

DESCRIPTION OF TEETH CALCULUS AND TOOTH BRUSHING BEHAVIOR IN I KETUT NAMA'S FAMILY

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ABSTRACT

Teeth calculus is a deposit of food residue that is not cleaned and contains microorganisms/ bacteria that stick to the teeth for a long time so that they harden. Health behavior is divided into three domains, namely knowledge, attitudes and actions. The family is the closest person to each individual, the interactions/ behaviors carried out within the family are the main examples for other family members. The purpose of this study was to determine the description of teeth calculus and tooth brushing behavior in the family of Mr. I Ketut Nama. This type of research is descriptive research. The results of the study, which amounted to 5 people, had a percentage of calculus in good criteria as much as 20%, moderate criteria as much as 60% and bad criteria as much as 20%. The average calculus index is 1.3 with moderate criteria. This can be seen from the results of observations of how respondents brush their teeth using a phantom and most respondents demonstrate by the wrong way. The percentage of tooth brushing behavior with very good criteria is 20%, good criteria is 40%, sufficient criteria is 20%, and criteria needs guidance is 20%. The average tooth brushing behavior is 66 with sufficient criteria. This might have happened because the time and frequency of the respondents in brushing their teeth was not quite right.

Keywords: Teeth Calculus, Tooth Brushing Behavior, Family.

INTRODUCTION

The goal of health development towards Healthy Indonesia 2025 is to increase awareness, willingness and ability to live a healthy life for everyone so that the highest possible increase in public health status can be realized. Through the creation of a society, nation and state of Indonesia which is characterized by its people living with behavior and in a healthy environment, having the ability to reach quality health services, in a fair and equitable manner, and having the highest degree of health throughout the territory of the Republic of Indonesia (Ministry of Health), 2009).

The degree of health is influenced by four factors, namely the environment, behavior, health services and heredity. Developing countries like Indonesia, the domain of behavior is the most dominant factor in influencing the status of dental and oral health. Health behavior is divided into three domains, namely knowledge, attitudes and actions (Notoatmodjo, 2014).

Oral health is a key indicator of overall health, well-being, and quality of life. Dental and oral health is a state of being free from chronic mouth and facial pain, mouth and throat cancer, oral infections and sores,

periodontal (gum) disease, tooth decay, tooth loss, and other diseases and disorders that limit an individual's capacity to bite, chew, smiling, speaking, and psychosocial well-being (World Health Organization (WHO), 2018).

According to Safrudin (2015), family is a collection of several people who are bound by a marriage bond, then understand and feel they stand as a unique combination and together strengthen this combination for the happiness, prosperity and peace of all members in the family.

According to Riskesdas (2018), 57.6% of the Indonesian population has dental and oral health problems and 58.45% of the Bali Province has dental and oral health problems. The results of Riskesdas (2018), show that 94.7% of Indonesians brush their teeth every day and 2.8% show the correct time to brush their teeth, while the percentage of Balinese who brush their teeth every day is 5.33% and 92.89% Shows the correct time to brush your teeth. The percentage of Gianyar residents who have brushed their teeth every day is 92.19% and the correct time to brush their teeth is 4.37%.

The mouth is an ideal place for the development of bacteria because of the temperature, humidity and sufficient food availability. Bacteria in the mouth affect the health of a person's teeth and mouth. The cleanliness of a person's teeth and mouth is mainly determined by the presence of food debris, plaque, teeth calculus, alba material, and stains on the tooth surface (Asni, 2008).

The surface of the teeth that has not been cleaned for a long time is a place for dirt or food residue to accumulate and bacteria in the mouth that multiply and produce metabolic materials which eventually harden into teeth calculus. Teeth calculus that sticks tightly to the tooth surface and is not cleaned for a long time will irritate or cause interference with the health of the gums and tooth surface. Gingivitis that is not treated or the cause is eliminated will continue to damage the supporting tissues of the teeth and jawbone around the inflammation. This damage is characterized by bleeding gums, swollen gums, teeth hurt when chewing, loose teeth or even tooth loss (Asni, 2008).

According to Blum (in Notoatmodjo, 2010), behavior is the second largest factor after environmental factors that affect the health of individuals, groups or communities. Behavior is an action or activity of the human being itself which has a very broad expanse, including: walking, talking, laughing, crying, working, studying, writing, reading, and so on. The definition of human behavior can be summed up as, all human activities or activities, both those that are directly observed, and those that cannot be observed by outsiders.

