



# Oral Hygiene Education on the Dental and Oral Hygiene Status of Inpatients at Ananda Hospital, Bekasi

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## ABSTRACT

Background: Indonesian people often experience dental and oral health problems with a prevalence rate of 57.6%. With a caries prevalence of 88.8% and periodontal tissue (gingivitis) reaching 74.1%. In West Java province, dental and oral health problems reach 58.0%. Inpatients have poor dental and oral hygiene status. Objective: to analyze the dental and oral hygiene of inpatients before and after being given oral hygiene education at Ananda Bekasi Hospital in 2024. Method: The research design used was a quasi-experimental study with one group pre-test and post-test before and after oral hygiene education with flipcharts and toothbrush demonstrations were given to patients at Ananda Bekasi Hospital. Results: The results of education for 3 days on 32 inpatients at Ananda Hospital Bekasi showed that before education, patients with good criteria were 3 (10%), patients with moderate criteria were 19 (59%) and poor criteria were 10 patients (31%). After education, patients with good criteria were 8 patients (25%), moderate criteria were 21 patients (65%) and poor criteria were 3 patients (10%). The average difference in oral hygiene status (OHI-S) before and after education was 0.83 with  $p = 0.04$ . Conclusion: it can be concluded that oral hygiene education is effective in improving the oral hygiene status of inpatients at Ananda Hospital Bekasi.

## INTRODUCTION

Dental and oral health cannot be separated from physical health, because dental and oral health have a major influence on physical health (Abebe, 2021). Maintaining dental and oral hygiene is one of the steps that can be taken to improve dental and oral health. The oral cavity is very important for human health and safety (Fadjeri et al., 2021). In general, it can be said that individuals not only have a healthy body condition, but also have a healthy oral cavity and teeth. Therefore, dental and oral health plays an important role in supporting physical health (Nurilawaty et al., 2021).

Dental and oral health is like the main gate to a healthy and prosperous body. Maintaining it is not only important for basic functions such as speaking and chewing, but also increases self-confidence and overall quality of life (Haryani et al., 2022). In order to determine the level of dental and oral hygiene, measurements are needed using a special index. This index is an important benchmark when assessing a person's dental and oral health (Nurjannah et al., 2012).

Based on data from the 2018 Indonesian Basic Health Research, Indonesian people have dental and oral health problems with a prevalence rate of 57.6%. This is evident in the prevalence of dental caries reaching 88.8% and periodontal tissue (gingivitis) up to 74.1%. In the province of West Java, dental and oral health problems reached 58.0% in the percentage of individuals who received treatment were men, namely 56.8% and women with 58.5%. This increase is quite significant and also comparable to the gender ratio, namely women increased by 2.8%. and more than men only increased by 2.3%. Almost everyone in Indonesia (96.58%) experiences gingivitis, based on basic health research data. This shows that 74.1% of people in Indonesia have dental and oral health problems. To overcome this problem, it is important to provide information and education on how to keep teeth and mouths clean. This effort is carried out through a dental and oral health promotion program, such as counselling (Balitbangkes, 2018).

Taking good care of your teeth and mouth is very important to maintain dental and oral health (Kramer & Splieth, 2022). It would be nice if the mouth is not kept clean, various oral cavity diseases can attack due to the accumulation of food residue and tartar (A'yun, 2021). The accumulation of food residue

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and bacteria on tartar can trigger various periodontal diseases, for example gingivitis, inflammation of the tooth supporting tissue (periodontitis), and loose teeth (Nurjannah et al., 2012). The health of teeth and mouth can be assessed by measuring the status of oral hygiene. One commonly used method is the Simple Oral Hygiene Index (OHI-S) created by Green and Vermillion. This assessment is carried out in two stages, namely measuring the debris index and calculus index (RE et al., 2021; Susanti et al., 2024).

Health education is the implementation or application of the concept of education and health, meaning the process of educating and learning health values so that individuals or community groups can overcome health problems (Kasihani et al., 2022). Health education is not just about informing the community how they can improve their learning opportunities, with and for themselves, and, as a result, change their lifestyles for both personal health and for the community (Notoatmodjo, 2014).

Study by (Restuning et al., 2014) at Beber Health Center, Cirebon, showed a significant change in the OHI-S score of inpatients after receiving dental nursing care. General inpatients with various diseases showed that patients had never received dental or oral health education from health workers. Dental and oral examinations showed an average OHI-S score of 2.5, exceeding the normal limit of 0-1.2 which is categorized as good. Other research (Marini & Primawati, 2022) relationship between family knowledge about dental and oral health maintenance with the dental and oral hygiene status of inpatients at Pertamina Jaya Hospital, Central Jakarta

Based on data from Ananda Hospital Bekasi, there is no dental or oral health program in the inpatient room and there is a lack of special attention from nurses to the dental and oral hygiene of inpatients, so this has attracted researchers to find out how far the dental and oral hygiene of patients is before being given education about dental and oral hygiene in patients.

## METHOD

The research design used is a quasi-experimental research type with one group pre-test and post-test. According to (Notoatmodjo, 2018), one group pre-test and post-test design is a research activity that provides an initial test (pretest) before being given treatment, after being given treatment, a final test (post-test) is given. This study was conducted to analyze the dental and oral hygiene status of inpatients in the Amarilis room before and after being given oral hygiene education at Ananda Hospital, Bekasi in 2024. This study will be conducted in May 2024. The sampling technique of the study that will be used in this study is purposive sampling which is carried out by taking cases or respondents who happen to be there or available in a place according to the context of the study. The criteria used as samples for this study are: Inpatients are willing to be research samples; Inpatients in the Amarilis room of Ananda Hospital, Bekasi; Patients with 3-day hospitalization and are new patients in the Amarilis room at the time of sampling; Inpatients with a conscious state; Inpatients who are not seriously ill; Inpatients who can still brush their teeth and patients who are not in a state of total rest.

