


The Relationship Between Dental and Oral Health Knowledge and Gingiva Status of Pregnant Women

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Article Info	ABSTRACT
<p>Keywords: Knowledge, pregnant women, gingival status</p>	<p>Oral health encompasses not only teeth but also gums, periodontal tissues, and soft tissues of the cheeks, tongue, and lips. Pregnant women have general knowledge about periodontal disease, but little understanding of its causes. Gum disease during pregnancy can lead to premature birth and low birth weight babies, the purpose of this study was to determine the relationship between pregnant women's knowledge of oral health and gingival status. The research used was observational analytic with a cross-sectional design, naely research conducted at the same time to connect between variables . inflammation. This study obtained a significant value of the normality test for the knowledge questionnaire of 0.05, namely 0.163, and gingival status of 0.05, namely 0.234. Based on the test of the relationship between knowledge about dental and oral health and gingival status in pregnant women, the p-value was $0.000 \leq (0.05)$. There is a relationship between knowledge about dental and oral health and gingival status in pregnant women.</p>
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INTRODUCTION

Health is one of the basic needs of humans, because that health is right for every inhabitant society protected by law. Every country recognizes that health has become the biggest capital to achieve prosperity. Therefore, repairing health services in essence is something investment source Power man To achieve a prosperous society. In developing countries like Indonesia, to be able to increase public welfare so required existence role of government through public service For can fulfill needs based on the people like health, education, and needs of other subjects¹

Dental and oral health is very important for general health. According to Nurjannah (2016), the World Health Organization (WHO) defines health teeth and mouth as a state of affairs that does not include disease mouth and face, cancer throat, infections and sores in the mouth, diseases gums and *periodontal tissue* , and disorders that inhibit a person's ability for chewing, biting, smiling, talking, and looking after psychosocial welfare. Dental and oral health covers Not only teeth, but also gums, *periodontal tissue* and soft tissue on the cheeks, tongue, and lips. Keep cleanliness good teeth and mouth help prevent disease teeth and mouth²

In a general way, plaque causes *gingivitis*. And there are factors *calculus*, *caries*, age, gender type, education level, income, and other risk factors influence the intensity of *gingivitis*. In addition there it is deficiency *nutrition* and *protein*, psychological factors (stress), *metabolic disease*, and *hematological disorders* such as *leukosis*³

The longer *the plaque* No cleaned, the gingival margin becomes reddish until red bluish, *gingival* contour grows bigger Because *edema*, and easy bleeding. Inflammation This happened to the pregnant mother when *hormone production* increased and can cause local irritation Because *gingiva* bleeds easily⁴. Pregnant mother owns general knowledge about *periodontal* disease but only a few know the causes. Pregnant women do clean teeth but, the majority do not know proper practice. Health integration *oral* with promotion health and *periodontal therapy* recommended for Mother high-risk pregnancy height⁵.

Disease gum during pregnancy causes *premature labor* or baby with low birth weight. Around 70.7% of pregnant mothers mentioned that they did not use tools to help clean *interdental teeth*, and 54.5% did not use drug gargles. Study This highlights lack of awareness Pregnant mothers about connection between *periodontal disease* and bad impact after childbirth⁶. Change behavior Pregnant mother can cause problems for its contents, and *gingival* infection will increase badly during pregnancy. (Simamora et al., 2022). If *gingivitis* is not treated immediately, the following things can occur: 1) Many factors can cause bleeding in the mouth, but *gingivitis* usually causes frequent gingival bleeding left alone or neglected; 2) *Periodontitis* is inflammation that attacks more *periodontal tissue* (*periodontal ligament*, *cementum*, and *bone*) *alveolar*⁷.

Several studies have discussed gingivitis and pregnancy, but none have been comprehensive. In this study, researchers observed each trimester of pregnancy and correlated maternal knowledge with gingival status. The connection between pregnancy and *periodontal disease*, *gingivitis*, is crucial for pregnant mothers to know how to maintain their teeth and mouth health during pregnancy. Symptoms of *gingivitis* begin to appear in the second month of pregnancy and peak in the eighth month.

gingival infection will increase badly during ongoing pregnancy when No maintenance is done. Change behavior in pregnant mothers can cause a number of problems for pregnancy, pregnant women with severity level of *periodontal disease* such as *periodontitis* and *gingivitis* currently until severe own risk. For giving birth to before the time is 7 times taller than pregnant mothers with healthy periodontal tissue condition⁸. Based on studies preliminary work done researchers at the Community Health Center Abeli Kendari City on February 7, 2024, the data obtained namely mother's data regular pregnancy inspect her pregnancy for 3 months final totaling 180 people, carried out interviews early in 2 mothers second trimester pregnant women aged 24-27, that lack of knowledge about health teeth and mouth as well as about *gingival disease*.

