

REDUCE THE STUNTING WITH THE INFANT AND YOUNG CHILD FEEDING PRACTICE (IYCF) IN YOGYAKARTA, INDONESIA

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Abstract

Stunting in children reflects the condition of failure to develop in children under five due to chronic malnutrition, so children become too short for their age. Chronic malnutrition occurs from the womb baby until the age of two years. Efforts to prevent stunting include feeding infants and children (IYCF) starting from Early Breastfeeding Initiation to give exclusive breastfeeding until the age of 6 months and after 6 months of age. This study aims to determine the effect of IYCF on decreasing stunting. This study used observational analytic using a case control design with matching procedures. Research location in Yogyakarta. Data collection is done by questionnaire. Respondents in this study were 100 mothers who had children aged 6 - 60 months, 50 children as cases and 50 children as controls. The study showed that stunting infants were not treated with early breastfeeding initiation as much as 70.31%, did not get exclusive breastfeeding as much as 76.19% and did not get the right complementary feeding as much as 70.76%. The results of data processing showed p value 0,000 so that there was a relationship between IYCF and the incidence of stunting. The right practice of IYCF has been proven to reduce the incidence of stunting in Yogyakarta, Indonesia

Keywords: early breastfeeding initiation, exclusive breastfeeding, complementary feeding, IYCF, Stunting

1. INTRODUCTION

Stunting reflects a condition of failure to thrive in children under five (under five years old) due to chronic malnutrition, that result in height that is too short for their age. Chronic malnutrition occurs to babies still in the womb to the age of two years. Thus, their initial 1000 days of life should get special attention because it determines the level of physical growth, intelligence and productivity of a person in the future. Today, Indonesia is one of countries with a high prevalence of stunting compared to other middle-income countries. If this problem is not solved immediately, it can affect Indonesia's development performance related to economic growth, poverty and inequality [1].

In Indonesia, around 37% (almost 9 million) of children under five get stunting and Indonesia is the fifth country with the greatest number of stunting in the world. Toddlers / *Baduta* (babies under the age of two years) who get stunting will do not have optimum intelligence, become more susceptible to disease and might be at risk of declining levels of productivity in the future. According to basic health research on 2013, the national stunting prevalence rate reached 37.2%, increasing from 2010 by 35.6% and 2007 by 36.8%. In the Special Region of Yogyakarta, incidence of stunting is still quite high at 27, 2%. The results of the nutritional status monitoring of infants in Sleman Regency in 2015 showed 12.86% stunting, 7.53% underweight, 6.14% overweight and 3.57% wasting. Kalasan Subdistrict is the sub-district with the highest stunting incidence in 2016 as much as 22.30%. [2].

In this regard, a number of efforts have been made to solve these nutritional problems. Some of efforts made by the government include the "First Thousand Days of Life" movement that includes

specific and sensitive efforts. Specific matters are direct efforts related to nutrition, such as micronutrient supplementation in infants and toddlers. Furthermore, there is also supplementation in pregnant women, through tablets for supporting blood production. It is carried out as a prevention from stunting itself. One of the efforts to prevent stunting is to give exclusive breastfeeding until the age of 6 months and after 6 months of age, sufficient quality and quality of complementary breastfeeding is given [3].

2.MATERIALS AND METHODS

This research used observation by using a case control design with matching procedures. The research site chosen working area of the Sleman District Primary Health Center. Data collection was performed by questionnaire. Respondents in this study were 100 children of ages $\geq 6 - 60$ months, 50 children as cases and 50 children as controls. Instrument in this study was a questionnaire to ask about their history of early breastfeeding initiation, exclusive breastfeeding, practice of giving complementary feeding, an infantometer to measure the length of the baby's body and a scale to measure the baby's weight. The questionnaire instrument for giving complementary feeding has been tested for content validity by two IYCF experts.

3.RESULTS AND DISCUSSIONS

In this study, univariate analysis was performed to determine the frequency distribution of each variable, both the dependent variable of exclusive breastfeeding and the independent variables including maternal age, maternal employment Status, maternal education, infant age, infant nutritional status, early breastfeeding initiation and exclusive breastfeeding.

