging process progressively changes the structure of the oral cavity and pharynx, which in individuals with tooth loss without prosthodontic rehabilitation is at risk of triggering oropharyngeal dilatation, impaired swallowing coordination, as well as an increased risk of aspiration of food bolus to the hypopharynx. This explains why public knowledge of denture function is so crucial but this is precisely where the biggest gaps are found. People tend to view dentures as purely aesthetic solutions, without understanding their role in maintaining the functional integrity of the stomatognathic system as a whole. Complete dentures, although able to restore chewing function, produce lower bite pressure than natural teeth, so their effectiveness depends heavily on the design accuracy, stability, and adaptation of the oral muscles. Improper dentures worsen swallowing efficiency and increase daily functional discomfort a risk that can be fully prevented through structured, community-based education (30). The results of the research on the people of Pinasungkulan Village, Modoinding District, clarify the strengthening of health promotion and periodic counseling regarding the importance of using dentures, considering that low public understanding can have an impact on impaired chewing function, decreased speech skills, nutritional problems, and decreased quality of life due to untreated tooth loss. Without sustained educational interventions and follow-up research with a wider population coverage, the risk of increasing dental and oral health problems and public health burdens in the future will be greater (31). The results of the study at the Kanina Dental Clinic in Yogyakarta indicate that although some respondents already have good knowledge and interest in the use of partially removable dentures, there are still community groups with limited understanding of the purpose and benefits of the treatment. This condition has the potential to affect the decision-making process in the use of dentures, especially when influenced by the social environment or inadequate information. Contextually, limited knowledge can contribute to suboptimal use of dentures, which may ultimately impact an individual's comfort, chewing function, speech ability, aesthetics, and quality of life after tooth loss (32).

Respondents who only had a limited understanding of the function of dentures tended to form different perceptions, especially in assessing the benefits and comfort of wearing them. This lack of comprehensive perception has the potential to reduce the level of acceptance and satisfaction with the use of dentures as a whole (33). In line with the findings of research in the work area of the Juai Health Center, most people still show a limited level of understanding of the function of dentures, which is influenced by the lack of access to adequate information. In general, respondents only interpret dentures as a means to help the chewing process and improve impaired mastication function. Meanwhile, the understanding of the role of dentures in supporting overall dental and oral health, including aesthetic, phonetic, and occlusal stability aspects, is still not optimally developed among the public (34). Similarly, the University Dental Hospital Wales and the dental units at St David's Hospital and Cynon Valley Hospital, although most denture users have received some initial education on prosthesis care, the results of the audit of 196 patients showed that there is still a high level of inadequate denture hygiene practices, marked by more than half of the respondents having low hygiene and some still using dentures while sleeping the urgency of strengthening continuous

education by the dental team to increase health literacy and prevent adverse effects on oral health in the long term (35). Research at Jinan Stomatology Hospital shows that patients with dental arch deficiency generally have a limited level of knowledge despite showing a relatively positive attitude and moderate health practices, conditions that are influenced by various demographic and social factors such as age, gender, education, occupation, income, marital status, lifestyle habits, health history, and access to health financing. Therefore, these findings affirm the importance of developing more targeted education and intervention programs, increasing access to dental services, and service approaches that comprehensively adapt to individual patient needs (36).

The Relationship of the Size (Placement) of Dentures to Their Function

Based on the results of bivariate analysis, the relationship between the variable size (placement) of dentures and denture function showed an OR value of 1.743 with a confidence interval of 95% (CI: 0.235–12,924) and a p-value of 0.625. Although an OR value greater than 1 descriptively indicates a higher probability of a given group, a very wide confidence interval and crossing the number 1 indicates that the estimate has a low level of precision. Thus, there is no statistically significant relationship between the size (placement) of dentures and denture function.

