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**The Effect of Counseling Using the Demonstration Method on Changes in Tooth
Brushing Skills of the Elderly at the Pasean Community Health Center**

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ABSTRACT

Background: The elderly are a vulnerable group to financial with health imbalances. The lack of understanding of the elderly about dental health is caused by nescience. Counseling is carried out so that elderly able to identify and prevent dental and oral problems. Improving the skills of the elderly is the best way to maintain dental health, namely by using the demonstration method, so that the elderly can be skilled in brushing their teeth and avoid dental and oral health problems. **Method:** Current study uses a qualitative analytical approach by monitoring 36 elderly people at the Pasean Community Health Center as respondents. Data were collected through a checklist observation sheet that measures the level of elderly people's tooth brushing skills at the Pasean Community Health Center. Data analysis used the Quasi Experiment technique. **Results:** The results of the study showed that there was an influence between the demonstration method counseling on transformation with the elderly's tooth brushing skills at the Pasean Health Center, value the Asymp. Sig. (2-tailed) is .000 which was smaller relative to (0.05). This implied before counseling was carried out by applying the demonstration technique, elderly skill with brushing teeth was include to category of needing guidance, and after counseling was carried out by applying the demonstration technique, elderly skill with brushing teeth was include to very good category.

Keywords: Counseling, Demonstration, Tooth, Elderly

BACKGROUND

Moegiarso (2022) Indonesia, one of many developing countries, experiences economic growth annually. The Central Statistics Agency (BPS) (2021) stated that improving the quality of life is a result of national development, which means better healthcare facilities. This has led Indonesia to experience the phenomenon of global population aging. This phenomenon can lead to an increase in life expectancy, accompanied by an increase in the elderly population. With the largest number of elderly people in the world, Indonesia ranks 8th (Idaryati et al., 2025).

Girsang et al., (2021) stated that this indirectly also poses a problem because the elderly are included in the group vulnerable

to economic and health inequality. This incident can cause various diseases suffered by the elderly due to vulnerabilities in health conditions. The periodontium is one of the disorders that is increasing and affecting the elderly. Periodontal disease attacks the parts surrounding the teeth, namely the gums, periodontal membrane, cementum, and bone. Periodontal disease is the most common oral cavity disease found after dental caries (Wijaksana, 2019).

Surya (2019) states that periodontal disorders are disorders that occur due to damage to the periodontal tissue, starting with a reversible gum infection that then increases seriously until the tooth-supporting tissue is lost. As much as 15%

of the world's population experiences periodontal disorders resulting in severe gum disease that results in tooth loss. Periodontal disorders begin with inflammation caused by bacteria found in biofilms caused by the amount of biofilm buildup and time. These aspects influence the formation of periodontal disorders, starting with socioeconomic aspects, and sources of inflammation include local and general, behavior, region, familial, residential area, and medical assistance.

Local aspects include biofilm and tartar, removable partial dentures, fixed dentures, the effects of tooth extraction, the use of orthodontic devices, crowding, and loss. Meanwhile, systemic aspects include diabetes mellitus, psychosomatics, stress, and nutrition. Attitudes include smoking or consuming tobacco, tooth brushing habits, while aspects of medical assistance include dental guidance, access to medical facilities, and medical insurance. Therefore, the elderly have poor oral hygiene compared to other groups (Barker et al., 2018).

Elderly people lack the understanding to maintain their teeth and keep them intact due to a lack of understanding resulting from a lack of education. Therefore, it is important for the elderly to receive counseling and health promotion so they can identify dental and oral health problems they suffer from (Sreenivasan et al., 2016). According to (Notoatmodjo, 2012), understanding is a term used to describe someone knowing something. Knowledge always consists of the knowing and the known, as well as awareness of the need to understand three things. The subject must have awareness to understand something and the object they are facing.

Brushing your teeth and maintaining good dental health can help alleviate these problems. According to Nasution (in Damayanti, 2014), brushing skills are basic competencies that continue to develop until mastery is achieved. Brushing skills are the ability to teach and

perform the steps necessary to clean teeth. Brushing teeth removes and disrupts plaque and debris formation, removes food residue stuck to teeth, stimulates gingival tissue, and eliminates undesirable bad breath (Arianto et al., 2014).

