The Description of Calculus and Tooth Brushing Behavior Among Pregnant Women Visiting Payangan Health Center, Gianyar Regency 2023

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ABSTRACT

Background: Calculus is a deposit from food waste that is not cleaned and contains microorganisms/ bacteria that stick to the teeth for a long time so that it undergoes hardening. Health behavior is divided into three domains, namely knowledge, attitude, and action. Pregnant women will experience physical and behavioral changes in pregnant women which also affect the condition of their teeth and mouth. The purpose of this research is to find out of Calculus overview and the behavior of brushing teeth in pregnant women who visit the Payangan Health Center in Gianyar Regency in 2023. Methods: This type of research is descriptive research. Results: The results of the study, which amounted to 35 pregnant women, had a percentage of calculus in good criteria of 42.86%, moderate criteria of 40%, and bad criteria of 17.14%. The average calculus index of pregnant women is 1.02 with moderate criteria. The percentage of teeth brushing behavior of pregnant women in the criteria is very good as much as 20%, good criteria as much as 40%, enough criteria as 28.58%, and need guidance as much as 11.42%. The average brushing behavior of pregnant women's teeth is 66.86 with sufficient criteria. Conclusions: It can be concluded that the calculus index in pregnant women is the most with good criteria and the least with bad criteria. The behavior of brushing teeth in pregnant women is the most with good criteria and the least criteria need guidance.

Keywords: Cavities, Brushing Behavior.

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INTRODUCTION

According to (Riskesdas 2018) 57.6% of the Indonesian population experiences dental and oral health problems and in Bali Province 58.45% experience dental and oral health problems, one of which is suffered by pregnant women. With the prevalence of dental-oral health problems being 23%, with the prevalence of active caries being 43.3%, dental care for pregnant women is something that must be considered and improved both through Community Health Efforts (UKBM) and efforts made by community health centers (Puskesmas). Republic of Indonesia Ministry of Health, 2018). The results of Riskesdas (2018) show that 94.7% of the Indonesian population has brushed their teeth every day and 2.8% indicated the correct brushing time, while the percentage of the Balinese population who have brushed their teeth every day is 5.33% and 92.89%. shows the correct time to brush your teeth. The percentage of Gianyar residents who brush their teeth every day is 92.19% and when brushing their teeth correctly 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. A person's dental and oral hygiene is mainly determined by the presence of food debris, plaque, calculus, alba material, and stains on the tooth surface (Gopdianto, Rattu, and Mariati 2014).

The surface of teeth that have not been cleaned for a long time is a place where dirt or food waste accumulates and bacteria gather in the mouth that multiply and produces metabolic materials that will gradually harden into tartar. Coral that is tightly attached to the surface of the tooth and has not been cleaned for a long time will irritate or cause problems with the health of the gums and tooth surface. Inflammation of the gums that is not treated or eliminated will continue to damage the supporting tissue of the tooth and jawbone around the inflammation. This damage is characterized by bleeding gums, swollen gums, sore teeth if chewing, teeth shaking or even teeth falling out (Gopdianto, Rattu, and Mariati 2014).

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

According to (Sriyono 2009) the self-preservation behavior of the community in maintaining dental and oral health, the indicator is the brushing variable. Brushing your teeth is the main recommended primary precaution. 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 the morning after breakfast, and the night before bed.

Dental health maintenance is very important, because teeth are not only a chewing tool but more than that, so the teeth should be maintained in the oral cavity. Dental and oral diseases are widespread diseases in Indonesian society (Gopdianto, Rattu, and Mariati 2014). The purpose of the research is to find out the

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picture of tartar and the behavior of brushing teeth for pregnant women who visit the Payangan Health Center in Gianyar Regency in 2023.