According to Sriyono (2009), the community's self-maintenance behavior in maintaining dental and oral health is an indicator of tooth brushing. Tooth brushing is the most important primary preventive measure recommended. The easiest way to avoid dental and oral health problems is to maintain dental and oral health, which is commonly done by brushing your teeth twice a day, namely in the morning after breakfast and at night before going to bed.

Maintenance of dental health is very important, because teeth are not only a means of mastication but more than that, so these teeth should be maintained in the oral cavity. Dental and oral disease is a disease that is widespread in Indonesian society (Asni, 2008).

Teeth calculus is a classified mass that is formed and firmly attached to the surface of the teeth and other solid objects in the mouth, such as restorations and dentures (Putri, Herijulianti, and Nurjannah, 2010). Teeth calculus is the deposition of inorganic salts which mainly consist of calcium carbonate and calcium phosphate mixed with food debris, bacteria and dead epithelial cells (Pico, 2012).

Plaque that sticks to the surface of the teeth consists of: saliva, food scraps and bacteria. Plaque that is not cleaned will receive calcium deposits originating from saliva and gum fluids, which eventually form teeth calculus. Areas that are the mouths of the major salivary glands will more easily form teeth calculus, namely on the surface of the lower jaw teeth facing the tongue, and the surface of the upper molars facing the cheeks. Meanwhile, salivary fluid will form teeth calculus in the area on the border of the gums and teeth (Syafardi, 2009).

According to Ipin (2011), routine daily cleaning needs to be done to avoid plaque and teeth calculus, namely by brushing your teeth properly and regularly. This action aims to prevent teeth calculus from forming. The treatment performed by the dentist is by cleaning the teeth calculus (scaling) with a tool called a scaler. There are manual or electric. After cleaning with a scaler, the teeth calculus will disappear and the teeth will be clean, but teeth calculus can reappear if dental hygiene is not maintained regularly and properly. It is also necessary to use dental floss (dental floss) to clean the surface between the two teeth which is often a place for food to slip and a place for plaque to accumulate. Mouthwash containing chlorhexidine can be used to prevent plaque from forming. This medicine can be used after brushing your teeth.

Behavior in terms of biology is an activity or activity of the organism concerned. Human behavior can be interpreted as a human activity that is very complex in nature, including speaking, behaving, walking, perception, emotion, thought and motivation (Notoatmodjo, 2010).

According to (Megantoro, 2015) tooth brushing behavior is influenced by how to brush teeth, brushing frequency, time to brush teeth, and tooth brushing equipment. (Notoatmodjo, 2015) explains that one of the causes of dental and oral health problems in the community is a behavioral factor or attitude that ignores dental and oral hygiene. This is based on a lack of knowledge about the importance of health care teeth and mouth.

Skill comes from the word skilled which means capable, capable, and agile. Iverson (2001) says skills require training and basic abilities that everyone has can help produce something more valuable more quickly.

Skill is the capacity needed to carry out several tasks which are the development of training results and experience gained (Dunette, 2002).

According to Suwelo (1992), the factor that affects oral hygiene is brushing. Brushing your teeth is an important routine in maintaining and maintaining healthy teeth and mouth from bacteria and food residue that

sticks to using a toothbrush. Brushing your teeth is an effort to keep your teeth clean and healthy. (Ramadan, 2012).

Frequency of brushing teeth ideally twice a day, namely after every meal and before going to bed. In practice it can't always be done, especially during the day when someone is at the office or at school (outside the house). The maximum frequency of brushing teeth is three times a day, namely after breakfast, lunch and before going to bed at night, or at least twice a day, namely after breakfast and before going to bed at night (PDGI, 2011). Brushing your teeth after eating aims to remove food debris that sticks to the surface or between the teeth and gums, while brushing your teeth before going to bed is useful for preventing the growth of bacteria in the mouth because in a sleeping state, saliva is not produced which functions to clean teeth and mouth naturally (Putri, Herijulianti, and Nurjannah, 2010).

Toothbrush aids are used because with a toothbrush alone sometimes we cannot clean the interproximal spaces properly, even though these areas have the potential to be affected by caries or gum inflammation. Various kinds of aids that can be used include dental floss, toothpicks, interdental brushes, brushes with single bristles, rubber tips and water irrigation (Putri, Herijulianti, and Nurjannah, 2010).

According to Safrudin (2015), family is a collection of several people who are bound by a marriage bond, then understand and feel they stand as a unique combination and together strengthen this combination for the happiness, prosperity and peace of all members in the family. . The family is a social group characterized by cohabitation, economic cooperation, and reproduction united by socially agreed marriage or adoption ties, which interact with each other according to their social roles.

