

Analysis of Factors Related to the Occurrence of Gingivitis in Adolescents in Class VIII of SMPN 2 Tellu Limpoe Sidenreng Rappang District South Sulawesi Province Year 2023

Rezki Dirman*¹, Arsad², Utari Zulkaidah³, Yulistina⁴, Sultan Amin Yasin⁵
Bachelor of Applied Dental Therapy Study Program
Institut Teknologi Kesehatan dan Sains Muhammadiyah Sidrap
Jl. Syarif Al-Qadri No.11 Pangkajene Sidrap, Makassar South Sulawesi 91611
Indonesia

Abstract:- Adolescence is a stage in human life which is often referred to as puberty, namely the transition period between childhood and adulthood. At this stage, teenagers will experience physical development. This is one of the most common causes of gingivitis in teenagers. One of the hormonal factors that is a secondary or predisposing factor for gingivitis is hormonal imbalance, namely an increase in endocrine hormones in adolescence. Increased hormone levels at this age can cause vasodilation resulting in increased blood circulation in the gingival tissue and sensitivity to local irritants, such as bacterial plaque biofilm, resulting in pubertal gingivitis. Pubertal gingivitis is a typical type of gingivitis that sometimes develops in children and puberty with little or even very little plaque (Linda Suryani, 2021 Loc.Cit). This type of research is quantitative research with methods analytical correlation using a cross sectional approach. The correlation analytical method in this research was used to measure the relationship (correlation) between the level of knowledge, and dental and oral care habits of adolescents with gingivitis. Sampling is carried out using techniques purposive sampling.

Level of dental and oral care knowledge among teenagers in class VIII SMPN 2 Tellu Limpoe 81,8% in the poor category, 13,6% in the medium category, and 4,6% in the good category. Meanwhile, 13,6% of dental and oral care habits are in the bad category, 81,8% are in the bad category moderate, and 4,6% in the good category. Then there is no relationship between knowledge of dental and oral care with the occurrence of gingivitis as well as dental and oral care habits with the occurrence of gingivitis in adolescents in class VIII SMPN 2 Tellu Limpoe.

To increase knowledge and encourage more habits both in dental and oral care are expected to be skilled health centers to provide health education teeth and mouth at school.

Keywords:- Factor Analysis, Gingivitis, Adolescents.

I. INTRODUCTION

Adolescence is a stage in human life which is often referred to as puberty, namely the transition period between childhood and adulthood. At this stage, teenagers will experience physical development. This is one of the most common causes of gingivitis in teenagers. One of the hormonal factors that is a secondary or predisposing factor for gingivitis is hormonal imbalance, namely an increase in endocrine hormones in adolescence. Increased hormone levels at this age can cause vasodilation resulting in increased blood circulation in the gingival tissue and sensitivity to local irritants, such as bacterial plaque biofilm, resulting in pubertal gingivitis. Pubertal gingivitis is a typical type of gingivitis that sometimes develops in children and puberty with little or even very little plaque (Linda Suryani, 2021 Loc.Cit).

Gingivitis is a form of periodontal disease that is most often suffered by children and adults. During puberty, there is an increase in the incidence and severity of gingivitis called pubertal gingivitis. The incidence and severity of gingivitis increases and reaches a peak at the beginning of puberty, namely at the age of 11-13 years 2 increasing to 80% (Asni, 2008 cit Linda Suryani 2021). In Indonesia, the prevalence of gingival and periodontal disease at the age of 14 years reaches 72.6%, higher than at the age of 8 years, namely 58.1% (Depkes, 1994 cit Linda Suryani 2021).

The proportion of oral health problems in Indonesia among teenagers is 14.0% of swollen gingiva and 13.9% of bleeding gingiva. With a percentage of mild inflammatory gingival status of 47.62%, moderate inflammation of 34.92%, and severe inflammation of 17.46%. The World Health Organization (WHO) recommends conducting an epidemiological study of dental and oral health in the 12-15 year age group. Several epidemiological studies show that oral hygiene and gingival status of various levels of severity are generally found in children and adolescents (Faizatus Shoumi and Siti Fitria Ulfah, 2021).

Based on research conducted by Faizatus Shoumi and Siti Fitria Ulfah (2021), it is stated that a literature review regarding the incidence of gingivitis in early adolescents can be concluded that the incidence of gingivitis in adolescent girls is higher than in boys. In addition, gingivitis in puberty teenagers is influenced by local factors and systemic factors which include hormonal factors.

And based on an initial survey from several teenage students at SMPN 2 Tellu Limpoe, they stated that they often experienced bleeding gums at certain times. Therefore, researchers are interested in conducting 3 studies related to the Analysis of Factors Associated with the Occurrence of Gingivitis in Adolescents in Class VIII of SMPN 2 Tellu Limpoe, Sidenreng Rappang Regency, South Sulawesi Province in 2023.