The absence of a meaningful relationship between the perception of the size (placement) of dentures and knowledge of their function is not an indication that this aspect is clinically irrelevant, but rather reflects a more fundamental condition: society has not yet reached the stage of understanding that allows them to link the technical dimensions of dentures to their functional impacts. The low initiative to seek information, both through print and electronic media, is the root of the problem that narrows the horizon of respondents' knowledge to only the most visible functions. As a result, the aspect of size (placement) that prosthodontically determines occlusion stability, chewing efficiency, and comfort of use, has not been identified as an important factor by the respondents. This condition confirms that the knowledge gaps found are structural, not individual, so they require a systematic and community-based approach to health promotion. They think it is not useful to know it; only those who use dentures need to know the function of dentures. The perception of some people who consider dentures as something less important also plays a role in the low level of knowledge and motivation to use dentures. This view affects people's attitudes towards information searching, acceptance of dental and oral health education, and awareness of the benefits of dentures in supporting oral function, aesthetics, and overall quality of life (37,38). The descriptive study of cross-cutting on 183 removable prosthesis users was motivated by the importance of patient satisfaction as an indicator of the success of prosthodontic rehabilitation in restoring chewing and phonetic functions, and the results showed that most of the respondents felt quite satisfied with the retention, aesthetics, chewing ability, and the final result of dentures, where the patient's behavior had a meaningful relationship with overall satisfaction ($p = 0.00$). So it can be concluded that the patient's perception of the accuracy of the size (placement) of dentures plays an important role in determining the function of the prosthesis and the level of overall satisfaction with use (39).

The findings of the study can be understood as an indication that the use of digital technology in the manufacture of dentures has the potential to provide a more comfortable user experience and in accordance with the expectations of some users. In the context of rural communities, information about ease of use, convenience, appearance, and reduced need for repeat visits can influence how people assess the benefits of dentures. Such perceptions are not only shaped by personal experiences, but also by stories, recommendations, and views of the surrounding environment. However, the results are not enough to describe all the conditions of the community, so further studies are needed on a more diverse population to understand public perception more comprehensively (40).

The development of digital technology in the manufacture of dentures and dental restoration shows that there are efforts to provide services that are more practical, fast, and in accordance with the needs of the community. In rural communities, the existence of new technology can affect public perception of dental care, especially if it is seen as able to provide convenience, time efficiency, and results that are more in line with user expectations. However, public acceptance of such innovations is likely to be determined not only by the technology, but also by the level of knowledge, access to information, previous experience, and trust in the health services available in their environment (41). Research in the elderly community shows that objective measurement of masseter muscle stiffness using myotometry has a significant relationship with maximum bite strength and number of teeth, so this parameter has the potential to be a more accurate and humane clinical indicator in assessing mastication function, mastication muscle strength, and the impact of tooth loss on the quality of oral health and functional ability of elderly individuals (42).

The method of implementing activities is carried out through providing information in the form of health counseling about dental caries, which includes causative factors, signs and symptoms, as well as prevention efforts that can be carried out through a health education approach. In addition, this activity needs to be accompanied by an ongoing evaluation and monitoring process to assess the effectiveness of counseling and ensure increased public understanding of dental and oral health (16). The study of 132 denture users partially removed from the elderly was motivated by the variation in dental care satisfaction between the patient's subjective assessment and objective clinical evaluation, and the results of the analysis showed that chewing satisfaction was not influenced by demographic factors or occlusal conditions, but was strongly related to the level of chewing function, food acceptance, and quality of life related to oral health, especially aspects of psychological discomfort and physical limitations, where respondents' perception of the ability to eat comfortably with dentures is the main factor that determines their satisfaction with the chewing function (43).

The Relationship of Denture Color to Its Function

In the variable color of dentures with denture function, an OR value of 1.233 was obtained with a confidence interval of 95% (CI: 0.167–9.115) and a p-value of 1.000. These OR values indicate a slightly higher probability trend, but the confidence interval that also includes the number 1 indicates that the relationship is not statistically significant. In addition, a fairly wide range of intervals indicates high uncertainty in the estimated risk obtained. Thus, statistically, there is no statistically significant relationship between the color of dentures and the function of dentures.

The low public attention to the color of dentures from a research perspective reflects the limited understanding of the aesthetic significance of prosthodontics more broadly. The assumption that dentures are "hidden" in the oral cavity indicates that society does not understand how the color of dentures contributes to facial aesthetic harmony, social confidence, and the quality of user interpersonal interactions. Interestingly, from the user's perspective, the majority of respondents reported satisfaction and comfort with the color of their dentures, indicating that color compatibility with natural teeth has implicitly been felt, although it has not been conceptually understood. This duality of perception, namely being satisfied as a user but not recognizing the functional value of color theoretically, which confirms that people's knowledge of the function of dentures is still a purely subjective experience, has not developed into a structured health literacy-based understanding.