Health publicity techniques are tools used by medical personnel to create transformation in the target population. Techniques are implicit and explicit steps to communicate information, utilizing instruments when necessary (Eltawil et al., 2019). Health publicity activities play a key role in organizing the understanding and skills needed to obtain health explanations (Ogueta et al., 2019). Health publicity, instruments, and learning tools need to be promoted to support participants in achieving impressive performance (Putra et al., 2018).

Hestiani (2017) stated that the demonstration method was designed as a useful strategy for delivering discussions to older participants, because the results obtained were effective (Azhari et al., 2017).

RESEARCH METHODE

Description of Materials or Research Subjects

The population of this study was all elderly people who had been recorded as visiting the Pasean Community Health Center during the last 2 months, totaling 40 people. along with pretest and posttest observation designed to observe the respondents' level of brushing skill before and after the intervention.

Research Design

This research falls into the quasi-experimental research category. Because the variables that need to be controlled or manipulated cannot be controlled, the quasi-experiment does not yet have the characteristics of a true experimental design (Notoatmodjo, 2018). This study used a pretest-posttest group design without a control group to assess changes in the elderly's ability to brush their teeth before

and after receiving counseling using a demonstration approach.

Research Location and Period

The research was conducted at Puskesmas Pasean, Pamekasan. The data collection was carried out from June 2024 to November 2024, covering preparation, intervention, monitoring, and evaluation stages.

Research Procedure

The research scheme for collecting data on counseling and changes in the elderly's tooth brushing skills at the Pasean Community Health Center is as follows:

1. Preparation Stage

- a. The permitting process begins with obtaining a research permit from the community health center (Puskesmas) and the Bakesbangpol (National Agency for Community Empowerment and Development) in the administration room of the Dental Health Department of the Surabaya Ministry of Health Polytechnic.
- b. Submitting and requesting permission from the head of the Pasean Community Health Center to conduct research data collection, and arranging a research schedule with the community health center's health workers.
- c. Arranging a counseling schedule for the elderly group, dividing the elderly into two groups and conducting two counseling sessions, each with 18 elderly individuals. The first session is from 8:00-9:00 AM and the second session is from 11:00-12:00 PM.
- d. Enumerators: The researcher was assisted by two enumerators from the same department for data collection. The researcher first explained the data collection procedures to the enumerators.

2. Implementation Stage

- a. Gathering the elderly for the first session in a counseling room

provided by the community health center.

- b. The researcher began with introductions, explaining the procedures and objectives of the study to the elderly who served as the sample in the first session.
- c. The researcher began the study with the elderly in the first session by providing observation sheet 01 to measure their tooth brushing skills. The researcher and enumerator observed the elderly during observation 01.
- d. After conducting observation 01, the researcher provided counseling, followed by the distribution of material using a tooth phantom through a demonstration method.-up monitoring using a WhatsApp communication group for ongoing assessment.
- e. The researcher used observation sheet 02 to measure the elderly's tooth-brushing skills, and the researcher and enumerator observed the elderly during observation 02.
- f. The researcher then recorded the data from observation sheet 01 and observation sheet 02 obtained by the elderly in the first session.
- g. The researcher then gathered the elderly in the second session at the Pasean Community Health Center for counseling.
- h. The researcher then began with introductions, explaining the procedures and objectives of the study to the elderly in the second session, who served as the research sample.
- i. The researcher began the study with the elderly in the second session by providing observation sheet 01 to measure the elderly's tooth-brushing skills, and the researcher and enumerator observed the elderly during observation 01.

- j. After conducting observation 01, the researcher provided counseling, followed by distributing the material using a tooth phantom as a demonstration method.
 - k. The researcher used observation sheet 02 to measure the elderly's tooth brushing skills, and the researcher and enumerator observed the elderly during observation 02.
 - l. The researcher then recorded the data from observation sheets 01 and 02 obtained by the elderly in the second session.
3. Completion Stage
- All research data collected was then processed and conclusions were drawn regarding the results of the research conducted at the Pasean Community Health Center.

Instruments and Equipment

The method used in this study was observation. Data collection in this study utilized several instruments, including:

1. Observation Sheet 01 and Observation Sheet 02 regarding the elderly's tooth-brushing skills.
2. Counseling instruments included tools: dental phantoms and toothbrushes.

Data Collection Methods

Data collection was carried out using pretest and posttest observation

distributed to elderly before and after the educational intervention using observation sheet.

Data Analysis

Analyzing the effect of counseling with the demonstration method on changes in the elderly's tooth brushing skills at the Pasean Community Health Center using the SPSS data processing application, with data analysis using the Wilcoxon test.

