

**The Decreasing of Debris Index in Toddlers with Mother Guiding on Posyandu**Silvia Prasetyowati<sup>1</sup>(corresponding author), Bambang Hadi Sugito<sup>2</sup><sup>1</sup>Department of Dental Health, Poltekkes Kemenkes Surabaya (silvia.prasetyowati@yahoo.com)<sup>2</sup>Department of Dental Health, Poltekkes Kemenkes Surabaya (bambanghadi\_sugito@yahoo.com)

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**ABSTRACT**

The role of parents is indispensable in guiding, understanding, reminding and providing facilities to children in order to maintain their oral hygiene. The mother guiding model aims to change the knowledge, attitudes and skills of mother in decreasing toddler index debris. The purpose of this study was to analyze the model of guiding in mothers to decrease toddler plaque index. The type of research was quasi-experimental analysis. The research target was all mothers of toddlers who had children aged 3-5 years. Data collection method used questionnaires and oral hygiene status sheets. Analysis data technique used McNemar statistical test. The results showed a significant difference between maternal knowledge before and after guiding. There were significant differences between maternal attitudes before and after guiding. There were significant differences between mother's brushingtooth skills before and after guiding. There is a difference in mean of debris index for toddlers between before and after mother guiding.

**Keywords:** Debris index, Toddler, Mother guiding**INTRODUCTION**

One of factor that plays a role in improving health of children is the behaviour of mother. The attitude and behaviour of mother in maintaining teeth have a significant influence on children attitudes and behaviour. The role of parents (mothers) is indispensable in guiding, providing understanding, reminding and providing facilities to children in order to maintain their oral hygiene.<sup>(1)</sup> Mothers with low knowledge of oral hygiene in toddlers will affect their oral health, and is a reinforcing factor of behaviour that does not support the oral health of children. Mother is the first and foremost environment where children interact as the oldest educational institution, meaning this is where an educational process begins. So that the mothers act as teacher for their children. There is a causal relationship between how mothers educate children and what the children do. Therefore, to fulfill their daily needs, they still need the intervention of their mothers everywhere, in any case, including in maintaining their own health.<sup>(2)</sup>

The accompaniment theory says that the guiding provided in terms of counseling on posyandu programs is very much needed by mothers who have children under five. In guiding and home visits which is done by health workers are efforts to equalize mothers and toddlers in developing various potentials that have achieved the health quality of children under five, especially the oral health of children towards a better direction. Guiding is intended to help mothers who have children under five, in improving oral health efforts of children under five.<sup>(3)</sup> The guiding model provided in promoting health services is an activity and / or a series of health service activities that prioritize activities which are health education, then carried out until the guides on the target object are the mother who has a toddler. The scope of the guiding model for changes in maternal knowledge is aimed at improving oral hygiene status in children under five. The form of guiding on tooth cleaning methods in the form of home visits was carried out for 3 stages (21 days of behaviour change) for each individual in a row starting from introduction (counseling), carrying out guiding, self practice.

The purpose of this study is to analyze the decreasing of toddler debris index with mothers guiding on posyandu.

**METHODS**

The following (Table 1) is a summary of the research methods applied in this study.

Table 1. The Research Methods

Type	Quasi experiment
Design	One group pre test and post test
Subjects	All mothers of toddlers who have children aged 3-5 years (100 children)
Variables	Independent Variables: Guiding Model Dependent Variables: Debris Index of toddlers
Data collection	Guiding Model: questionnaire Debris Index of toddlers: debris index observation sheet
Analysis	MC-nemar test

**RESULTS**

Based on table the results shows that the majority of respondents aged from 31-40 years are 49%, respondents with age over 40 are 23% and those aged 20-30 years are 28%. From the characteristics of education shows that the education level of respondents is mostly Senior High School / Vocational School by 78%, for the education level of respondents who are bachelor / diploma by 16%, and respondents with junior high school education level by 6%. This means that in most education level is senior high school / vocational school. Whereas for the work of the most respondents are housewives as much as 64%, mothers with private jobs as much as 29% and a small portion as civil servants 7%.