Although the use of home teeth whitening products has been proven to be able to objectively increase the brightness of tooth color in a short period of time, the results of the study show that these aesthetic changes do not significantly increase the psychosocial satisfaction or self-perception of the respondents, which indicates that there is still a low understanding of the community, including in the context of dentures regarding the relationship between tooth color and actual oral function, so that aesthetic aspects are often perceived separately from the functional benefits of oral cavity health (44). Similarly, the study involving 80 lay respondents with diverse demographic backgrounds showed that color variation in dentures significantly affected the perception of harmony and aesthetic quality where the greater the difference in color between teeth, the aesthetic assessment changed non-linearly and was influenced by age, gender, and education factors, but the results also confirmed that respondents tended to judge color only as a visual aspect without understanding its association with denture function in maintaining occlusion balance, mastication comfort, and overall oral health (45). Technological developments in the determination of denture colors reflect efforts to produce a look that is more in line with user expectations. In rural communities, the assessment of dentures often focuses more on the visual impression that is easily observable than on other aspects that underlie the manufacturing process. Limited access to information and diverse experiences can affect the way people understand the quality of dentures, so color is often used as the main indicator of successful use. This condition has the potential to cause a difference between the expectations and the experience felt by the user. Therefore, increasing public understanding of the various factors that affect the final results of dentures can help form a more complete and realistic perception of their functions and benefits (46). Focusing on manufacturing, the results showed that all dentures underwent discoloration after exposure to dyes with coffee gave the strongest staining effect, but the materials produced through the milling process have better stain resistance and color stability than conventional methods and can return to the original color after the cleaning protocol, thus confirming that the selection of materials and fabrication techniques plays an important role in the sustainability of aesthetics and clinical function of dentures, although respondents generally still have limited understanding of the relationship between material discoloration

and functional performance and durability of dentures in long-term use (47). The aesthetic aspects of tooth color and phonetic function have an important role in shaping the level of satisfaction of denture users. The suitability of denture color with natural teeth, as well as the ability of dentures to support pronunciation clarity, has a direct effect on the user's sense of comfort and increased confidence in carrying out daily activities. In addition, the harmonious perception in the family environment regarding the suitability of denture colors also encourages an increase in individual interest in using dentures, due to the social support and acceptance of this aesthetic aspect (48).

Interpretation of Key Findings

Interpretation The findings of this study show that most of the people in the work area of the Aranio Health Center show that the low public knowledge about the function of dentures is a more prominent issue than proving the role of size (placement) and color of dentures. Most respondents seem to judge dentures based on direct experience or visual impressions, so perceived perception and satisfaction do not necessarily reflect the level of knowledge or function of dentures as a whole. Therefore, the absence of meaningful statistical relationships needs to be understood carefully considering the unbalanced distribution of results, limited sample sizes, and limitations of instruments in capturing differences between perception, knowledge, satisfaction, and function.

In addition, the absence of statistically meaningful relationships needs to be understood by considering the limitations of statistical power, unbalanced data distribution, and wide confidence intervals so that the accuracy of estimates is limited. In addition, the instruments used capture more perception and basic knowledge than the function of dentures as a whole. This condition reflects that low levels of knowledge are more influenced by limited access to dental health information and education, rather than solely by the characteristics of dentures themselves.