The definition of family can be viewed from the dimensions of blood relations and social relations. The family in the dimension of blood relations is a social unit that is bound by blood relations between one another. Based on the dimensions of this blood relationship, families can be divided into extended families and nuclear families. Meanwhile, in the dimension of social relations, the family is a social unit that is bound by mutual relations or interactions and influences each other, even though there is no blood relationship between them (Shochib, 2015).

The research variables in the framework here are teeth calculus and tooth brushing behavior in the family of Mr. I Ketut Nama. Calculus is a deposit of food residue that is not cleaned and contains microorganisms or bacteria that stick to the teeth for a long time so that they harden. The calculus index (CI) assessment criteria according to Putri, Herijulianti, and Nurjannah, (2010) follow the following provisions: Good: 0.0-0.6, Moderate: 0.7-1.8, and Bad: 1.9-3.0. Respondents' skills in practicing how to brush their teeth. There are four criteria for skills according to the Ministry of Education and Culture, (2018), namely: Very good: 80-100, Good: 70-79, Enough: 60-69, and Need guidance: <60.

METHOD

TYPE OF RESEARCH

This research is a descriptive research with an observational design. Descriptive research is research conducted with the primary objective of obtaining an objective description or description of a situation (Notoatmodjo, 2002).

RESEARCH FLOW

Conducting Assessments and Interviews with the Family of Mr. I Ketut Nama

Identification of Problems

Submission of Scientific Writing with the Title: Description of Teeth Calculus and Tooth Brushing Behavior in the family of Mr. I Ketut Nama

Data Retrieval

Processing and Analysis of Data

Reporting

RESEARCH LOCATION

This research was conducted at the home of Mr. I Ketut Nama, located at Pengosekan Village, Mas, Ubud, Gianyar, Bali

TIME OF RESEARCH

This research was conducted in September 2023.

DATA ANALYSIS UNIT

The unit of data analysis in this study was teeth calculus and tooth brushing behavior in the family of Mr. I Ketut Nama.

STUDY POPULATION

The population in this study was the entire family of Mr. I Ketut Nama.

RESEARCH SAMPLE

This study did not use a sample, but the total family of Mr. I Ketut Nama, which consisted of 5 people.

TYPE OF DATA COLLECTED

The data collected in this study are primary data and secondary data. Primary data were taken from direct dental and oral hygiene examinations as well as interviews and observations about tooth brushing behavior in the family of Mr. I Ketut Nama. And secondary data in the form of data on the number of Mr. I Ketut Nama's family.

DATA COLLECTION TECHNIQUES

Data on teeth calculus was collected by conducting direct examinations on the family of Mr. I Ketut Nama. Then the results of the examination are written into a blank for dental teeth calculus examination. Tooth brushing behavior data was collected by observing the family of Mr. I Ketut Nama who practiced tooth brushing techniques with tooth models then the results of the observations were checked in the checklist on the observation sheet.

DATA COLLECTION INSTRUMENTS

The instruments used in this study were a set of dental diagnostic tools (mouth mirror, sonde, tweezers, excavator), examination forms/status cards, cotton pellets, disclosing solution, alcohol, interview guides and observation of tooth brushing behavior, toothbrushes, and models. tooth.

DATA PROCESSING TECHNIQUES

Coding, namely by checking the status card of the examination results and the results of the interview.

Editing, namely the steps to change the data collected by using the code. Code 1 for correct tooth brushing behavior and code 0 for wrong tooth brushing behavior.

Tabulating, namely by entering the examination results data into the master table to facilitate data analysis.

Presentation of data, presented in the form of tables accompanied by narration.

DATA ANALYSIS

Data analysis was carried out using univariate in the form of percentages and the average of Mr. I Ketut Nama's family with correct tooth brushing behavior.

Calculating the percentage of Mr. I Ketut Nama's family having good, moderate, and bad calculus index (CI) criteria is done by adding up the total of Mr. I Ketut Nama's families who have good, moderate, and bad calculus index (CI) criteria.

Data analysis in the form of percentages is carried out using the following formulas:

Percentage of respondents who have good calculus index (CI) criteria:

$$\frac{\sum \text{respondents who have good calculus index criteria}}{\sum \text{respondent}} \times 100\%$$

The percentage of respondents who have moderate calculus index (CI) criteria:

$$\frac{\sum \text{respondents who have moderate calculus index criteria}}{\sum \text{respondent}} \times 100\%$$

Percentage of respondents who have poor calculus index (CI) criteria:

$$\frac{\sum \text{respondents who have poor calculus index criteria}}{\sum \text{respondent}} \times 100\%$$

Calculating the percentage of Mr. I Ketut Nama's family having very good, good, sufficient tooth brushing behavior criteria, and needs guidance.