Table 1. Characteristics of Respondents

Characteristic	Frequency	Percentage
<b>Age</b>		
20 – 30	28	28
31 – 40	49	49
41 – 50	23	23
Total	100	100
<b>Education</b>		
Bachelor / Diploma	16	16
Senior High School / Vocational School	78	78
Junior High School	6	6
Total	100	100
<b>Work</b>		
Civil Servants	7	7
Private Job	29	29
Housewife	64	64
Total	100	100

Table 2. Respondents' Categories of Knowledge, Attitudes and Skills

Category	Before		After		p-value
	f	%	f	%	
<b>Knowledge</b>					
Good	50	50	80	80	0.000
Poor	50	50	20	20	
Total	100	100	100	100	
<b>Attitude</b>					
Good	27	27	92	92	0.000
Poor	73	73	8	8	
Total	100	100	100	100	
<b>Toothbrushing Skill</b>					
Good	27	27	88	88	0.000
Poor	73	73	12	12	
Total	100	100	100	100	

Based on table it is known that the percentage of good knowledge categories was more better after the guiding (20%) than before guiding (50%). The percentage of poor categories was greater before guiding (50%) than after guiding (20%). The test results shows a significant difference between mothers knowledge before and after guiding (0.000 <0.05). It is known that the percentage of good attitude categories was more after guiding (92%) than before guiding (55.4%). The percentage of bad attitude categories was greater before guiding (73%) than after guiding (8%). The test results showed a significant difference between maternal attitudes before and after guiding (0.000 <0.05). It is known that the percentage of good categories in tooth brushing skills was more (88%) after guiding than before guiding (27%). The percentage of bad categories in tooth brushing skills was greater before guiding (73%) than after guiding (12%). Test results showed a significant difference between the tooth brushing skills of mothers before and after guiding (0.000 <0.05)

Table 3. Debris Index of Toddler before and after Guiding

Mean of Debris Index		Mean		SD		P-value
Before	After	Before	After	Before	After	0.000
0.26	0.17	0.262	0.179	0.26	0.18	

Table 3 shows an mean score decrease in debris index before guiding with an average of 0.26 and after guiding with an average of 0.17. There was a significant difference in debris index among toddlers before mothers guiding and after mothers guiding (0.000 <0.05).

## DISCUSSION

### Knowledge of Mothers about Oral Hygiene and Oral Health Care in Toddler

Knowledge is everything that is known by someone obtained through sensory activity. Knowledge becomes the basis for people to do something. Knowledge or cognitive is a very important domain in shaping people actions (overt behaviour).<sup>(4)</sup> The results showed that there was a difference between the knowledge in toddler mothers between before and after guiding. Most mothers had good knowledge about the maintenance of oral hygiene of toddlers. There is an increase in the knowledge of mothers in terms of brushing teeth in their toddlers, among others, how to clean the teeth of toddlers, when brushing teeth, frequency of brushing teeth. Increased knowledge of toddler mothers can occur due to new information about maintenance of oral hygiene. There is an increase in the knowledge of mothers in terms of tooth brushing their toddlers, among others, how to clean the teeth of toddlers, when brushing teeth, frequency of brushing teeth. Increased knowledge of toddler mothers can occur due to new information about maintenance of oral hygiene. People knowledge can be influenced by the factors which is come from inside the individuals (education, motivation and perception) as well as factor which is come from outside the individuals (information, social, cultural and environmental). Knowledge is an insight that is obtained formally or informally. Formally knowledge is obtained from the education which is the basis of knowledge. Education is positively related to knowledge in developing attitudes and skills, while informally education is gained from experience. After people have knowledge or knows the stimulus, then makes an assessment or opinion on what they know in the form of attitude, the next process is expected they will implement or practice what they know or react to those things. Practicing something is what is called behaviour.

Knowledge can also be influenced by age, level of education and work. In line with the research of Asih et al, which states that with increasing age, knowledge will increase, but if it is not supported by factors of information or experience, the increasing age of a person does not guarantee a knowledge level of person. The more information that is obtained, the higher the knowledge of a person, so that with increasing age, there will be physical and psychological changes that can affect a personability to seek information and knowledge. The majority of toddlers are educated in Edelweys age 31-40 years (49%), where age is included in the age group that is mature for a woman in carrying out her role as a mother, so that sufficient maturity and experience to be a mother is able to find information that is needed well about child care in paying attention to oral hygiene for the maintenance of oral hygiene. Education is also related to the process of intellectual and emotional maturation. With education is an effort to advance character, mind and body which includes everything that is done for himself or done by others for himself, with the aim of bringing the level of perfection closer.<sup>(5)</sup> In other words, education is the process of influencing behaviour habits, thoughts and feelings. The results of Rahayu's<sup>(6)</sup> study stated that there was a relationship between the level of education and the incidence of dental caries in children under five in Mancasan village, this was related to the education of mothers of toddlers in Edelweys posyandu,