II. METHODS

This type of research is quantitative research with methods analytical correlation using a cross sectional approach. Design Cross sectional is a research design that measures or The observations are carried out simultaneously at one time. The correlation analytical method in this research was used to measure the relationship (correlation) between the level of knowledge, and Dental and oral care habits of adolescents with gingivitis. Sampling is carried out using techniques purposive sampling, namely determining the sample with consideration certain of the total population in the class VIII SMPN 2 Tellu Limpoe, Sidenreng Rappang Regency.

III. RESULT

A. Respondent Characteristics (Univariate Analysis)

The characteristics observed in this study were gender, age, knowledge, habits, and gingivitis, along with data more:

➤ Gender

Table 1 Results of Respondent Distribution Analysis by Type Gender in Adolescents in Class VIII SMPN 2 Tellu Limpoe Sidenreng Rappang Regency.

Table 1 Gender

Gender	Frequency	%
Male	11	50
Female	11	50
Amount	22	100

In table 1 you can see the frequency of respondents based on gender shows an equal percentage, of 22 there were 11 male respondents, teenagers with 37 the percentage is 50% and there are also 11 teenagers as girls with a percentage of 50%.

➤ Age

Table 2 Results of Respondent Distribution Analysis Based on Age in Adolescents in Class VIII SMPN 2 Tellu Limpoe Regency Sidenreng Rappang

Table 2 Age

Age	Frequency	%
13-14 Tahun	19	86,3
15-16 Tahun	2	9,1
17-18 Tahun	1	4,6
Amount	22	100

In table 2 you can see the frequency of respondents based on There are 19 people in the 13-14 year age group teenagers with a percentage of 86,3%, aged 15-16 years as many as 2 teenagers with a percentage of 9,1%, and aged 17-18 years there was 1 teenager with a percentage of 4,6%.

➤ Dental and Oral Care Knowledge

Table 3 Results of Respondent Distribution Analysis Based on Level Knowledge of Dental and Oral Care in Adolescents in Class VIII SMPN 2 Tellu Limpoe, Sidenreng Rappang Regency

Table 3 Dental and Oral Care Knowledge

Category	Frequency	%
Bad	18	81,8
Currently	3	13,6
Good	1	4,6
Amount	22	100

In table 3 you can see the frequency of respondents based on there are categories for the level of dental and oral care knowledge bad as many as 18 teenagers with a percentage of 81,8%, category while there are 3 teenagers with a percentage of 13,6%, and in the good category there is 1 teenager with a percentage of 4,6%.

➤ Dental and Oral Care Habits

Table 4 Results of Respondent Distribution Analysis Based on Dental and Oral Care Habits of Adolescents in Class VIII SMPN 2 Tellu Limpoe, Sidenreng Rappang Regency

Table 4 Dental and Oral Care Habits

Category	Frequency	%
Bad	3	13,6
Currently	18	81,8
Good	1	4,6
Amount	22	100

In table 4 you can see the frequency of respondents based on The level of dental and oral care habits is in the poor category as many as 3 teenagers with a percentage of 13,6%, medium category as many as 18 teenagers with a percentage of 81,8%, and categories well there is 1 teenager with a percentage of 4,6%.

➤ Gingivitis

Table 5 Results of Respondent Distribution Analysis Based on Level Incidence of Gingivitis in Adolescents in Class VIII SMPN 2 Tellu Limpoe, Sidenreng Rappang Regency

Table 5 Gingivitis

Category	Frequency	%
Healthy	4	18,1
Light	11	50
Currently	5	22,8
Heavy	2	9,1
Amount	22	100

In table 5 you can see the frequency of respondents based on the incidence rate of gingivitis is in the healthy category (none inflammation) as many as 4 teenagers with a percentage of 18,1%, in the light category there were 11 teenagers with a percentage of 50%, in the medium category there are 5 teenagers with a percentage of 22,8%, and the weight category is 2 teenagers with a percentage 9,1%.

Table 6 Relationship between knowledge and the incidence of gingivitis

Knowledge	Gingivitis Occurrence				Amount	%	Mark P Value
	Healthy	Light	Currently	Heavy			
Bad	3	9	4	2	18	81,8	0,913
Currently	1	1	1	0	3	13,6	
Good	0	1	0	0	1	4,6	
Total	4	11	5	2	22	100	

Based on table 6 above, the relationship between knowledge can be seen dental and oral care with the incidence of gingivitis in teenager in class VIII of SMPN 2 Tellu Limpoe. Teenagers who knowledge in the poor category, namely 18 teenagers (81,8%) with the incidence of healthy gingivitis as many as 3 people, mild as many as 9 people, medium as many as 4 people, heavy as many as 2 people. There are 3 teenagers with moderate knowledge teenagers (13,6%) with a healthy gingivitis incidence of 1 people, light 1 person, moderate 1

B. Bivariate Analysis

Bivariate analysis or hypothesis testing is used to see whether there is a relationship between two variables, namely the relationship between dental and oral health knowledge with the incidence of gingivitis, and the relationship between dental and oral care habits and level incidence of gingivitis in adolescents in class VIII SMPN 2 Tellu Limpoe.