The data used in this study are primary data generated directly by filling out the pre-test sheet conducting the OHI-S examination to measure the status of dental and oral hygiene before education and the post-test sheet by conducting the OHI-S examination after education on oral hygiene consecutively for 3 days in inpatients in the Amarilis room, Ananda Hospital, Bekasi. Data analysis using the SPSS application with the Paired sample t-test.

## RESULT

**Table 1.** Frequency distribution of respondent characteristics by gender

<b>Gender</b>	<b>Frequency</b>	<b>Percent (%)</b>
Male	6	19%
Female	26	81%
<b>Total</b>	<b>32</b>	<b>100%</b>

Based on table 1, it shows that the distribution of respondents' gender characteristics obtained results, namely, 6 male patients (19%) and 26 female patients (81%).

**Table 2.** Frequency distribution of dental and oral hygiene before and after education on oral hygiene

Knowledge Level	Before		After	
	F	%	F	%
Good	3	10%	8	25%
Moderate	17	59%	25	65%
Poor	10	31%	3	10%
<b>Total</b>	<b>32</b>	<b>100%</b>	<b>47</b>	<b>100%</b>

Based on table 2, it shows that the dental and oral hygiene of respondents before education was, Good for 3 patients (10%), Moderate for 17 patients (59%), Poor for 10 patients (31%). While respondents after being given education were, Good for 8 patients (25%), Moderate for 21 patients (65%), Poor for 3 patients (10%).

**Table 3.** Effectiveness test of dental and oral hygiene before and after education on oral hygiene

Dental and oral hygiene	Mean	Difference	p-value
Pre-test	2.62	0.83	0.04
Post-test	1.79		

Based on table 3, it shows that the average value of OHI-S before being given oral hygiene education was 2.62, while after being given oral hygiene education it was 1.79, meaning that there was a decrease in OHI-S before and after being given oral hygiene education, with a difference of 0.83 and the paired sample t-test obtained  $p = 0.04$ .

## DISCUSSION

The results of the study before oral hygiene education with flipcharts and toothbrush demonstrations on respondents showed that the OHI-S criteria were good for 3 patients (10%), the OHI-S criteria were moderate for 19 patients (59%), and the OHI-S criteria were poor for 10 patients (31%). Meanwhile, after education with flipcharts and toothbrush demonstrations, the OHI-S criteria increased to 8 patients (25%), the OHI-S criteria increased to 21 moderate (65%), and the OHI-S criteria were poor for 3 patients (10%).

The results of this study are relevant to the study conducted by I Ketut Harapan (2018) the results of the study before the education were good criteria for 1 patient (3.3%), moderate criteria for 19 patients (63.3%), and poor criteria for 10 patients (33.3%). After the education was given, the results were good criteria for 5 patients (16.6%), moderate criteria for 20 patients (66.6%), and poor criteria for 5 patients (16.6%). This study is better because the number of respondents after the education was good, namely 8 patients (25%).

The results of this study are also relevant to the study conducted by Irma, Anang and Emma (2023) the results of the study were given dental and oral health care with good OHI-S criteria for 0 patients (0%), moderate criteria for 2 patients (4.2%), and poor criteria for 46 patients (95.8%). The results after being given Dental and Oral Health care were, good criteria for 38 patients (79.2%), moderate criteria for 9 patients (18.8%), and poor criteria for 1 patient (2%).

Health education or education is an application or implementation of education in the health sector. Operationally, health education is all activities to provide and improve knowledge, attitudes, and good practices of individuals, groups or communities in maintaining and improving their own health. Dental and oral health education is the addition of knowledge and abilities of a person through learning techniques or instructions with the aim of changing or influencing human behavior to increase awareness of the value of dental and oral health so that they consciously want to change into healthy behavior (Pudentiana Rr et al., 2019). Flipchart is one way of providing dental and oral health education that is usually done when conducting education. Flipcharts also have the advantage of being easy to carry and the material presented focuses on the problems being faced so that respondents can understand better. The flipchart method is carried out by directly dealing with inpatients during education, the counselling time is also effective, making it easy for respondents to remember the material presented (Anggreni et al., 2022).

According to (Notoatmodjo, 2014) knowledge is something that is owned by each individual that can be obtained based on their own experience or the experience of others. A person's knowledge can be significantly influenced by the provision of information from others. When someone receives new information, either through formal education such as school and training, or through informal interactions with family, friends, or colleagues, the information can broaden their horizons and understanding. This knowledge received can then change the attitudes and behavior of individuals, encouraging them to take better action in maintaining their health. Therefore, the provision of information by others plays a key role in the process of learning and increasing a person's knowledge.

Oral hygiene education with flipchart media and toothbrush demonstrations for inpatients is very important, because this educational method can change the mindset and skills of inpatients in maintaining dental and oral hygiene during the treatment process in the hospital, with dental health education, patients understand that how to maintain dental and oral hygiene during the inpatient treatment process is important to maintain dental and oral health.

## CONCLUSION

Based on the results of the research that has been done, it can be concluded that oral hygiene education is effective in improving the oral hygiene status of inpatients at Ananda Hospital Bekasi.

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