Comparison with Previous Studies

The results of this study on the function of dentures show that the majority of respondents (96%) do not have a comprehensive understanding of the function of dentures, because most only view them as a chewing aid and a means of increasing confidence, while other functions such as increasing clarity of speech, facial aesthetic support, stabilizing the arrangement of teeth, and maintaining overall oral health are still poorly understood. These findings are in line with various previous studies that reported low public literacy related to prosthodontic function, such as research (31,34) which showed that limited access to information causes people to not understand the benefits of dentures holistically, as well as research (35,36) which affirmed that although patients have a positive attitude towards the use of dentures, The practice and understanding of oral health is still not optimal due to educational, social, and demographic factors. Physiologically, tooth loss without rehabilitation has also been shown to worsen oral function due to changes in the structure of the oral cavity and pharynx, which have an impact on the decline of chewing and swallowing ability, so the use of well-designed dentures plays an important role in maintaining this function, although its effectiveness remains lower than that of natural teeth (30). However, the results of this study also show aspects that are not entirely in line with the findings (32), where some respondents in other studies have had a fairly good level of knowledge and interest in the use of dentures, although there are still groups with low understanding that affect the quality of care and comfort of use. In addition, the research (33) emphasizes that limited understanding can form a negative perception of the benefits and comfort of dentures, which has the potential to decrease patient acceptance and satisfaction. Overall, the results of this study reinforce the importance of continuous education and community-based health promotion as a positive step to improve dental and oral health literacy, but at the same time show real challenges in the form of information gaps, physiological adaptation of users, and the quality of prosthesis care, which are still inhibiting factors in optimizing denture function and patient quality of life after tooth loss.

The results showed that there was no significant relationship between the size (placement) of dentures and denture function ($p = 0.625$), although the tendency of respondents with good placement had a higher chance of knowledge, but the effect was not statistically significant. These findings are not entirely in line with the research (39,40,43), which assert that the accuracy of prosthesis design, retention, and adaptation contribute to patient function and satisfaction, but are in line with the studies (37,38) which show that low health literacy and limited access to information cause people to not view size and placement as important factors in function dentures.

In the denture color variable, the results of the analysis also showed no significant association with denture function ($p = 1,000$), indicating that society tends to separate aesthetic aspects from functional benefits, although

users subjectively still feel comfortable and satisfied with color suitability. These findings are in line with the research (44,45), which showed that color is more perceived as a visual aspect, but it is not entirely in line with (47,48), who emphasized that color stability and aesthetics actually contribute to phonetic function, comfort, and social acceptance, so the results of this study confirm the existence of a gap between public perception and clinical concepts of the function of dentures comprehensively.

Limitations and Cautions

This study has several limitations that need to be considered in interpreting the results. First, the cross-sectional research design only describes the relationship between variables at a certain time, so it cannot explain the causal relationship in depth. Second, data collection is carried out through questionnaires and interviews that rely heavily on the subjective perception of respondents, so that it has the potential to cause information bias.

In addition, the limited access to dental health services in the work area of the Aranio Health Center and the dominant role of dentists as denture providers can affect public perception and perception. Cultural factors, hereditary habits, and the lack of structured dental health promotion are also important concerns that have not been fully accommodated in this study. Therefore, the results of the research need to be interpreted carefully and used as a basis for the development of more in-depth follow-up research.

Recommendations for Future Research

Increasing information about the benefits, manufacturing process, and various functions of dentures, such as tooth stability, pronunciation improvement, aesthetics, and prevention of jaw muscle complaints, needs to be strengthened. Education through print and digital media should be optimized, especially by involving close families of denture users, so that access to information becomes easier and more comfortable. In addition, the role of dental health workers, including dentists, dental nurses, and dental technicians, is critical in intensifying health promotion through counseling and the development of targeted educational media.

CONCLUSION

The results showed that the level of public knowledge about the function of dentures is still relatively low, with most respondents (96%) in the category of not knowing. In addition, in terms of the size (placement) of dentures, the largest proportion of respondents were in the poor category (45%). These findings illustrate that public understanding is still limited about the proper function and aspects of the use of dentures. In the aspect of color of dentures, the distribution of respondents was relatively balanced between the interested (45%) and lack of interest (55%) categories. The results of the analysis showed that the size (placement) and color of dentures did not have a significant relationship with denture function. These findings suggest that public perceptions of denture function do not show a meaningful relationship with size (placement) and color. The conclusion of this study shows that public knowledge about denture function is still low in the communities studied, especially in environments with limited access to professional dental health information and services. This condition indicates a gap between public perception and a more comprehensive understanding of the benefits of dentures. These findings are an important basis for strengthening the promotion of more targeted and sustainable oral health. As a practical implication, the development of easy-to-understand educational media, the involvement of family members as a source of information support, and capacity building for health workers in providing counseling can be considered to help improve public health literacy more effectively.