Research Ethics

This study has received an ethical exemption from the Health Research Ethics Committee of the Surabaya Ministry of Health Polytechnic (Poltekkes Kemenkes Surabaya) under reference number No.EA/3691/KEPK-Poltekkes_Sby/V/2025. The ethical assessment was conducted in accordance with the seven WHO 2011 standards, which include social values, scientific values, the balance of risks and benefits, confidentiality, and informed consent in accordance with the 2016 CIOMS Guidelines. This ethical approval certificate is valid from 25 July 2025 until 25 July 2026.

RESULT AND DISCUSSION

Frequency distribution of elderly tooth brushing skills at Pasean Community Health Center before counseling was conducted

Table 1.

Distribution of Univariate Research Results of the Elderly at the Pasean Community Health Center, Tlontoraja Hamlet, Pasean District in 2025

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Need Guidance	36	100.0	100.0	100.0

Table 1 shows the frequency distribution of elderly tooth brushing skills

at the Pasean Community Health Center before the counseling was carried out was all in the Need Guidance category.

Table 2.

Distribution of Univariate Research Results of the Elderly at the Pasean Community Health Center, Tlontoraja Hamlet, Pasean District in 2025

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Very Good	36	100.0	100.0	100.0

Table 2 shows the frequency distribution of elderly tooth brushing skills at the Pasean Community Health Center

before the counseling was carried out was all in the Very Good category.

Result of wilcoxon test analysis

Table 3.

Distribution of Bivariate Research Results of the Elderly at the Pasean Community Health Center, Tlontoraja Hamlet, Pasean District in 2025

		N	Mean Rank	Sum of Ranks
Post Test – Pre Test	Negative Ranks	0 ^a	.00	.00
	Positive Ranks	36 ^b	18.50	666.00
	Total	36		

Post Test – Pre Test

Z	-5.463 ^b
Asymp. Sig. (2-tailed)	.000

Table 3 obtained an Asymp. Sig. (2-tailed) value of .000 (<0.05), which means there is a significant influence on the counseling on tooth brushing skills using the demonstration method for the elderly at the Pasean Community Health Center.

Discussion

This study aims to demonstrate the effect of demonstration-based counseling on

changes in tooth-brushing skills among elderly people at the Pasean Community Health Center in Tlontoraja Village, Pasean, Pamekasan Regency. Based on the data collection and analysis, the discussion is structured into points for easier understanding.

Toothbrushing Skills of the Elderly at the Pasean Community Health Center

Before Conducting Counseling Using the Demonstration Method

Oral health education is an effort to change the behavior of individuals, groups, or communities so that they have the skills and habits to live a healthy lifestyle in the field of dental and oral health (Arsyad, 2018). Demonstration is a method of presenting learning and counseling materials by directly showing how to do something or demonstrating a process (Julianti, 2019). Health education has been proven to be an effective way to develop skills (Sari et al., 2018). In this study, the demonstration method counseling was based on the skills of brushing teeth of respondents in the elderly category, the average elderly brushing skills at the Pasean Health Center, Tlontoraja Village, Pasean, Pamekasan Regency were at the lowest value, requiring guidance, as a result the elderly did not understand how to brush their teeth properly and resulted in many problems in the condition of their oral cavity such as dental caries, tartar, disorders of the tooth supporting tissue, to bad breath that arose due to the ignorance of the elderly in maintaining dental and oral health, especially brushing their teeth and mouth properly and correctly.

Before the counseling, many elderly did not understand the importance of maintaining oral hygiene regularly and were not accustomed to good hygiene practices such as brushing their teeth properly. To find out and measure the skills of brushing teeth of the elderly at the Pasean Health Center, researchers used observation sheets on the elderly. This is based on the results of the observation sheet showing that most elderly people do not understand how to brush their teeth properly and get low scores, so that elderly people need guidance to understand how to brush their teeth properly and correctly, in order to avoid various problems related to dental and oral health. Therefore, changes in toothbrushing skills are very necessary to improve the quality of dental and oral health of the elderly. So that the skills of

brushing teeth can lead to changes in knowledge and attitudes of the elderly, so that it can become good practice. Better toothbrushing techniques are also a preventative measure against dental and oral health problems. The lack of education about dental and oral health makes elderly people do not understand how to maintain their dental and oral health, only a small portion of elderly people have a little understanding of the procedure for brushing their teeth and mouth, but it is still far from good. This is proven because elderly people admit that this is the first time they have received counseling on how to brush their teeth properly and correctly.