METHOD

This research is descriptive (Notoatmodjo 2002). This research was carried out at the Payangan Health Center, Gianyar Regency, in April 2023. The population in this study is all pregnant women who visited the Payangan Health Center of Gianyar Regency in January 2023. The sample size in this study using Slovin's formula obtained a sample size of 35 people. Sampling technique using an accidental sampling technique. Accidental sampling is a sampling technique based on chance, that is, anyone who coincidentally meets a researcher can be used as a sample if it is considered that the person who happened to meet is suitable as a data source (Sugiyono 2016).
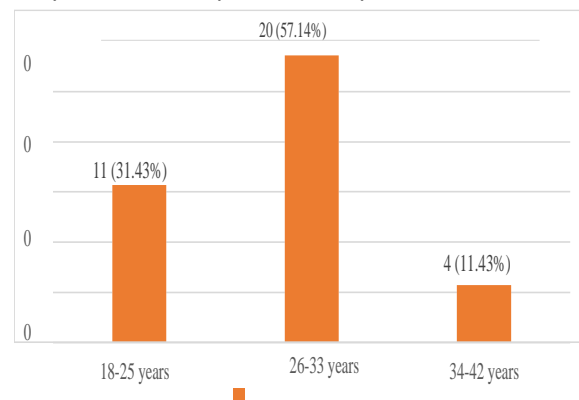
Data collection techniques about calculus are collected by conducting a direct examination of pregnant women who visited the Payangan Health Center of Gianyar Regency in 2023. Then the results of the examination are written in the form of a dental calculus examination. Data on tooth brushing behavior is collected by observing pregnant women who practice the technique of brushing their teeth with a dental model and then the results of the observations are checked on the observation sheet. Data collection instruments use a set of dental diagnostic tools (glasses, sondes, tweezers, excavators), check stamps/ status cards, cotton pellets, disclosing solutions, alcohol, interview guides and observations of brushing behavior, toothbrushes, and dental models. Data analysis was carried out with a university in the form of percentages and averages of pregnant women with the correct brushing behavior. Calculating the percentage of pregnant women who have good, medium, and bad calculus index (CI) criteria is done by summing up all pregnant women who have good, medium, and bad calculus index (CI) criteria.

RESULTS

1. **Characteristics of the research subject**
a. Based on the results of a study of 35 pregnant women at the Payangan Health Center in Gianyar Regency in 2023, it can be seen in picture 3 and picture and picture 1:

Picture 1. Subject Characteristics Based on the Age of Pregnant Women Who Visited at the Payangan Health Center of Gianyar Regency in 2023
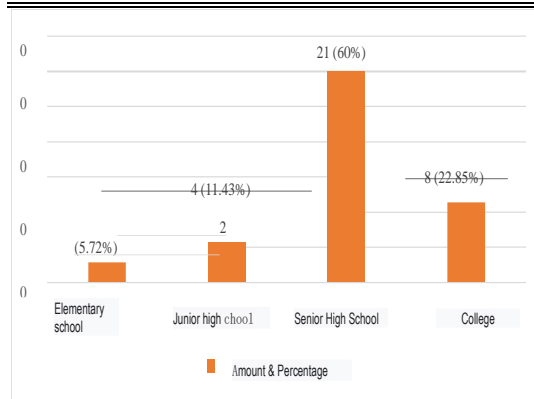
Picture 1 shows that pregnant women who visited the Payangan Health Center of Gianyar Regency in 2023 are the most with an age range of 26-33 years, which is 20 people (57.14%), and at least with an age range of 34-42 years, which is 4 people (11,43%)

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Picture 2. Subject Characteristics Based on the Education Level of Pregnant Women Who Visited the Payangan Health Center of Gianyar Regency in 2023

Picture 2 shows that pregnant women who visit the Payangan Helath Center of Gianyar Regency have the most with an SMA/K education level of 19 people (60%), and the least with an elementary education level of 2 people (5.72%) Observational results on research subjects

The percentage of pregnant women who visit the Payangan Health Center of Gianyar Regency who have good, moderate, and bad calculus index (CI) criteria in 2021.

Table 1

Persentase *Calculus Index* (*CI*) of Pregnant Women Visiting at Payangan Health Center in Gianyar Regency in 2023

No	Criteria *CI*	*f*	%
1	Good	15	42,86
2	Moderate	14	40
3	Bad	6	17,14
	Amount	**35**	**100**

Table 1 shows that the calculus index in pregnant women is the highest with good criteria of 15 people (42.86%) and the least with bad criteria of 6 people (17,14%). The average calculus index

(CI) for pregnant women who visit the Payangan Health Center of Gianyar Regency in 2023 is 1.02 with moderate criteria. The percentage of pregnant women who have brushing behavior with very good criteria, enough, and need guidance who visit the Payangan Health Center of Gianyar Regency in 2023.