AUTHOR CONTRIBUTIONS STATEMENT

The main author and correspondent is responsible for preparing activity reports, coordinating with the implementation site manager, taking care of licensing, and carrying out the data collection process. The second author plays a role in supporting the management of licensing administration and conducting systematic recapitulation of research data. The third author contributed to the preparation of scientific articles and the management of relevant references. Meanwhile, the fourth author was in charge of collecting supporting literature and refining the final manuscript.

CONFLICTS OF INTEREST

The author has no conflict of interest.

DECLARATION OF GENERATIVE AI AND AI-ASSISTED TECHNOLOGIES IN THE WRITING PROCESS

The author uses AI, ChatGPT, in sentence paraphrasing, the Grammarly app for writing and language order checking.

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BIBLIOGRAPHY

1. WHO. Global oral health status report [Internet]. 2022. 120 p. Available from: <https://www.who.int/publications/i/item/9789240061484>
2. FDI. FDI's definition of oral health [Internet]. Available from: <https://www.fdiworldddental.org/fdis-definition-oral-health>
3. Kemenkes RI. Peraturan Menteri Kesehatan Republik Indonesia Nomor 12 Tahun 2025 Tentang Rencana Strategis Kementerian Kesehatan Tahun 2025-2029 [Internet]. Permenkes RI No. 12 Tahun 2025 Indonesia; 2025 p. 900. Available from: <https://www.kemkes.go.id/id/permenkes-ri-no-12-tahun-2025-tentang-rencana-strategis-kementerian-kesehatan-tahun-2025-2029>
4. Cheng Y, Cheng L, Zhu F, Xiang Y, Duan S, Luo J, et al. New measure of functional tooth loss for successful Oral ageing: a cross - sectional study. BMC Geriatr [Internet]. 2023;1–13. Available from: <https://doi.org/10.1186/s12877-023-04570-1>
5. Setyowati S, Purnomo PS, Hartina M. Dampak kehilangan gigi, fungsi kognitif dan kualitas hidup lanjut usia. 2021;5(3):88–96. Available from: <https://doi.org/10.32504/hspj.v5i3.468>
6. Badan Pusat Statistik. Statistik Penduduk Lanjut Usia 2024 [Internet]. 21st ed. Jakarta: Badan Pusat Statistik; 2024. (21). Available from: <https://www.bps.go.id/id/publication/2024/12/31/a00d4477490caaf0716b711d/statistik-penduduk-lanjut-usia-2024.html>
7. Utami S, Herninda AY, Dlya A. Correlation Between Tooth Brushing Behavior And Oral Hygiene Status Among 18 To 54-Year-Olds. 2024;11(1):48–59. Available from: <https://doi.org/10.30659/odj.11.1.48-59>
8. Simanjuntak H, Puput Oktamianti, Cicilya Candi. Mutu Layanan dan Kepuasan Pasien pada Layanan Kesehatan Gigi dan Mulut Pemerintah dan Swasta : Literature Review. Media Publ Promosi Kesehat Indones [Internet]. 2024 Feb 4;7(2):257–64. Available from: <https://doi.org/10.56338/mppki.v7i2.4303>
9. Ferreira RC, Kawachi I, Gabriel J, Souza S, Campos FL. Is reduced dentition with and without dental prosthesis associated with oral health-related quality of life ? A cross- sectional study. 2019;2:1–12. Available from: <https://doi.org/10.1186/s12955-019-1149-2>
10. Limpuangthip N, Purnaveja S, Somkotra T. Predisposing and enabling factors associated with public denture service utilization among older Thai people: a cross-sectional population-based study. BMC Oral Health [Internet]. 2019;19(1):220. Available from: <https://doi.org/10.1186/s12903-019-0923-1>