This study aligns with (Ermawati, 2017) that the average elderly respondent from various cities in Indonesia still has moderate to poor oral hygiene. This situation arises because the elderly lack understanding of proper dental hygiene, brushing techniques, timing, and other efforts to maintain dental hygiene. The 2018 Basic Health Research (Riskesdas) results show that many elderly people brush their teeth daily, but most do not brush at the appropriate times.

Toothbrushing Skills of the Elderly at the Pasean Community Health Center After Counseling Using the Demonstration Method

Skills refer to specific actions performed or the nature of an activity. Many activities are considered skills and consist of various skills or competencies that a person possesses. This is due to the general idea that skills are one or more extended patterns of movement or behavior. Skills are the abilities or competencies that a person has to perform a task, which can only be acquired through practice through training and experience (Arleta, 2019). Based on the results obtained during the study, counseling using the demonstration method given to the elderly had a significant impact on the elderly's tooth brushing skills. The elderly were able to practice brushing movements

correctly and precisely according to the researcher's instructions. This was seen in that 36 elderly people received an average score in the very good category.

This study aligns with (Aisyah et al., 2024) that counseling for the elderly in the community has resulted in significant improvements in knowledge, attitudes, and oral hygiene behavior. This is also in line with research (Liana et al., 2023) before and after community outreach activities, there were significant changes in the way the elderly brushed their teeth after being given dental phantoms. This is indicated by data showing that the level of knowledge of the elderly increased after providing information in the form of health counseling. This is also consistent with research (Berniyanti et al., 2019) seen from the results of observations of elderly cadres regarding their knowledge and understanding of how to brush their teeth properly.

The empowerment program used demonstration methods using images, toothbrushes, and posters to help the presenters and elderly cadres better understand the material. This was evident from observations of elderly people who received counseling from cadres on how to brush their teeth properly. The cadres' method of delivering the material to the elderly, by providing phantoms (dental learning models) and toothbrushes, was considered very engaging. This allowed the elderly to demonstrate the correct and appropriate way to brush their teeth for missing teeth and teach their peers how to brush their teeth. Furthermore, elderly people at the Integrated Health Post (Posyandu) demonstrated and implemented the correct way to brush their teeth.

The Effect of Demonstration Method Counseling on Changes in Tooth Brushing Skills of the Elderly at the Pasean Community Health Center

The results of the study showed that there was an influence between the demonstration method of counseling on

changes in the elderly's tooth brushing skills at the Pasean Community Health Center. The elderly do not have preventive awareness to maintain their dental health due to a lack of knowledge caused by a lack of education. Dental health counseling is a planned and directed effort to create an atmosphere where individuals and community groups are willing to change the behavior of the elderly for the greater good. In delivering counseling, learning methods play an important role as a means to create an effective teaching and learning process.

Counseling must be made as interesting and effective as possible so that the elderly can capture and apply the counseling information provided by health workers, teaching aids play an important role in counseling such as dental phantoms, dental phantoms play an important role in dental and oral health counseling because their shape resembles the anatomy of human teeth and mouth, so that the elderly can adapt and get a complete picture of how to maintain their dental and oral health, the counseling method with teaching aids can also be called the demonstration method. The demonstration method is a method that is very easy to understand and learn compared to reading or listening because it will provide counseling materials that are easier, simpler, and more memorable. For example, a more complete understanding can be achieved by demonstrating a process with the correct procedure and showing it to the speaker (Herijulianti et al., 2002).

The results of this study are in line with the findings (Bany, 2014) that the counseling method using the demonstration method is more effective than lectures. According to research (Pratiwi, 2019), the demonstration method produces effective results because in the process of receiving the subject of the counseling material, this is because it has the advantage of deeper memory, resulting in a good and complete understanding. In addition, participants see the performance process directly with artifacts, which makes the results more effective. The results showed that in each

age group 55-60 years, 61-65 years, 66-70, and 71-75 years the average skill score increased after the counseling.

CONCLUSION

The demonstration-based counseling method significantly improved the toothbrushing skills of the elderly at the Pasean Community Health Center, shifting their performance from a “need guidance” category before the intervention to a “very good” category afterward.

CONFLICT OF INTEREST

The authors declare that there are no conflicts of interest related to this research.

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