

Relationship Between Periodontal Disease and Quality of Life of the Indonesian Family Welfare Guidance Programme (PKK) from Hamlet (RW) Number 01 Sronдол Wetan Urban Village, Semarang City

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Abstract:- Periodontal disease is a disease in the oral cavity with inflammation that attacks the supporting tissues of the teeth, including gingivitis and periodontitis. Periodontal disease is caused by primary and secondary factors, the main factor is irritation by pathogenic bacteria in plaque, while secondary factors are local and systemic factors. According to the results of the Basic Health Research of the Indonesian Ministry of Health in 2018 (RISKESDAS), the national prevalence of dental and oral problems is 57.2%. The prevalence of periodontal disease is more than 82% in young people and more than 50% in adults. Age and illness that affects everyone can regress in various ways, which affect their quality of life. Treatment for periodontal disease is complete plaque control accompanied by scaling and root planning and anti-bacterial therapy.

The aim of the study was to analyze cases of periodontal disease in relation to quality of life. This type of research is a survey based on the nature of correlational research. This quantitative descriptive method uses a design cross-sectional with an analytic observational approach. The object of this research was 250 women from the PKK RW 01 group in Sronдол Wetan Urban Village, Semarang City. Sampling technique using non-probability sampling with purposive sampling method or sample consideration based on the characteristics or characteristics of the population that have been previously known data analysis will be carried out using SPSS software, to determine the factors that affect the quality of life / disability status, to see the effect between two variables using the Spearman rank Correlation test.

The results showed that there was a significant relationship between periodontal disease and quality of life in the PKK RW 01 group of Sronдол Wetan Village, Semarang City, the data showed quality of life and gingivitis, as well as quality of life and periodontitis with crosstabulation test and spearman rank correlation test P-value 0,000 with a significant 0.01 as for the research data as follows: Respondents had a gingivitis condition with a severe category and a bad quality of life, namely

50 respondents (63.3%). Respondents who had periodontitis with severe category and poor quality of life were 48 respondents (60.8%).

Keywords:- Periodontal Disease, Quality of Life.

I. INTRODUCTION

Diseaseperiodontalis a disease in the oral cavity with inflammation that attacks the supporting tissues of the teeth, which includes gingivitis and periodontitis, periodontal disease is caused by primary and secondary factors, the primary factor is irritation by pathogenic bacteria in plaque, while secondary factors are local and systemic factors, for example local, namely incomplete tooth restoration and smoking, while systemic factors, are genetic, nutritional, hormonal and hematological factors (Manson and Eley, 2012)

Periodontal disease affects almost all humans in the world and reaches 50% of the total adult population (Newman et al., 2012.)Clinical features of gingivitis or gingival inflammation are red to bluish gingiva with enlarged gingival contours due to edema and bleeding easily when given stimulation such as when eating and brushing teeth.(Marcus Chamber E et all, 2009). Mccording to the results of the Basic Health Research Health Ministry in 2018 (RISKESDAS) showed a national prevalence of oral and dental problems is 57.2%.

Increasing age and illness that affects everyone can experience setbacks in various ways, which affect the quality of life. According to the *World Health Organization Quality of Life 2004 (WHOQOL)*, quality of life is an individual's perception of an individual's position in life according to the cultural context and value system he adopts, where individuals live and their relationship with expectations. The research objective was to describe the relationship between periodontal disease and the quality of life of the women group PKK RW 01 Kelurahan Sronдол Wetan Kec. Banyumanik Semarang City.

II. RESEARCH METHOD

The design type in this study is an analytical survey using approach *cross sectional* (Notoatmodjo S, 2010). The population in this study was a group of PKK women RW 01, Srandol Wetan sub-district, Banyumanik district, Semarang city, totaling 250 people. method *purposive sampling* or judgment the sample based on characteristics or properties of the previously known populations by Notoatmodjo (2010). Inclusion criteria, namely the criteria or characteristics that need to be met by each member of the population that can be taken as a sample in study this which are included in the inclusion criteria are:

- (1)Members of the PKK RW 01, Srandol Wetan urban village
- (2) are 30 years old or older
- (3)Have gingivitis (inflammation of the gums) and periodontitis
- (4)Willing to be a respondent

The collection datamethod uses a questionnaire method with ainstrument questionnairefor data from the dependent variable, while data from the variableindependently using themethod examinationwith the examination width instrument. Quantitative data analysis was performed using SPSS software, to determine the factors that affect the quality of life / disability status, to see the effect between two variables using thetest *Spearman rank Correlation*. (Sugiyono, 2006)

III. RESEARCH METHOD

Type and design in this study is an analytical survey using approach *cross sectional*. This means a study in which data collection for both the independent and dependent variables is carried out jointly or at once (Notoatmodjo S, 2010). The population in this study was a group of women PKK RW 01, Srandol Wetan sub-district, Banyumanik district, Semarang city, totaling 250 people. The sampling technique uses *non- probability sampling* with *purposive sampling method* or consideration samples based on thecharacteristics or characteristics of the population that have been previously known according to Notoatmodjo (2010). The data collection methods were questionnaire and examination /methodsobservation, using a questionnaire instrument and intra oral examination sheet. Data analysis was performed using SPSS software, to determine the factors that affect the quality of life / disability status, to see the effect between two variables using thetest *Spearman rank Correlation*. (Sugiyono, 2006).