11. Riskesdas. Laporan Nasional Riskesdas 2018 [Internet]. Kementerian Kesehatan Republik Indonesia. Badan Penelitian dan Pengembangan Kesehatan. Jakarta: Lembaga Penerbit Badan Penelitian dan Pengembangan Kesehatan (LPB); 2019. 674 p. Available from: <https://repository.kemkes.go.id/book/1323>
12. SKI. Survei Kesehatan Indonesia (SKI) 2023 [Internet]. Kemenkes RI. Jakarta; 2023. Available from: https://kemkes.go.id/app_asset/file_content_download/17169067256655eae5553985.98376730.pdf
13. Maulidina HA. Hambatan Penegakan Hukum Terhadap Praktik Tukang Gigi Tanpa Izin di Kabupaten Batang. 2024;(4):165–72. Available from: <https://doi.org/10.62383/aliansi.v1i4.306>
14. Andriani R, Damhuji D, Mahmiyah E, Rusmali R. Faktor-Faktor Yang Mempengaruhi Minat Masyarakat Untuk Membuat Gigi Tiruan Lepas Ke Tukang Gigi. Dent Ther J [Internet]. 2021 May 31;3(1):27–40. Available from: <https://doi.org/10.31965/dtj.v3i1.616>
15. Yacob N, Safii SH, Ahmad NA, Yunus N, Razak FA. Denture microbiome shift and changes of salivary inflammatory markers following insertion of 3D printed removable partial PMMA denture: a pilot study. BMC Oral Health [Internet]. 2024 Oct 14;24(1):1216. Available from: <https://doi.org/10.1186/s12903-024-05012-z>
16. Ilmi MB, Ernadi E. Peningkatan Pengetahuan Cara Menggosok Gigi Dengan Kejadian Karies Gigi Melalui Upaya Penyuluhan (Edukasi) Kesehatan Pada Masyarakat Desa Juai Kecamatan Juai Kabupaten Balangan. 2017 May 23;2(2). Available from: <http://dx.doi.org/10.31602/jpai.v2i2.749>
17. Falatehan N, Fahira J. Persepsi Tentang Fungsi Estetik Dan Mastikasi Gigi Tiruan Lengkap Terhadap Lanjut Usia. Cakradonya Dent J [Internet]. 2020;12(2):99–103. Available from: <https://doi.org/10.24815/cdj.v12i2.18440>
18. Rahman E, Ilmi MB. Perbedaan Sikat Gigi Biasa Dengan Sikat Gigi Elektrik Terhadap Penurunan Debris Indeks Pada Murid Kelas V Madrasah Diniyah Islamiyah Kindaung Banjarmasin. J Kesehat Indones [Internet]. 2019;9(3):117–21. Available from: <https://doi.org/10.33657/jurkessia.v9i3.173>
19. Sutarno M, Anam K, Ilmi MB, Widia Sary EWS, Anugrah FT, Azidin Y, et al. A Causal Model of Workplace Engagement Among Indonesian Nursing Staff. Pacific Rim Int J Nurs Res [Internet]. 2022 Dec 14;27(1):50–64. Available from: <https://doi.org/10.60099/prijnr.2023.260332>
20. Adriani M, Sugiarto DW, Ayubi D, Martha E. Determinan Pemanfaatan Pelayanan Kesehatan Gigi dan Mulut oleh Ibu Hamil di Wilayah Puskesmas Pancoran Mas Kota Depok. Media Publ Promosi Kesehat Indones [Internet]. 2022 Mar 29;5(4):387–94. Available from: <https://doi.org/10.56338/mppki.v5i4.2227>
21. Sri Widuri R.U. Jatiputri, Ayun Sriatmi, Henry Setyawan Susanto. Kepatuhan terhadap Pedoman Pengendalian Infeksi dalam Praktik Kedokteran Gigi : Literature Review. Media Publ Promosi Kesehat Indones [Internet]. 2023 Mar 3;6(3):436–44. Available from: <https://doi.org/10.56338/mppki.v6i3.3322>
22. Choong EKM, Shu X, Leung KCM, Lo ECM. Oral health-related quality of life (OHRQoL) after rehabilitation with removable partial dentures (RPDs): A systematic review and meta-analysis. J Dent [Internet]. 2022;127:104351. Available from: <https://doi.org/10.1016/j.jdent.2022.104351>
23. Permata RAD, Fiashriel Lundy, Siti Asiyah. Pengelolaan Program UKGS Melalui Pelatihan Dokter Gigi Kecil di SDN Ketindan 4 Kabupaten Malang. Media Publ Promosi Kesehat Indones [Internet]. 2023 Nov 4;6(11):2185–92. Available from: <https://doi.org/10.56338/mppki.v6i11.3819>
24. Pergub Kalsel. Peraturan Gubernur Kalimantan Selatan No.071 Tahun 2023 Tentang Rencana Kerja Pemerintah Daerah Provinsi Kalimantan Selatan 2024 [Internet]. Nomor.071 Tahun 2023 Banjarbaru, Indonesia; 2023 p. 1189. Available from: <https://ppidutama.kalselprov.go.id/wp-content/uploads/2024/09/RKPD-2024.pdf>
25. Dinkes Kab. Banjar. Profil Kesehatan Kabupaten Banjar 2024 [Internet]. Martapura; 2025. Available from: https://satudata.banjarkab.go.id/uploads/publikasi/PROFIL_2024_DINAS_KESEHATAN_KAB_BANJAR.pdf
26. Raj N, Ahmed S, Nandini V V, Lathief J, Kumar D, Surya R. Aesthetic Perception of Patients and Dentists on Conventional and Characterized Complete Dentures. J Pharm Bioallied Sci [Internet]. 2022 Jul;14(Suppl 1):S611–5. Available from: https://doi.org/10.4103/jpbs.jpbs_784_21
27. Kayani AT, Butt AM, Shahid M, Shaikh UB, Qureshi I, Dahri WM, et al. Assessing Smile Line Aesthetic Impact in Complete Denture Wearers from the Perspective of Laypersons. J Heal Rehabil Res [Internet]. 2023;3(2):1311–1315. Available from: <https://jhrlmc.com/index.php/home/article/view/698>