Table 2

Percentase of Tooth Brushing Behavior of Pregnant Women Visiting at the Payangan Regency Health Center in 2023

	Skill Level Criteria	*f*	%
1	Verry Good	7	20
2	Good	14	40
3	Enough	10	28,58
4	Need Guidance	4	11,42
	Amount	**35**	**100**

Table 2 shows that the most brushing behavior in pregnant women with good criteria is 14 people (40%) and the least criteria need guidance, namely 4 people (11.42%). The average brushing behavior for pregnant women who visited the Payangan Health Center in Gianyar Regency in 2023 is 66.86 with sufficient criteria.

DISCUSSION

The results of the study picture of calculus and brushing behavior in pregnant women who visited the Payangan Health Center of Gianyar Regency in 2023 as many as 35 people showed that pregnant women in the 18-25 age range were 11 people (31.43%), the most in the age range of 26-33 years, namely 20 people

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(57.14%) and at least in the age range 34-42 years, namely 4 people (11,43%). The last education of pregnant women is at least 2 people in elementary school (5.72%), 4 people in junior high school (11.43%), at most 21 people (60%), and 8 people in college (22.85%).

The results of research and data analysis show that the picture of calculus in pregnant women who visited the Payangan Health Center in Gianyar Regency in 2023 with good criteria of 15 people (42.86%), medium criteria of 14 people (40%), and bad criteria of 6 people (17,14%). The average calculus index of pregnant women is 1.02 with moderate criteria.

This can be seen from the results of observations on how respondents brushed their teeth using phantom, namely on the observation sheet and interview number 8 regarding brushing teeth on the surface of the front and back teeth of the lower jaw facing the tongue with a movement from the gums towards the surface of the teeth and most respondents demonstrated in the wrong way. In number 9 about brushing teeth on the surface of the front and back teeth of the upper jaw facing the ceiling with movement from the gums towards the surface of the teeth most respondents demonstrated in the wrong way.

The level of education greatly affects the behavior of each individual, this leads to the respondent's lack of knowledge on how to brush their teeth properly and correctly. There are hormonal changes during pregnancy that cause nausea and vomiting in pregnant women so it causes a feeling of laziness to maintain dental and oral hygiene such as brushing your teeth so that food waste that is not cleaned will settle and quickly harden so that tartar forms.

This follows the opinion (of Gejir. I. N. and Sukartini. N. K. 2016), which is that in addition to hormonal changes, there will be an increase in plaque on the teeth, if the teeth are not cleaned due to laziness or nausea during pregnancy, of course, this is a risk of inflammation of the gums that are prone to occur in the early trimester of pregnancy. The results of research and data analysis show that the behavior of brushing teeth in pregnant women who visit the Payangan Health Center of Gianyar Regency in 2023 with very good criteria of 7 people (20%), good as many as 14 people (40%), enough as 10 people (28,58%), and need guidance as many as 4 people (11,42%). The average brushing behavior of pregnant women's teeth is 66.86 with sufficient criteria. This can be seen from the results of interviews between researchers and respondents about the time and frequency of pregnant women brushing their teeth and the tools used by pregnant women to brush their teeth. On the observation sheet and interview number 3 about when mothers usually brush their teeth, most respondents brush their teeth 2x a day but the time is not right. In number 4 about what tools and materials mothers use to brush their teeth, most respondents answered toothbrushes, toothpaste, and glasses to rinse their mouth, but most respondents did not use mirrors to see whether the surface of the teeth was clean or not.

This may happen because the time and frequency of respondents brushing their teeth is not appropriate and the lack of facilities and infrastructure for brushing their teeth (Notoatmojo 2015) explains that the causes of dental and oral health problems in the community are behavioral or attitude factors that ignore dental and oral hygiene. This is based on a lack of knowledge about the importance of maintaining dental and oral health.

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CONCLUSION (S)

This may happen because the time and frequency of respondents brushing their teeth is not appropriate and the lack of facilities and infrastructure for brushing their teeth (Notoatmojo 2015) explains that the causes of dental and oral health problems in the community are behavioral or attitude factors that ignore dental and oral hygiene. This is based on a lack of knowledge about the importance of maintaining dental and oral health.

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