



The Effectiveness of the Implementation of Exclusive Breastfeeding on the Measurement of Body Weight and Body Length at 6 months of Age as an Effort to Prevent Stunting

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ABSTRACT

Breast milk is the main nutrient for babies to protect them against possible disease attacks. The balance of nutrients in breast milk is at its best and the milk is in the best form for the baby's body. The purpose of this study is to determine the effectiveness of the application. The research design used in this study was observational with a prospective cohort approach. Where this research intends to look at several groups based on certain characteristics by taking purposive sampling and samples of 30 babies including 15 Exclusive Breastfeeding Groups, 15 Formula Milk Mix Groups, IMD Groups and Formula Milk Mixes in the Work Area of the Bara-Baraya Health Center in 2022. Instruments The research used is an observation sheet analyzed using the Chi-Square Fisher Exact test analytical test. Research Results There is a significant relationship between Exclusive Breastfeeding, and Mixed Formula Milk to increase body weight, and body length. While the results obtained a p value of 0.023 which means there is a significant relationship between the application of exclusive breastfeeding to stunting prevention. In the exclusive breastfeeding group, the stunting rate was lower than those using formula milk, and those who carried out early initiation of breastfeeding according to the standard, which was 1 hour long, tended to give exclusive breastfeeding on demand.

Keywords: *Exclusive breastfeeding, Weight, length, Stunting.*

1. INTRODUCTION

Breast milk is the main nutrient for babies to protect them against possible disease attacks. The balance of nutrients in breast milk is at its best and the milk is in the best form for the baby's body. Breast milk is also not only beneficial for babies but also for postpartum mothers or breastfeeding mothers and can prevent stunting in babies.

Based on data from the World Health Organization (WHO) 2 out of 3 babies are not exclusively breastfed for 6 months. Meanwhile, in Indonesia, based on the coverage of the 2018 Riskesdas results, it was reported that the coverage of breastfeeding and IMD increased from 34.5% (2013) to 58.2% (2018) while the prevalence of exclusive breastfeeding in 2018 was only 37.3%.³ In 2019, the Directorate The Indonesian Ministry of Health's Nutrition Development targets 50% and 80% for coverage of IMD and exclusive breastfeeding. In fact, the gap between IMD coverage and exclusive breastfeeding is getting higher. The impact of the low IMD coverage will continue to the low coverage of exclusive breastfeeding and increase the incidence of diarrhea, respiratory tract infections (ARI) as well as growth disorders accompanied by malnutrition in toddlers and under-five mortality.

One way to prevent stunting is to apply exclusive breastfeeding to infants starting from 0-6 months. The benefits of breast milk are very large, among others, can increase the growth of brain nerve cells, provide energy for the work of brain nerve cells, and reduce the risk of babies suffering from diseases and provide a loving relationship between mother and baby. In addition, carbohydrates in breast milk facilitate calcium absorption, maintain bifidus factor in the intestine (a factor that inhibits the growth of harmful bacteria and makes a good place for beneficial bacteria) and protein in breast milk consists mostly of whey protein so that it is more easily absorbed by the intestines. baby's digestive system.

Breastfeeding also greatly affects the growth and development of infants, largely determined by the amount of breast milk obtained including energy and other nutrients contained in the breast milk. Breast milk without other food ingredients can meet the needs of growth until the age of about six months. In addition, breast milk contains a lot of white

blood cells that are transferred from mother to baby, so it can work to fight viral infections, intestinal bacteria, where babies are very susceptible to disease so easily diarrhea and reduced nutrition which can be at risk of stunting.

Stunting or short is a condition where children experience failure to grow and develop so that children have a shorter height than the standard age. This condition is caused by the incidence of malnutrition or chronic malnutrition that has occurred for a long time (Lestari et al. 2018). According to UNICEF, stunting is defined as children aged 0-59 months whose height according to the WHO child growth standard is more than minus two standard deviations (moderate and severe stunting) and more than minus three standard deviations (chronic stunting).

Globally, the problem of stunting often occurs in developing countries. In 2019, as many as 144 million children under 5 years of age were stunted, 47 million children were wasted and 38 million children were overweight. Based on the results of the Integrated Toddler Nutrition Status Survey (SSGBI) by the Balitbangkes of the Ministry of Health of the Republic of Indonesia in 2019, it is known that the highest proportion of stunting is in East Nusa Tenggara, West Sulawesi, and West Nusa Tenggara. This result is almost the same as Riskesdas in 2018, where the highest proportion of stunting is in East Nusa Tenggara, West Sulawesi, and Aceh. Meanwhile, the lowest proportion of stunting according to the 2019 SSGBI is in the Bangka Belitung Islands, Riau Islands and Bali, according to Riskesdas 2018 in Bali, DKI Jakarta, and DI Yogyakarta. Reducing the stunting rate has been declared a national priority program. Currently, the Government will continue to move to organize the implementation of the acceleration of stunting prevention and develop the National Strategy (Stranas) and Acceleration of Stunting Prevention (Stunting) 2018-2024. The government's program through the 2020-2024 National Medium-Term Development Plan (RPJMN), also sets a target for the national stunting rate to drop to 14% (Health Profile 2021).

Meanwhile, the development of stunting in South Sulawesi from year to year is quite volatile. Namely: 34.1% (2015); 35.7% (2016); 34.8% (2017); 35.6% (2018). And, lastly in 2019 it fell 5.1%. So South Sulawesi Province is in position 11 (eleven) which was previously in position 4 (four) of the highest stunting figures in Indonesia.

Stunting prevention requires integrated nutrition interventions, including specific and nutritionally sensitive interventions (Beal et al. 2019). Global experience shows that the implementation of integrated interventions to target priority groups in priority locations is the key to the success of improving child nutrition and growth and development, as well as preventing stunting. The purpose of this study was to analyze the application of exclusive breastfeeding to the measurement of body weight and length at the age of 6 months as an effort to prevent stunting at the Bara-Baraya Health Center Makassar City.

