



# The Effect of Family-Based Education on Exclusive Breastfeeding to Optimize Child Development in the Golden Period

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**Abstract** - During golden period, the brain experienced the fastest development in the history of its life, up to 80%. Breast milk is the best food in early life. Exclusive breastfeeding coverage has not been achieved. Several reasons are the cause, namely: the length of time when the milk comes out the first time you feed, the family /community perception that the cause of the baby crying after being breastfed is because there is not enough milk so that it needs to be given formula milk. This study aims to identify the effect of family-based education on exclusive breastfeeding. The research design used a quasi experiment, pre test and post test with control group design. Starting with pre-test on both groups of respondents, then in the intervention group family-based education was carried out (involving the husband/1 other family member) about exclusive breastfeeding for 3 meetings. The third stage carried out a post test in both groups. The number of respondents was 30 people each group of 15 breastfeeding mothers. Data analysis used Wilcoxon test and Mann Whitney test. The results showed that there was a significant influence between family-based education on exclusive breastfeeding (p value = 0.028). Naturally, healthy newborn babies can breastfeed, the more frequent breastfeeding of breast milk products will increase so that exclusive breastfeeding is possible to achieve, the knowledge and attitudes of mothers and their families need to be improved. It is recommended that family-based education be implemented to increase the achievement of exclusive breastfeeding.

**Key Words** - family, education, exclusive breast milk.

## I. INTRODUCTION

The golden period or golden period lasts from the time the child is in the womb to the age of two. In this period the brain has experienced rapid development in its life history, namely up to 80%. After birth, the brain nerve cells do not increase anymore, but the number of connections between the brain nerves continues. One brain nerve cell can establish connections with 20,000 other brain nerve cells. The more the number of nerve cell connections, the smarter the brain is [1]. The number of connections between brain nerve cells is determined by nutrition and stimulation. The failure of nutritional intake during this period has difficult, even irreversible, long-term effects [2].

Nutritional problems for infants in North Sumatra: thin babies who receive additional food (36.7%). Coverage of exclusive breastfeeding (33.0%), IMD <1 hour (30.3%), breastfeeding up to 5 months (48.6%). The prevalence over malnutrition and malnutrition is at the national prevalence. Infants and toddlers aged 0-23 months are malnourished (2.8%), malnourished (8.6%), aged 0-59 months, malnutrition (3.1%), malnutrition (10.1%) (BB / U indicator). Nutritional status with the TB / U index shows the incidence of stunting, at: 0-23 months of age, very short (8.0%), short (11.1%), aged 0-59 months, very short (9.3% ), short (15.1%). Nutritional status with a weight loss index / TB age 0-23 months is very thin (5.2%), thin (9.3%), aged 0-59 months is very thin (4.3%), thin (7.7%) . Stunting in early life will have a negative impact on health, cognitive, and functional as adults [3].

Breast milk is the best food at the beginning of life (0-6 months), then breast milk plus complementary foods until the age of two years. The coverage of exclusive breastfeeding at Medan Johor Health Center has not been achieved. Several things are the cause, namely: When the milk comes out the first time you feed, the family / community's perception that the cause of the baby crying after being breastfed is because there is not enough milk so that formula milk is needed.

Healthy Indonesia program with a family approach that the family approach is the love of the program. Family-based education can increase the intention to change health behavior [4]. Family-based educational interventions about offering exclusive breastfeeding to comply with exclusive breastfeeding to optimize child development in the golden period need to be done.

## II. METHOD

This research is a quantitative study using quasi-experimental pre-test and post-test with a control group design, to analyze the effect of family-based education on offering exclusive breastfeeding. Researchers will provide family-based education about exclusive breastfeeding to the intervention

group and the control group will not be given family-based education as in the intervention group. Prior to the intervention, the intervention and control groups were carried out before the test, then carried out family-based education. After 3 times family-based educational activities with 2 month intervals were carried out, then a post test was carried out on both groups using the same questionnaire instrument as the pre test and measuring exclusive breastfeeding.

### III. RESULTS

#### A. Univariate Analysis

##### 1) Respondent's Characteristics

The sample in this study was 30 people consisting of 2 groups, namely 15 breastfeeding mothers who were given family-based education about exclusive breastfeeding by researchers who were the intervention group and 15 breastfeeding mothers who were not given family-based education about exclusive breastfeeding which was the control group.