Tabel 1. Frequency distribution based on mother's age, employment Status, maternal education, baby's age, baby's nutritional status, early breastfeeding initiation and exclusive breastfeeding

Variabel	($\Sigma=100$) Frequency (N)	Percentage (%)
Mother's age		
< 20 Years	12	12
20-35 Years	72	72
'> 35 Years	16	16
Maternal education		
Primary education	18	18
Secondary education	65	65
Post Secondary education	17	17
Employment Status		
Working Mother	53	53
Housewife	47	47
Baby's nutritional status		
Stunting	50	50
Non Stunting	50	50
Baby's age		
6-12 Month	28	28
13-24 Month	46	46
25-36 Month	24	24
37-48 Month	2	2
Early Breastfeeding Initiation		
Yes	36	36
No	64	64
Exclusive Breastfeeding		
Yes	37	37
No	63	63
Complementary Feeding		
Correct	35	35
Incorrect	65	65

The results of the study showed that the majority of mothers whose children under five were in the range of healthy reproduction, for 72%, based on education the respondents have secondary education, namely junior high or high school. Working mothers were accounted for 53% of the questionnaire questions given showing that mostly work as factory workers. The history of early breastfeeding initiation indicated that most of them did not carry out early breastfeeding initiation while giving birth, and the history of exclusive breastfeeding told that most babies do not get exclusive breastfeeding and most practice of IYCF giving is incorrect. From the results of cross tabulation, data is obtained

Tabel 2. Cross table between early breastfeeding initiation, exclusive breastfeeding and complementary feeding to the incidence of stunting

	Group				N	%	P Value	r
	Case		Control					
	N	%	N	%				
Early Breastfeeding Initiation								
Yes	5	13.88	31	86.12	36	100	0.000	
No	45	70.31	19	29.69	64	100		0.493
Exclusive Breastfeeding								
Yes	2	5.40	35	94.59	37	100	0.000	
No	48	76.19	15	23.81	63	100		
complementary feeding								
Correct	4	11.43	31	88.57	35	100	0.000	
Incorrect	46	70.76	19	29.24	65	100		

Based on the results of the chi square test, there was a relationship between the variables of early breastfeeding initiation, exclusive breastfeeding and complementary feeding on the incidence of stunting in infants with a p value <0.05.

Discussions

In this study the results of the analysis on the relationship between giving early breastfeeding initiation to the incidence of stunting in children under five showed that there was a relationship with p value <0.05. The results of this study were in line with the research conducted previously (4) Children with stunting was found not getting breast milk intake in their first hour of birth, not all mothers were aware of the importance of first breast milk or colostrum, some of mothers still assume that it must be discarded. Lack of knowledge about lactation management causes mothers not to know the importance of colostrum. early breastfeeding initiation is the process of breastfeeding the baby immediately after birth, where the baby is left to look for the mother's own nipples (not handed to the nipple), early breastfeeding initiation will greatly help the continuity of exclusive breastfeeding and the length of breastfeeding. Thus the baby's nutritional needs will be fulfilled until the age of 2 years and prevent malnourished children.[5], [6].

Babies experiencing early breastfeeding initiation will get colostrum, a liquid that is rich in antibodies (immune substances) and other important substances that are crucial for baby's intestinal growth. The newborn's intestine is still very young so it's not ready to process food intake. Antibodies contained in colostrum play a very important role for resistance to infection. Moreover, breast milk also contains anti-allergic substances, thereby reducing the risk of illness due to allergies. Foods other than breast milk contain proteins that are not human proteins (such as animal milk) that cannot be properly digested by the intestine, which increases the risk of allergies [7].

The results showed a relationship between exclusive breastfeeding and the occurrence of stunting, this was in line with a study in Padang on 2018 with the results indicating that 51% of stunting babies did not get exclusive breastfeeding [8]. Many stunting condition happened in children who do not get breast milk exclusively, they get a tendency for infectious diseases such as diarrhea and respiratory diseases. It will be easier to attack babies obtaining less breastfeeding and given too early food or formulas [9].

The content of breast milk is anti-infective which can prevent various diseases such as diarrhea and respiratory problems. Based on the questionnaire provided by researchers to mothers of babies who did not exclusively provide breastfeeding, most mothers of babies under five combined breastfeeding with formula milk by reasoning that breast milk only is not enough. Mothers of toddlers assume that providing additional formula milk will meet the nutritional needs of children in order that the growth goes well, but formula milk does not contain antibodies similarly to antibodies contained in breast milk, so babies are more susceptible to disease [10] [11].