METHODS

Research used is study *Observational analytics*. Study This Used To know how and why something phenomenon occurs through analysis *correlation statistics* (testing relationship / influence) between cause and effect factors⁹. Research This use design *Cross sectional* (cut)

latitude) namely do research at the same time For connect between independent variables (free) and dependent variables (bound) being studied to samples and populations found. This independent variable is knowledge Mother pregnant, and the dependent variable in this study is the gingival status¹¹ . Population in study This is Mother pregnant women visiting the community health center for 3 months final as many as 180 people. Engineering taking samples in research This is *Accidental sampling* where Determination technique sample based on coincidence, that is Who only those who as it happens to meet with researchers can be used as a sample ¹² . In this study, a questionnaire and observation sheet was used. A questionnaire is a data collection technique that is carried out by giving a set of questions or written statements to respondents to answer. This questionnaire is used to determine the knowledge of pregnant women regarding *gingival status* . Observations were conducted to observe the conditions in the field during the research. Data processing in this study used the application, namely SPSS (*Statistical Product and Service Solution*), for each analysis by conducting a *normality test* , after obtaining the results, the data was analyzed through a *correlation* test to determine whether or not there is a relationship between knowledge ± knowledge of pregnant women with *gingival status* . The procedure in this study included providing informed consent to pregnant women, then giving them a questionnaire to fill out, conducting observations, namely examining gingival status, then recording the results of both examinations and conducting data analysis. Finally, the results and conclusions from the examination results were presented.

RESULTS AND DISCUSSION

Pregnancy Trimester Table

The research results show that pregnant women are in trimester I, trimester II, and trimester III, which are described in the table below.

Table 1. Distribution Based on Pregnancy Trimester

Trimester of pregnancy	n	percentage
Trimester I	2	10%
Second Trimester	12	60%
Third Trimester	6	30%
Total	20	100%

Table 1. Shows that Mothers pregnant women who were in their first trimester of pregnancy were 2 people (10%), mothers pregnant women who were in their second trimester of pregnancy as many as 12 people (60%), mothers There were 6 pregnant women (30%) who were in their third trimester of pregnancy.

Knowledge Table for Pregnant Women

The research results show that knowledge among pregnant women is at the following table

Table 2. Distribution of Knowledge for Pregnant Women

Knowledge Mother pregnant	n	Percentage
Good	6	30%
Medium	6	30%

Knowledge Mother pregnant	n	Percentage
Less than	8	40%
Total	20	100%

Table 2. Shows knowledge Mother pregnant based on questionnaire Good totaling 6 people (30%), medium totaling 6 people (30%), less totaling 8 people (40%).

Gingival Status Criteria Table

The research results show that the criteria for gingival status in pregnant women are in the following table.

Table 3. Distribution Based on *Gingival Index Criteria*

Category	n	Percentage
Healthy	5	25%
Inflammation	7	35%
Inflammation	8	40%
Inflammation	0	0%
Total	20	100%

Table 3. Show that there are 5 respondents with criteria healthy (25%), respondents with criteria inflammation light as many as 7 people (35%), respondents with criteria inflammation currently as many as 8 people (40%), respondents with criteria inflammation weight 0 people (0%).

Normality Test Table

This study shows the results of the normality test as follows: *Normality* test Connection Knowledge About Dental and Oral Health With *Gingival* Status in

Table 4. Pregnant Women at the Community Health Center Abeli Kendari City

Variables	n	p-Value
Knowledge of pregnant mothers	20	0.163
<i>Gingival</i> status	20	0.234

Based on Table 4 it is shown that *significant* knowledge given questionnaire knowledge get mark *significant* 0.163, *gingival* status get value 0.234. Where the value is >0.05 which means the data in the table on distributed normally

Analysis Test Table

This study shows the following analysis results: Analysis test connection knowledge about health teeth and mouth with *gingival* status in the pregnant mother at the Community Health Center Abeli Kendari City

Table 5

Variable	N	p-Value
Knowledge of pregnant mothers	20	0,000
<i>Gingival</i> status	20	0,000

Based on Table 5 Relationship Test Knowledge About Dental and Oral Health With *Gingival* Status in Pregnant Women at the Community Health Center Abeli Kendari City,

obtained p -Value $0.000 \leq (0.05)$ which means there is a connection between knowledge about health teeth and mouth and *gingival status* in pregnant mothers

Research results show most of pregnant mothers own knowledge Good as many as 6 respondents (30%), knowledge currently as many as 6 respondents (30%), knowledge not enough as many as 8 respondents (40%). Most of them respondents own knowledge about health teeth and mouth with gingival status in the mother's minimal pregnancy so that need existence improvement learning about health teeth and mouth and the dangers of poor *gingival* status in pregnant mothers. Of all questionnaire knowledge provided to respondents there were 11 respondents who gave wrong answers on the questionnaire this number 10 cause because lack of knowledge will gum easily bleed, swelling, discharge pus from gums, pain moment chew food, teeth shake, and teeth become off. This is the consequence if someone caught campus disease or coral tooth.