Data analysis in the form of percentages is carried out using the following formulas:

The percentage of respondents who brush their teeth with very good criteria:

$$\frac{\sum \text{respondents who brush their teeth with very good criteria}}{\sum \text{respondent}} \times 100\%$$

Percentage of respondents who brush their teeth with good criteria:

$$\frac{\sum \text{respondents who brush their teeth with good criteria}}{\sum \text{respondent}} \times 100\%$$

Percentage of respondents who brush their teeth with sufficient criteria:

$$\frac{\sum \text{respondents who brush their teeth with sufficient criteria}}{\sum \text{respondent}} \times 100\%$$

Percentage of respondents who brush their teeth with the criteria of needing guidance:

$$\frac{\sum \text{respondents who brush their teeth with criteria need guidance}}{\sum \text{respondent}} \times 100\%$$

The average calculus index of Mr. I Ketut Nama's family:

$$\frac{\sum \text{the average calculus index of Mr. I Ketut Nama's family}}{\sum \text{respondent}}$$

The average tooth brushing behavior in Mr. I Ketut Nama's family:

$$\frac{\sum \text{the average tooth brushing behavior of Mr. I Ketut Nama's family}}{\sum \text{respondent}}$$

RESULTS

Table 1
Percentage of Calculus Index (CI) of Mr. I Ketut Nama's family

No	CI Criteria	<i>f</i>	%
1	Good	1	20
2	Moderate	3	60
3	Bad	1	20
Amount		5	100

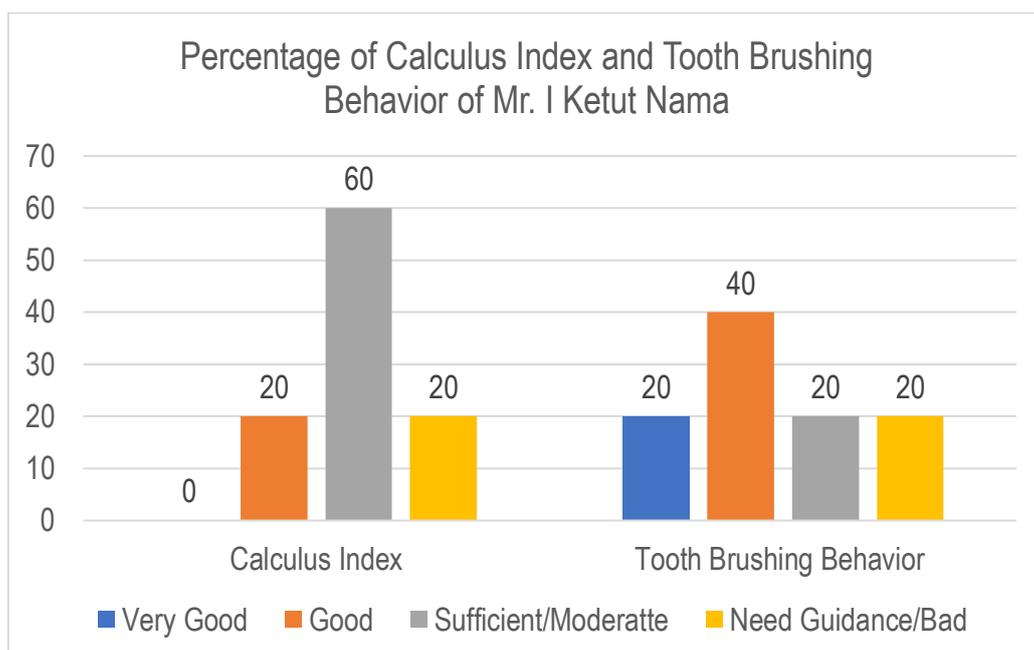
The average calculus index (CI) in Mr. I Ketut Nama's family was 1.3 with moderate criteria.

Table 2
Percentage of Tooth Brushing Behavior of Mr. I Ketut Nama's Family

No	Skill Level Criteria	<i>f</i>	%
1	Very good	1	20
2	Good	2	40
3	Sufficient	1	20
4	Need Guidance	1	20
Amount		5	100

The average tooth brushing behavior in Mr. I Ketut Nama's family is 66 with sufficient criteria.