28. Hadi L, Muttaqin Z, Halim S, Adhana A, Pasaribu ES, Alfida S, et al. Persepsi diri terhadap estetika gigi dan senyum pada mahasiswa kedokteran gigi. 2021;4(1):1–8. Available from: <https://jurnal.unprimdn.ac.id/index.php/PrimaJODS/article/view/2395/1526>
29. Notoatmodjo S. Metodologi Penelitian Kesehatan / Prof. Dr. Soekidjo Notoatmodjo, S.K.M., M.Com.H [Internet]. Cetakan ke. Jakarta: Rineka Cipta; 2018. Available from: <https://opac.perpusnas.go.id/Detailopac.Aspx?Id=1208446#>
30. Novialdi MZ, Indrasari M. Relationship between complete dentures and swallowing ability. 2023;4(December):93–7. Available from: <https://doi.org/10.46934/ijp.v4i2.214>
31. Mangundap GCM, Wowor VNS, Mintjelungan CN. Efektivitas Penggunaan Gigi Tiruan Sebagian Lepas terhadap Fungsi Pengunyahan pada Masyarakat Desa Pinasungkulan Kecamatan Modindong. e-GIGI [Internet]. 2019 Jul 11;7(2). Available from: <https://doi.org/10.35790/eg.7.2.2019.24161>
32. Haryani W, Indahsari R, Sutrisno S. The relationship between levels of knowledge and interest in using the partial dentures: A case at Yogyakarta's private dental clinic, Indonesia. GHMJ (Global Heal Manag Journal) [Internet]. 2018 Feb 28;2(1):13. Available from: <https://doi.org/10.35898/ghmj-21191>
33. Fatima F, Balbeid M, Wardani SC, Stephani EA. Kualitas Hidup Lansia Pengguna dan Bukan Pengguna Gigi Tiruan di Desa Gondanglegi Kabupaten Malang. Sinnun Maxillofac J [Internet]. 2025 Oct 31;7(02):124–35. Available from: <https://doi.org/10.33096/smj.v7i02.205>
34. Ilmi MB, Anam K, Ernadi E. Determinan Persepsi Masyarakat terhadap Fungsi Gigi Tiruan di Wilayah Kerja Puskesmas Juai. J Akad Baiturrahim Jambi [Internet]. 2021 Sep 18;10(2):418. Available from: <https://doi.org/10.36565/jab.v10i2.394>
35. Milward P, Katechia D, Morgan MZ. Knowledge of removable partial denture wearers on denture hygiene. Br Dent J [Internet]. 2013 Nov 14;215(10):E20–E20. Available from: <https://doi.org/10.1038/sj.bdj.2013.1095>
36. Sun J, Meng J, Shan J, Lu H, Wei W, Zhang S, et al. Knowledge, attitudes, and practice related to tooth loss and dentures among patients with dental arch deficiencies. BMC Public Health [Internet]. 2024 Jul 6;24(1):1810. Available from: <https://doi.org/10.1186/s12889-024-19310-2>
37. Triatna C, Herawan E, Hartini N, Rosalin E. Outcomes of School Resource Organizing Health Diagnostics. JPI (Jurnal Pendidik Indones [Internet]. 2023;12(1). Available from: <https://doi.org/10.23887/jpiundiksha.v12i1.58495>
38. Azzahra E, Amos J, Zicof E, Nadira NA, Widdefrita W. Efektivitas Permainan Ludo dalam Peningkatan Pengetahuan dan Sikap tentang Pencegahan Karies Gigi. Media Publ Promosi Kesehat Indones [Internet]. 2023 Nov 4;6(11):2239–48. Available from: <https://doi.org/10.56338/mppki.v6i11.3980>