Breast milk contains suitable nutrients that for the needs of babies, thus helping growth and development of children. Infants who do not get enough breast milk means they have poor nutrition and might result in malnutrition and lead to stunting. In accordance with [7] one of the benefits of exclusive breastfeeding is to support infant growth, especially height because breast milk calcium is more efficiently absorbed by the body than calcium contained in breast milk substitute or formula milk. So babies who are breastfed tend to be higher than babies fed by formula milk. Breast milk contains more calcium and is easily absorbed by the body so that it can maximize growth, especially height and can avoid the risk of stunting [12].

The research results also found that there were 2 respondents whose babies received exclusive breastfeeding but suffered from stunting. The results of the study showed that the two respondents had a history of chronic energy deficiency during pregnancy, so that the nutritional needs in the womb were not sufficiently adequate and had an effect on subsequent growth and risk of stunting. At the time of delivery the baby is born suffering from low birth weight where the weight of the birth weight is less will affect the next baby's growth. This is in accordance with the theory that exclusive breastfeeding is not the only factor that causes stunting, there are other factors such as nutritional intake, infectious disease, food availability, maternal haamil nutritional status, birth weight, birth length and complementary feeding [1] [13].

Stunting can specifically start from a pregnant mother. the condition of pregnant women, before becoming pregnant even after pregnancy will determine fetal growth. Malnourished mothers are at risk of giving birth to low birth weight babies and are a major cause of stunting [14]. After born, babies who are not breastfed properly will be at risk of suffering an infection due to not nutritious enough and not hygienic dietary habit. Giving breast milk exclusively will reduce the risk of infection because there is anti-infection substance in the milk so that the babies grow up well [10].

The results of the analysis on Complementary feeding giving with the incidence of stunting in children under five showed a correlation, other studies conducted [15] obtained the better results of providing complementary feeding, the better the nutritional status of children. The lack of giving complementary feeding might result in less optimum nutritional intake of children so that result in poor nutritional status and even stunting. Proper and good complementary feeding giving is aimed to meet nutritional needs of children so that there is no failure to thrive. complementary feeding given must also be diverse, given gradually from the form of pulverized, soft to become accustomed to family food [2].

Giving complementary feeding must pay attention to the Nutrition Adequacy Rate (RDA) recommended based on the age group and appropriate food texture for the age of the toddler. Sometimes parents give complementary feeding before the age of 6 months, despite the baby's digestive ability is not ready to receive additional food. As a result many babies experience diarrhea [7]. The problem of growth disorders at an early age occurred in Indonesia is strongly suspected to be related to the number of babies who have been given complementary feeding since the age of one month, even before. Too early complementary feeding giving can reduce the breast milk consumption but if it is too late it will result in malnourished baby. Actually the digestion of babies has started to be strong since the age of four months. Babies who consume breast milk, additional food can be given at the age of six months. In addition to the sufficient number and quality, giving complementary feeding also needs to pay attention to food hygiene so that children avoid bacterial infections that cause digestive disorders [16]. Feeding too early and inappropriately results in many children suffering from malnutrition. For this reason it is necessary to monitor their growth from birth on a regular and continuous basis. The phenomenon of growth faltering in Indonesian children begins to occur at the age of 4-6 months when babies are given companion food other than breast milk and continue to worsen until the age of 18-24 months.

Theoretically the complementary feeding giving is aimed to increase the energy and nutrients needed by babies because breastmilk cannot meet the needs of babies continuously. Solid-shaped companion food is not recommended to be given too early to the baby considering that the baby's intestines have not been able to digest properly so that it can interfere with intestinal function. Lack of energy and protein consumption for a certain period of time will result in malnutrition, thus to ensure the growth, development and health of toddlers, it is necessary to get adequate nutritional intake. Pattern of giving complementary feeding is influenced by maternal factors, since the mother who plays an important role in regulating the consumption of a child, which subsequently affects the nutritional status of the child. Factors that influence the pattern of complementary feeding giving are mother's knowledge about nutrition, mother's education, mother's job, family income level, customs and infectious diseases owned [17].

4. CONCLUSION

The right practice of IYCF has been proven to reduce the incidence of stunting in Yogyakarta, Indonesia

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