IV. RESULTS AND DISCUSSION

1. Research Results

Table 1 Distribution of Gingivitis

No	Gingivitis	Number	Percentage
1	Mild	14	18%
2	Moderate	13	16%
3	Severe	52	66%
	Total	79	100%

Based on table 6.1 it is known that most respondents have periodontal tissue conditions (suffering from gingivitis) with heavy category as many as 52 respondents (66%). 13 respondents (16%) with moderate conditions and 14 respondents in the category of mild gingivitis conditions.

Table 2 Distribution of Periodontitis

No	Periodontitis	Total	Percentage
1	Light	3	4%
2	Moderate	27	34%
3	Heavy	49	62%
	Total	79	100%

Based on table 6.2 it is known that most respondents have periodontal tissue conditions (suffering from periodontitis) with a severe category, namely 49 respondents (62%). 27 respondents (34%) with moderate conditions and only 3 respondents (4%) with mild conditions.

Table 3 Distribution of Quality of Life

No	Quality of Life	Total	Percentage
1	Good	20	25%
2	Bad	59	75%
	Total	79	100%

Based on table 6.3 it is known that most respondents have a bad quality of life, namely 59 respondents (75%). Meanwhile, only 20 respondents (25%) had a good quality of life.

Table 4 Relationship of Gingivitis and Quality of Life

Quality of Life of Gingivitis Disease	Good		Bad		Number	
	n	%	n	%	n	%
Mild	14	17.7	0	0.0	14	17.7
Moderate	4	5.1	9	11.4	13	16.5
Severe	2	2.5	50	63.3	52	65.8
Total	20	25.3	59	74.7	79	100

p-value = 0.000

Based on tables 5.4 and 5.5 it is known that most respondents who suffer from gingivitis in a severe category followed by the quality of life of the respondent with bad category, namely 50 respondents (63.3%). The results of statistical tests showed that the value of p -value = 0.000 ($p < 0.05$), this shows that there is a significant relationship between gingivitis and the quality of life of the PKK RW 01 group of women, Srandol Wetan Kec. Banyumanik Semarang City.

Table 5 Relationship between Periodontitis and Quality of Life

Quality of Life of Periodontitis Diseases	Good		Bad		Number	
	n	%	n	%	n	%
Mild	2	2.5	1	1.3	3	3.8
Moderate	17	21.5	10	12.7	27	34.2
Severe	1	1.3	48	60.8	49	62.0
Total	20	25.3	59	74.7	79	100

2. Discussion

1. relationship of gingivitis with the quality of life of the group of mothers PKK RW 01 Srandol Wetan Kec. Banyumanik Semarang City.

Based on the results of the study, it is known that the most respondents who suffer from gingivitis with a severe category followed by the quality of life of respondents with a bad category, namely 50 respondents (63.3%). The results of the examination showed that most of the respondents were already in an inflamed / inflamed gingival condition, bleeding occurred at the time of the examination and bleeding spontaneously. Analysis of the results of the quality of life questionnaire showed that of the 63.3% who had a bad category related to gingivitis, 60% of the respondents said they had experienced pain in the gums, in the mouth, in the jaw, headaches and uncomfortable chewing food. a lot of pain so that you have difficulty in doing your activities because of the pain it causes. From this it can be seen that the occurrence of something unpleasant will affect the survival / activity of the individual.

Gingivitis is an inflammatory process in the periodontium tissue caused by microorganisms that form a colony and dental plaque that adheres to the gingival margins. The occurrence of gingivitis is characterized by a change in the staining of the gingiva to red, clinical and histopathological changes, namely the occurrence of swelling and bleeding of the gingiva and a change in position and contour of the gingiva (Manson & Eley, 1993). The further consequence is that it can cause disruption in the patient's ability to clean teeth and cause aesthetic and functional problems in this case, namely the quality of life where the respondent feels pain and functional disorders, which is difficult to use / interfere with in consuming food. In accordance with the statement put forward by Suryani (2016) which states that the emergence of a disorder / disease can disrupt daily life which then reduces the quality of life of the individual.