**Table 1. Frequency Distribution of Respondent Characteristics**

Characteristics	Group (n=30)		Intervention		Control	
	Total n	%	n	%	n	%
Age (years):						
<20	2	13,33	0	0	2	6,67
20-35	11	73,34	13	86,67	24	80
>35	2	13,33	2	13,33	4	13,33
Total	15	100	15	100	30	100
Education:						
Primary School	1	6,67	2	13,33	3	10
Junior High School	7	46,67	3	20	10	33,33
Senior High School	4	26,66	6	40	10	33,33
College	3	20	4	26,67	7	23,34
Total	15	100	15	100	30	100
Profession:						
Work	5	33,33	7	46,67	12	40
Does not work	10	66,67	8	53,33	18	60
Total	15	100	15	100	30	100
Parity:						
1	4	26,67	5	33,33	8	26,67
2	6	40	3	20	9	30
>2	5	33,33	7	46,67	13	43,33
Total	15	100	15	100	30	100

The age characteristics of the two groups were dominated by 20-35 years, as many as 11 people (73.34%) in the intervention group and 13 people (86.67%). Educational characteristics in the intervention group were dominated by the junior high school category, namely as many as 7 people (46.67%), then the high school category was 4 people (26.67%), then the PT category was 3 people (20%) and 1 person (6.67%) SD category. In contrast to the control group, education was dominated by the SMA category, namely 6 people (40%), followed by the PT category as many as 4 people (26.67%), then the SMP category 3 people (20%) and SD as many as 2 people (13, 33%). There were also differences in job characteristics, the intervention group was dominated by the non-working category as many as 10 people (66.67%), 5 people who worked (3.33%) while in the control

group the difference in the number of respondents who worked and did not work a little, namely 8 people (53.33%) who did not work and 7 people (46.67%) who worked. Parity characteristics in the intervention group were dominated by parity category 2, namely 6 people (40%), then the parity > 2 category was 5 people (33.33%) and the least parity category 1 was 4 people (26.675), while in the control group Parity characteristics were dominated by parity > 2, namely 6 people (46.67%), then parity 1 was 5 people (33.33%) and parity 2 was 3 people (20%). From the description above, the distribution of respondents appears to be even in each characteristic.

##### 2) Result of Pre Test and Post Test of Knowledge and Attitude of Respondents

**Table 1. Distribution of Pre-Test and Post-Test Frequency of Knowledge and Attitudes in Groups Intervention and Control Groups**

Variable	PRE TEST				POST TEST			
	groups (n=30)		Groups (n=30)		Intervention		Control	
	n	%	n	%	n	%	n	%
Knowledge:								
Well	6	40	8	46,77	13	86,67	7	46,67
Less	9	60	15	53,33	2	13,33	8	53,33
Total	15	100	15	100	15	100	15	100
Attitude:								
Positive	10	66,67	9	60	14	93,33	10	66,67
Negative	5	33,33	6	40	1	6,67	5	33,33
Total	15	100	15	100	15	100	15	100

There was an increase in the percentage of good knowledge in the intervention group, from 40% in the pre test to 86.67% in the post test, while in the control group there was no change in knowledge at all, the percentage was still 46.67% during the pre test and post test. There was an increase in positive attitudes in the intervention group and the control group. The percentage increase in positive attitudes in the intervention group from 66.67% in the pre test to 93.33% in the post test, this is greater than the control group, namely 60% in the pre test to 66.67% in the post test.

**Table 2. Exclusive breastfeeding in the intervention and control groups**

No	Exclusive Breastfeeding	Intervention		Control	
		N	%	N	%
1	Exclusive	12	80	6	40
2	Not exclusive	3	20	9	60
	Total	15	100	15	100

The percentage of the intervention group that gave exclusive breastfeeding was up to two times that of the control group.

#### B. Bivariate Analysis

##### 1) Differences in Knowledge and Attitudes of Pre-Test and Post-Test in the Intervention Group

**Table 4. The results of the test for differences in knowledge and Attitudes of Pre-test and Post-test in the Intervention Group Using the Wilcoxon Test**

Group	Variable	Pre Test	Post Test	Z-Test	p value
		Mean Runk	Mean Runk		
Intervention	Knowledge	4,00	0,00	-2,646	0,008
	Attitude	2,50	0,00	-2,000	0,046
Control	Knowledge	1,50	1,50	0,000	0,378
	Attitude	4,00	4,00	1,000	0,705

The data table above illustrates the test of differences in knowledge and attitudes pre-test and post-test in the intervention group using the Wilcoxon test. It is known that the p value of the knowledge variable is 0.008 and the attitude is 0, 046 ( $<0.05$ ), which means that there are significant differences in the knowledge and attitude variables in the pre-test and post-test in the intervention group before and after being given family-based education about exclusive breastfeeding.