2. METHODS

The research design used in this study is Observational with a Prospective Cohort approach where this research intends to see further development after being given an intervention which is divided into several groups based on certain characteristics by taking purposive sampling and inclusion criteria, including infants aged 6 months and not experiencing complications, mothers who are not SEZ and nipples are not sinking and are willing to be respondents so that a sample of 30 babies is obtained including 15 exclusive breastfeeding groups, and 15 formula milk mix groups in the Bara-Baraya Health Center Work Area Makassar City. The research instrument used was an observation sheet. The data were analyzed using the analytic test of Fisher's Exact Test.

3. RESULT AND DISCUSSION

The results of the study include to determine the application of exclusive breastfeeding to increase in weight and body length of infants aged 6 months as prevention of stunting. The data obtained from the results of further research are presented in the form of distribution tables and cross tabulations are carried out and data analysis is systematically presented as follows:

Based on table 1, it was found that from 30 babies, in the Exclusive Breastfeeding group there were 15 babies with baby weight according to the standard as many as 13 babies (86.7%) and 2 babies (13.3%) not according to the standard. Meanwhile, in the mixed formula milk group, there were 15 babies with baby weight according to the standard, 5 babies (33.3%), and 10 babies (66.7%) not according to the standard. So that the results obtained using the Fisher Exact test, namely $0.023 < 0.05$, there is a significant relationship between weight gain based on age for 6 months.

Based on table 2, it was found that from 30 babies, in the Exclusive Breastfeeding group there were 15 babies with a baby's body length according to the standard as many as 10 babies (66.7%) and 5 babies (13.3%) not according to the standard, while in the Mix Exclusive Breastfeeding group there were 15 babies with body weight according to the standard 7 babies (46.7%) and 8 babies (53.3%) not according to the standard. The results obtained using the Fisher Exact test that is $0.032 < 0.05$ so that there is a significant relationship between weight gain based on age for 6 months.

Success in getting the nipple allows the baby to get colostrum. Nutrients in colostrum are needed by babies in the early days of life, including for growth in height. This is because colostrum contains immunoglobulin A protein which can provide protection for infants up to 6 months of age. In addition, there are minerals needed by newborns, such as calcium, potassium and sodium which play a role in bone formation.

Based on research conducted by (Handayani, Kapota, and Oktavianto 2019) it was found that the history of exclusive breastfeeding in this study reached 56.8% or 25 children, and the majority of children in this study tended not to experience stunting. Children who are exclusively breastfed tend not to experience stunting as many as 23 children (52.3%). The results of the chi square test obtained $p \text{ value} = 0.000$. Nutrients in colostrum also help the digestive system so as to facilitate the absorption of mineral elements. Therefore, babies who get IMD have more advantages than babies who don't because they get important elements from colostrum and reduce the risk of stunting. This study proves that children (aged 0-24 months) who do not have an IMD have 2 times the risk of experiencing stunting compared to those who have an IMD. Another advantage obtained by babies who have IMD is that they have a greater chance of succeeding in exclusive breastfeeding. This is evidenced by Jessica Irawan's research in Denpasar that mothers who carry out IMD have a 5 times more chance of being successful in giving exclusive breastfeeding.

This study is in line with (Campos, Vilar-Compte, and Hawkins 2021) results showed that efforts to reduce child stunting in Mexico should include prenatal strategies aimed at preventing low birth weight offspring, especially among short women, households moderate to severe food insecurity, families with a higher number of children <5 years old, and indigenous people. Community. The postnatal component should include a multilevel strategy to support breastfeeding.

Another study conducted by M. Rizal Permadi (2018) in Boyolali Regency found that children who did not receive exclusive breastfeeding had a risk of stunting 7.86 times higher than children who received exclusive breastfeeding. Where stunting is weight and height that does not match the child's age.

Several factors are indirect causes of the disruption of the nutritional status of children because they affect the condition of the mother not to exclusively breastfeed. Whereas exclusive breastfeeding is known to provide all the essential nutrients for the growth and immunity of children in the first six months of life until the age of 2 years so that it offers a protective effect. During exclusive breastfeeding, breast milk is more mature and the lactose content is higher than colostrum, thereby increasing the absorption of mineral elements. This benefits the baby

because it makes the growth of bones and body systems more mature and perfect.

Research conducted (Bustami and Ampera 2020) showed that the incidence of stunting in children included the level of education and knowledge of the mother, the head of the family, the number of family members, early initiation of breastfeeding, exclusive breastfeeding, weaning age, supplementary feeding, and vitamin administration. A ($p < 0.05$). The dominant factors affecting stunting were 16.7 times exclusive breastfeeding, 10.6 times because they were not given complementary feeding, 3.5 times because they did not receive Vitamin A capsules, 1.7 times due to poor weaning age, and 1.5 times due to poor age. times because the head of the family does not get. Not having a good income. Several variables that do not affect the incidence of stunting include the education of the head of the family ($p = 0.482$) and the mother's occupation ($p = 0.992$).

According to the researcher's assumption that indirect factors that influence mothers not to give exclusive breastfeeding can cause the main role of nutrition from breast milk for growth to be ineffective for infants, including knowledge, education and work. Ultimately, infants who are not exclusively breastfed affect or are associated with stunting.

4. KESIMPULAN

Exclusive breastfeeding is very important for the nutritional needs of babies so that all parties must optimize nutrition improvements to ensure the fulfillment of balanced nutrition for children, for example, giving breast milk early until exclusive breastfeeding is achieved without providing additional food until the baby is 7 months old to prevent stunting in infants.

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