The results of the statistical test *Spearman Rank Correlation* show that the p -value = 0.000 ($p < 0.05$), this shows that there is a significant relationship between gingivitis and the quality of life of the PKK RW 01 group of women, Srandol Wetan District, Kec. Banyumanik Semarang City. These results are in line with research conducted by Lestari (2014) with the results that there is a significant relationship between periodontal conditions and quality of life, where out of 17 respondents only 2 respondents had periodontal conditions in the healthy category. 81.3% of respondents felt pain or discomfort when eating. Puspitasari (2017) in his research also obtained the results that there is a significant relationship between oral health and quality of life, respondents with oral health are sick followed by poor quality of life.

2. The relationship between periodontitis and quality of life of the women group PKK RW 01 Kelurahan Srandol Wetan Kec. Banyumanik Semarang City.

The results showed that most respondents who suffered from periodontitis with a severe category followed by the quality of life of respondents with a bad category, namely 48 respondents (60.8%). The statistical test results showed that the value of p -value = 0.000 ($p < 0.05$), this shows that there is a significant relationship between periodontitis and the quality of life of the PKK RW 01 group of women, Srandol Wetan Kec. Banyumanik Semarang City.

Periodontitis is an infectious disease caused by bacteria in the biofilm attached to the teeth, which is characterized by inflammation of the gingiva and subsequent damage to connective tissue and alveolar bone. Periodontitis can cause tooth loss or worse, an increased risk of heart attack or stroke and other serious health problems. Periodontitis refers to gum disease and tissue and or bone damage. In simple terms, it can be said that periodontitis involves permanent changes in the supporting structure of the teeth (Carranza FA et al, 2008).

The results of the examination showed that most of the respondents had a bad category of periodontal tissue conditions (suffering from periodontitis) with deep pocket conditions. Respondents complained of pain, difficulty chewing food, trying to avoid food due to swelling of the gums and feeling depressed and disturbed in their activities due to the pain caused by the swelling of the gums. From this it can be seen that the emergence of periodontal disease will affect the quality of life of the respondents. Respondents with good periodontal tissue conditions have a good quality of life and conversely respondents with severe periodontitis have a poor quality of life. From the results of the data Diana shows that respondents who suffer from periodontitis with a severe category followed by the quality of life of respondents with a bad category are 48 respondents (60.8%), the results of the analysis based on the results of the questionnaire show that there are 20 respondents (41.7%) who in the question in the questionnaire that he had felt discomfort because the gums became so loose that the teeth became loose, and caused discomfort during chewing food activities and when talking.

The results of the study are in line with research conducted by Pratiwi (2016), with the results of periodontal disease having an impact on quality of life. In addition, Rianti (2016) in her research states that the quality of life is influenced by various factors, including periodontal disease, adequate socioeconomic conditions, education and knowledge, environment or culture, then the level of awareness of each individual to maintain dental and oral hygiene.

V. CONCLUSIONS AND RECOMMENDATIONS

1. Conclusion

- a. Respondents had a gingivitis condition with a severe category and a bad quality of life, namely 50 respondents (63.3%). Analysis of the results of the quality of life questionnaire showed that 63.3% of those who had a bad category were related to the gingivitis disease 60 % of the respondents stated that they had experienced pain in the gums, in the mouth, in the jaw, headaches and uncomfortable chewing food, felt very sick so that they had difficulty in doing activities because of the pain they caused.
- b. Respondents who had periodontitis with severe category and poor quality of life were 48 respondents (60.8%). The results of the analysis based on the results of the questionnaire showed that there were 20 respondents (41.7%) who answered the questions in the questionnaire that they had felt uncomfortable because the gums became so loose that the teeth became loose, causing discomfort during chewing food activities and when talking. The results of the examination on intra-oral identification of respondents, namely 20% of the number of respondents aged 40 to 50 years had lost teeth (had been extracted) between 3-5 elements, as well as the condition of the calculus index in the respondents showed the average CI index at respondents aged between 40t-50 with an average score of 3 (bad), it shows the level of community dental health status is very low.
- c. There is a significant relationship between periodontitis and the quality of life of the PKK RW 01 sub-district Srandol Wetan Kec. Banyumanik Semarang City with the crosstabulation statistical test p-value 0,000. and Spearman rank correlation p-value 0.000. and the significant 0.01

2. Recommendations

- a. Expected that respondents who have gingivitis condition with weight categories for treatment by visiting facilities care healthteeth and mouth, so that the status oral healthof the respondents can be optimized so that the quality of life they were previously in the category of bad can be good .
- b. Expected to respondents who have a condition periodontitis with weight categories, especially for respondents who have tartar which score CI 3 (bad category) for treatment by visiting facilities carehealthteeth and mouth, to be able to doaction the cleaning of tartar(scaling), Likewise , for respondents who have loose teeth, it is necessary to take care of their

loose teeth by professionals so that thestatus oral healthof the respondents can be optimal so that the quality of life of those who were previously in the bad category can be good.

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