## 2) Differences in Knowledge and Attitudes of Pre Test and Post Test in the Control Group

**Table 5. The results of the test for differences in knowledge and attitudes of pre-test and post-test in the control group using the Wilcoxon test**

Variable	Pre Test	Post Test	Z-Test	p value
	Mean Runk	Mean Runk		
Knowledge	1,50	1,50	0,000	0,378
Attitude	4,00	4,00	1,000	0,705

The data table above illustrates the test of differences in knowledge and attitudes pre-test and post-test in the control group using the Wilcoxon test. It is known that the p value of the knowledge variable is 0, 378 and the attitude is 0, 705 ( $>0.05$ ), it means that there is no significant difference in the knowledge variable and the attitude variable in the pre-test and post-test in the control group.

**Table 6. Test results of differences in exclusive breastfeeding in the control and intervention groups using the Mann Whitney Test.**

Variabel	Kontrol	Intervensi	Z-Test	p value
	Mean Runk	Mean Runk		
Exclusive Breastfeeding	12,50	18,50	-2,198	0,028

The data table above illustrates the difference test of exclusive breastfeeding in the control and intervention groups using the Mann Whitney Test. It is known that the p value is 0.028 ( $<0.005$ ), which means that there is a significant effect of family-based education on exclusive breastfeeding.

## IV. DISCUSSION

Exclusive breastfeeding is giving only breast milk, without the addition of other fluids such as formula milk, honey, tea water and without other food additives such as bananas, papaya, biscuits, porridge, rice and team [5].

The results showed the Wilcoxon test in the intervention group for knowledge there was p value = 0.008 and an attitude of 0.046 ( $<0.05$ ) meaning that there were significant differences in the knowledge and attitude variables in the intervention group before and after being given family-based education about exclusive breastfeeding. Whereas in the control group the p value was obtained for the knowledge variable 0, 378 and the attitude 0, 705 ( $>0.05$ ) meaning that there was no significant difference in the knowledge and attitude variables in the pre test and post test in the control group.

In the pre-test, the percentage of mothers with good knowledge in the intervention group was 6 people (40%) less than the control group as many as 7 people (46.67%), but in the post test there was a significant increase where the percentage of respondents in the intervention group with Good

knowledge category became 13 people (86.67%) while in the control group there was no change. In the intervention group there was an increase of 46.67%, in the control group 0%.

There was also a significant increase in the percentage of positive attitudes in the intervention group, namely from 10 people (66.67%) in the pre test to 14 people (93.33%) in the post test. In the control group, there was also an increase in positive attitudes but the percentage was very small, from 9 people (60%) in the pre test to 10 people (66.67%) in the post test.

Education on exclusive breastfeeding is carried out on a family basis, namely providing education to breastfeeding mothers accompanied by one of the mother's closest relatives. The mindset of mothers and their families is directed that the first 1000 days of life (from pregnancy until the baby is 2 years old) is an urgent period, a period that greatly determines the quality of children's resources in the future. Breast milk is the best food that cannot be replaced and is very economical and practical.

Assistance is a form of real support for mothers in the process of giving exclusive breastfeeding. The participation of family members in providing this education becomes meaningful participation for mothers to solve problems that mothers experience in breastfeeding so that they are able to carry out their role optimally.

This is in accordance with the research of [6], which revealed that the decision making in giving exclusive breastfeeding by mothers was influenced by the role (support) of the family. Support to breastfeeding mothers is an integral part of the family role. The importance of the role of the family has been recommended at the High Level Conference on Child Welfare (1990), that all families (especially husbands) know the importance of supporting women in breastfeeding tasks only in the first 4 to 6 months of the child's life [5].

During the breastfeeding process, the two groups experienced problems commonly experienced by breastfeeding mothers, among others, blistered nipples, insufficient breast milk. Mothers in the intervention group have known that chafed nipples can occur due to inappropriate breastfeeding techniques and insufficient breast milk can be increased by providing mothers with nutritional intake that can increase milk production such as katuk leaves, suppressing stress levels that mothers experience, helping mothers feel as comfortable as possible during the breastfeeding period. With correct and sufficient knowledge, the mother's attitude when dealing with problems or obstacles in the breastfeeding process, the mother is calmer and knows what to do. There are also family members who remember and help them to overcome the existing problems in order to have adequate nutritional intake for their children.

This is in accordance with the research of Albernaz (2008) that lactation counseling (education) and breastfeeding can prevent early arteries and are effective in increasing exclusive breastfeeding [5].

## V. ACKNOWLEDGMENT

To The Ministry of Research and Technology and Higher Education who has funded this research

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