the majority of which are high school education, where the level of education of a person is higher, the more knowledge which he obtained. According to the Education Constitution No. 20 of 2003 concerning the category of high education is starting from high school.<sup>(7)</sup>

Another factor that can influence knowledge is work. The results of the study revealed that the mothers of the committee were partly housewives. In the condition of the majority of toddler mothers who do not work can also give a lot of attention and the flexibility of time they have in providing opportunities to pay attention to the condition of oral hygiene in their toddlers.

### **Attitudes of Mothers about Maintenance of Toddlers Oral Hygiene**

The results showed that there were differences in attitudes of mothers of toddlers before and after guiding. The attitude of mothers under five after guiding increased compared to before guiding. The results of this study were similar to those of Siahaan et al.<sup>(8)</sup> which stated that there were changes in the attitude of mothers of toddlers after guiding activities by Posyandu cadres. This is in line with the opinion of<sup>(9)</sup> which states that attitude is something that cannot be seen immediately but can only be interpreted in advance from closed behavior. The factors that underlie the mothers' attitudes are mothers' knowledge that has increased after the new information they receive. Research conducted by Suryawati, et al.<sup>(10)</sup> which states the existence of a relationship between maternal knowledge of toddler and maternal attitudes in caring of the oral hygiene in toddler. Another factor besides knowledge that can influence a person's attitude is the belief that someone has, mind, media and also emotions.<sup>(9)</sup>

Changes in attitude on an ongoing basis can change a person's behavior in improving the oral hygiene status of children under five. From the results of the study showed a change in attitude towards a better, this is due to the guiding process carried out by posyandu cadres who guides incentives so that it is easier to understand by mothers toddler. The existence of independent practice in the guiding process is also one way to get changes in the behavior of mothers of children under five years of age in practicing good and correct brushing on their children.

### **Tooth Brushing Skills of Toddler Mothers**

The results of the study revealed that there were changes in maternal toddler skills in brushing teeth before and after guiding. According to the theory of behavior change, response is an action that arises and develops followed by certain stimuli, this stimulus is called reinforcing stimuli or reinforces because these stimuli strengthen the response that has been made. Therefore guiding is carried out to strengthen a behavior in the form of actions taken in maintaining the cleanliness of the teeth and mouth of toddlers by brushing teeth properly. This is in line with Siahaan's research, et al.<sup>(8)</sup> that there is an increase in the skills score of mothers who get a guiding with mothers who do not get guiding

### **Toddlers Debris Index**

The results showed that there were differences in index debris between before and after guiding. The index after guiding decreased compared to before guiding. The results showed significant differences in index debris between before and after guiding. Siahaan's research, et al.<sup>(8)</sup> also shows that there are significant differences in oral hygiene status between before and after guiding by Posyandu cadres. Some things that can reduce debris of the toddler index in this study are the increased knowledge and attitudes of mothers in maintaining the cleanliness of the teeth and mouth of toddlers. Increased knowledge and attitudes of mothers is the basis for mothers to act in an effort to maintain the cleanliness of their children's teeth and mouth. The knowledge and attitudes of mothers of toddlers are predisposing factors for the actions of mothers of toddlers in maintaining the cleanliness of their children's teeth. This statement is like Lawrence Green (1980) theory in Notoatmodjo.<sup>(10)</sup> which mentions that knowledge and attitudes are predisposing factors that influence a person's behavior. Research on guiding models conducted in the end can improve the knowledge of mothers of toddlers in maintaining oral hygiene of toddler, this can be seen from changes in maternal attitudes and skills with decreasing the index debris value of children under five.

## **CONCLUSION**

There is a significant difference between knowledge, attitudes, maternal skills before and after the guiding.

There are changes in how to maintain the oral hygiene of toddlers with differences in the average debris of the toddler index between before mothers guiding and after guiding.

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