Picture 1
Result Graph



DISCUSSION

The general purposes of this study was to determine the description of teeth calculus and tooth brushing behavior in the family of Mr. I Ketut Nama. The specific purposes of this research are: Knowing the percentage of Mr. I Ketut Nama's family who have good, moderate, and bad calculus index (CI) criteria. Knowing the percentage of Mr. I Ketut Nama's family who have tooth brushing behavior with the criteria of very good, good, sufficient, and need guidance. Knowing the average calculus index (CI) of Mr. I Ketut Nama's family. And knowing the average tooth brushing behavior of Mr. I Ketut Nama's family.

The results of this study are expected to provide the following benefits: for the first can be useful for Mr. I Ketut Nama's family in knowing the description of teeth calculus so that they can pay more attention to the health of their teeth and mouth. Also this study can be used to add insight into Mr. I Ketut Nama's family about tooth brushing behavior.

The results of the research and data analysis showed that the percentage of calculus index in Mr. I Ketut Nama's family was in good criteria, namely 1 person (20%), moderate criteria, namely 3 people (60%) and bad criteria, namely 1 person (20%). The average calculus index of Mr. I Ketut Nama's family is 1.3 with moderate criteria.

This can be seen from the results of observations of how respondents brush their teeth using a phantom, namely on the observation sheet and interview number 8 regarding brushing teeth on the surfaces of the front and back teeth of the lower jaw facing the tongue with movement from the gums towards the tooth surface and most respondents demonstrate by the wrong way. In number 9 regarding brushing the teeth on the surface of the front and back teeth of the maxilla which face the ceiling with the movement of the gums towards the tooth surface and most respondents demonstrate it in the wrong way.

The results of the research and data analysis showed that the percentage of tooth brushing behavior in Mr. I Ketut Nama's family with very good criteria, namely 1 person (20%), good criteria, namely 2 people (40%), sufficient criteria, namely 1 person (20%), and the criteria for needing guidance is 1 person (20%). The average tooth brushing behavior in Mr. I Ketut Nama's family is 66 with sufficient criteria.

This can be seen from the results of interviews between researchers and respondents about the time and frequency of brushing their teeth and the tools used to brush their teeth. On the observation and interview sheet number 3 regarding when do you usually brush your teeth, and most respondents brush their teeth 2x a day but the time is not right. In number 4 regarding what tools and materials do you use to brush your teeth, and most respondents answered toothbrushes, toothpaste, and glasses for gargling, but most respondents did not use a mirror to see if the tooth surface was clean or not.

This might have happened because the time and frequency of the respondents in brushing their teeth was not quite right and the lack of facilities and infrastructure for brushing their teeth. Notoatmodjo, (2015) explains that one of the causes of dental and oral health problems in society is a behavioral factor or attitude that ignores dental and oral hygiene. This is based on a lack of knowledge about the importance of maintaining oral health.

CONCLUSIONS

Based on the results of research and discussion conducted on 5 people in the family of Mr. I Ketut Nama, it can be concluded that the percentage of calculus index in good criteria is 1 person (20%), medium criteria is 3 people (60%) and bad criteria is 1 person (20%). The average calculus index is 1.3 with moderate criteria. The percentage of tooth brushing behavior with very good criteria is 1 person (20%), good criteria is 2 people (40%), sufficient criteria is 1 person (20%), and criteria needs guidance, namely 1 person (20%). The average tooth brushing behavior is 66 with sufficient criteria.

Conflict of Interest

We (the authors) hereby declare that there is nothing that interferes with the researcher's professional judgment in conducting or reporting research so that there is no conflict of interest in preparing this research.

Acknowledgment

Praise and gratitude the authors pray to the presence of God Almighty because of His grace the author can complete a scientific paper with the title "Description of Teeth Calculus and Tooth Brushing Behavior in the Family of Mr. I Ketut Nama" on time.

The author realizes that the completion of this scientific paper is inseparable from the help of various parties, in this regard the author expresses his deepest gratitude to:

Mrs. Sri Rahayu, S.Kp., Ns., S.Tr. Keb, M. Kes as Director of the Denpasar Ministry of Health Poltekkes.
Mr. I Nyoman Gejir, S.Si.T, M.Kes as Head of the Dental Health Department of the Denpasar Ministry of Health Polytechnic

Family of Mr. I Ketut Nama who are willing to be respondents in this scientific writing.

All parties who have provided much support so that the writer can complete this scientific writing.

The author realizes that this scientific paper is still far from being perfect, therefore the writer expects constructive criticism and suggestions for the sake of perfection in this scientific writing.

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