From the results study there is criteria knowledge not enough as many as 8 respondents with overall average value from 20 respondents namely 63.5%, this includes in the category knowledge moderate . Cause lack of knowledge Mother pregnant that is lack of awareness will importance guard cleanliness teeth and mouth as well as lack of knowledge about disease teeth and mouth that can result bad for fetus, many factors reason lack of knowledge Mother pregnant that is factor age from results in the field that get criteria not old enough around 23-41 years old and most 30 years old to above, most Mother pregnant not enough attention to health teeth and mouth caused by ignorance about dangers disease teeth and mouth for the fetus, while the most education received that is high school graduates with work Mother House stairs , less environment attention will importance of guarding health teeth and mouth during pregnancy and also a sense of indifference will health teeth and mouth become the main factor reason for lack of knowledge Mother pregnant. This is in line with research conducted by (Raihan Zachary Ramadhan, Irfan Dwiandhono, 2023) . Pregnant women own knowledge is not good enough and also lack of awareness of the importance of maintaining healthy teeth and mouth, even though *gingivitis* causes risk for fetus and Mother pregnant like, baby born low body weight, *prematurity* , *diabetes mellitus* , stroke, *cardiovascular* disease¹³

distribution of *gingival* status in pregnant mothers shows that there are 5 respondents with criteria healthy (25%), respondents with criteria inflammation light as many as 7 people (35%), respondents with criteria inflammation currently as many as 8 people (40%), respondents with criteria inflammation weight 0 people (0%). The most common *gingival* status obtained that is criteria inflammation currently totaling 8 respondents with an average of 0.9%, *gingival status* in 8 respondents This 3 respondents were in the second trimester of pregnancy and 5 respondents in the third trimester, the main factor that is improvement in hormones during pregnancy resulting in increased plaque attached to the surface of teeth, and also feeling lazy to keep cleanliness of teeth and mouth Because Pregnant mothers feel nausea, fatigue, and vomiting. This is in line with research conducted (Senjaya et al., 2020). Symptoms mouth Mother pregnant based on trimester of pregnancy namely in the second trimester of the pregnant mother often experiencing nausea, fatigue, vomiting and hormonal changes that cause a sour taste in the mouth, cleanliness bad teeth and mouth and plaque

increasing over time causing inflammation of the gums, while in the third trimester it is the same as the second trimester but appear lump between gum two teeth appearing in the month to 7 and 8⁷¹⁴

Gingivitis caused by increased *sex hormones* during pregnancy called *gingivitis* pregnancy . Good steroid increase in *plasma* and fluids *gingiva* at pregnancy and therapy *steroids* in women post *menopause* make tooth more difficult to tie¹⁹¹⁵ Pregnancy *gingivitis* often occurs in *the gingival* margin and interdental areas, which makes it look red, swollen, and painful if stimulated. *Gingivitis* during pregnancy increases the most in the *anterior tooth area* , but also increases in the *posterior tooth area* (Viera Valencia & Garcia Giraldo, 2019b) .

Based on normality test results seen that *significant* knowledge respondents given questionnaire knowledge get *significant mark* 0.163, while *gingival* status get value 0.234. Where the value means above >0.05 which means the data in the table on distributed normally . Which means tester using parametric tests (*Correlation Test*).

Correlation Test Results knowledge about health teeth and mouth with *gingival* status in the mother pregnant at the health center Abeli Kendari city , obtained *p-Value* \leq (0.005), which means there is a connection between knowledge about health teeth and mouth with *gingival* status in the mother pregnant at the health center Abeli . Study This is in line with research conducted by (Simamora et al., 2022) . About connection knowledge Pregnant mothers about maintaining health teeth and mouth with incident *gingivitis* there is influence level of knowledge of pregnant women about maintaining health teeth and mouth with incident *gingivitis* at the Community Health Center Putat Jaya, Surabaya City.

The limitations encountered in study This is the most sample No willing to become respondents due to lack of attention will importance of guarding health teeth and mouth and also most respondents No willing to document the cavity area of his mouth Because feel uncomfortable and not comfortable.

CONCLUSION

Based on the results and discussion, it can be concluded that the knowledge of pregnant women at the Abeli Community Health Center in Kendari City is moderate, with a percentage of 63.5%. The gingival status of pregnant women is classified as mild inflammation, with a percentage of 0.9%. Based on research results, it was found that That There is a Connection Between Knowledge About Dental and Oral Health and *Gingiva*/Status in Pregnant Women at the Abeli Kendari City Community Health Center. The suggestions in this study are expected to increase insight for health workers, cadres, and pregnant women regarding dental and oral health during pregnancy so that in the future, gum inflammation in pregnant women can be reduced.

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