➤ Relationship between knowledge and the incidence of gingivitis

Table 6 Relationship between Knowledge of Dental and Oral Care with Incidence of Gingivitis in Adolescents in Class VIII SMPN 2 Tellu Limpoe, Sidenreng Rappang Regency

person, heavy 0 person. Meanwhile, teenagers whose knowledge is in the good category namely, there was 1 teenager (4,6%) with gingivitis light.

➤ Relationship between habits and the incidence of gingivitis

Table 7 Relationship between Dental and Oral Care Habits with Incidence of Gingivitis in Adolescents in Class VIII SMPN 2 Tellu Limpoe, Sidenreng Rappang Regency

Table 5.7 Relationship between habits and the incidence of gingivitis

Habit	Gingivitis Occurrence				Amount	%	Mark P Value
	Healthy	Light	Currently	Heavy			
Bad	0	1	2	0	3	13,6	0,213
Currently	4	10	2	2	18	81,8	
Good	0	0	1	0	1	4,6	
Total	4	11	5	2	22	100	

Based on table 7 above, the relationship between habits can be seen dental and oral care with the incidence of gingivitis in teenager in class VIII of SMPN 2 Tellu Limpoe. Habitual teenager with the bad category, namely 3 teenagers (13,6%) with the incidence of healthy gingivitis 0 people, mild 1 person, medium as many as 2 people, heavy 0 people. Habitual teenager with the medium category, namely 18 teenagers (81,8%) with the incidence of healthy gingivitis as many as 4 people, as many as mild 10 people, medium 2 people, heavy 2 people. Whereas there is 1 teenager whose habits are in the good category adolescents (4,6%) with moderate incidence of gingivitis.

IV. CONCLUSION AND RECOMMENDATIONS

A. Conclusion

Based on the results of research that has been carried out regarding analysis of factors associated with the occurrence of gingivitis in adolescents in class VIII at SMPN 2 Tellu Limpoe, Sidenreng Rappang Regency South Sulawesi Province in 2023, can be concluded as follows:

- Level of knowledge of dental and oral care among teenagers in class VIII SMPN 2 Tellu Limpoe 81.8% in the poor category, 13.6% in the medium category, and 4.6% in the good category.
- Dental and oral care habits in adolescents in class VIII SMPN 2 Tellu Limpoe 13.6% in poor category, 81.8% in category moderate, and 4.6% in the good category.

- There is no relationship between knowledge of dental and oral care with the occurrence of gingivitis in adolescents in class VIII SMPN 2 Tellu Limpoe ($0.913 > 0.05$ (alpha)).
- There is no relationship between dental and oral care habits with the occurrence of gingivitis in adolescents in class VIII SMPN 2 Tellu Limpoe ($0.213 > 0.05$ (alpha)).

B. Suggestions

- To increase knowledge and encourage more habits both in dental and oral care are expected to be skilled health centers to provide health education teeth and mouth at school.
- To reduce the incidence of gingivitis, it is hoped that in adolescents those who experience gingivitis should pay more attention to their internal habits dental and oral care by finding out or applying techniques proper dental and oral care in everyday life.
- School agencies are expected to provide counseling indirectly directly by attaching information media about dental health and mouths in every room or area of the school environment always busy, such as canteens, parking lots, parks and other places.
- For further research, it is hoped that there will be researchers who will study it about knowledge and habits regarding the incidence of gingivitis in adolescents by paying attention to factors related to other cases of gingivitis.

REFERENCES

- [1]. Amanullah, ASR. & DK Kharisma. 2022. Perkembangan Pola Asuh Orang Tua Terhadap Emosi Remaja. *ALMURTAJA: Jurnal Pendidikan Islam Anak Usia Dini* 1 (2), 49-55. ejournal.iai-tabah.ac.id
- [2]. Fadilla, Julian. 2021. Pengaruh Kebersihan Gigi dan Mulut dengan Status Gingiva pada Ibu Hamil. Poltekkes Tanjungkarang. repository.poltekkestjk.ac.id
- [3]. Firdaus, Angga, & Yunanta M. 2018. Pengetahuan dan Sikap Remaja Terhadap Penggunaan Napza di Sekolah Menengah Atas di Kota Semarang. Universitas Muhammadiyah Semarang. repository.unismu.ac.id
- [4]. Handayani, Ni Komang ASS. 2019. Gambaran Gingivitis pada Ibu Hamil di Puskesmas Manggis II Kabupaten Karangasem Tahun 2019. Poltekkes Kemenkes Denpasar. repository.poltekkes-denpasar.ac.id