39. Kavita K, Iqbal MA, Singh R, Singh S, Nazeer J, Singh R. Factors affecting patient satisfaction among patients undergone removable prosthodontic rehabilitation. J Fam Med Prim Care [Internet]. 2020;9(7):3544. Available from: https://doi.org/10.4103/jfmpe.jfmpe_120_20
40. Bors A, Szekely M, Beresescu L, Maier A, Beresescu F. Patient Satisfaction and Perception with Digital Complete Dentures Compared to Conventional Complete Dentures—A Pilot Study. Dent J [Internet]. 2025 Jun 27;13(7):291. Available from: <https://doi.org/10.3390/dj13070291>
41. Muta S, Ikeda M, Nikaido T, Sayed M, Sadr A, Suzuki T, et al. Chairside fabrication of provisional crowns on FDM 3D-printed PVA model. J Prosthodont Res [Internet]. 2020 Oct;64(4):401–7. Available from: <https://doi.org/10.1016/j.jpor.2019.11.004>
42. Hara K, Namiki C, Yamaguchi K, Kobayashi K, Saito T, Nakagawa K, et al. Association between myotonometric measurement of masseter muscle stiffness and maximum bite force in healthy elders. J Oral Rehabil [Internet]. 2020 Jun 24;47(6):750–6. Available from: <https://doi.org/10.1111/joor.12968>
43. Yoshimoto T, Hasegawa Y, Salazar S, Kikuchi S, Hori K, Ono T. Factors Affecting Masticatory Satisfaction in Patients with Removable Partial Dentures. Int J Environ Res Public Health [Internet]. 2021 Jun 20;18(12):6620. Available from: <https://doi.org/10.3390/ijerph18126620>
44. Tadin A, Galić S, Gavić L. Assessment of Color Change, Esthetic Perception, Treatment Satisfaction, and Side Effects Following the Use of Over-the-Counter Whitening Products. Acta Stomatol Croat [Internet]. 2023 Dec 15;57(4):300–15. Available from: <https://doi.org/10.15644/asc57/4/2>

45. Wesselbaum J, Dirksen D, Runte C, Becker A. Perception and Acceptance of Shade Variances in the Smile. *Dent J* [Internet]. 2024 Aug 16;12(8):260. Available from: <https://doi.org/10.3390/dj12080260>
46. Şahin N, Ural Ç. Comparison of different digital shade selection methodologies in terms of accuracy. *J Adv Prosthodont* [Internet]. 2024;16(1):38. Available from: <https://doi.org/10.4047/jap.2024.16.1.38>
47. Alsharif AS, Sadid-Zadeh R, Li R, Clark WA, Alqutaibi AY. Impact of digital fabrication techniques on the color stability of complete dentures base and artificial teeth. *BMC Oral Health* [Internet]. 2025 Dec 22;25(1):1926. Available from: <https://doi.org/10.1186/s12903-025-07197-3>
48. Falatehan N, Kusumah E. Gambaran Tingkat Kepuasan Estetik Dan Fonetik Pada Pemakai Gigi Tiruan Lengkap Di Fakultas Kedokteran Gigi Universitas Trisakti. *Cakradonya Dent J* [Internet]. 2018;10(2):102–6. Available from: <https://doi.org/10.24815/cdj.v10i2.11710>