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The Influence of Mother Empowerment in Nutrition Classes on Infant Nutrition Status in Coastal Area

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Abstract

Nutritional deficit is a major threat to cause nutritional status that triggers stunting which can disrupt of physical and mental growth, intelligence, immunity, and reduce productivity, resulting in long-term economic losses for Indonesia. Nutritional counseling significantly increased the mother's nutritional knowledge and babies born in good nutritional status. This research uses quasi experimental design by empowerment intervention in nutrition class with counseling and demonstration of complementary food processing by utilizing local food. Data analysis was performed by multiple logistic regression analysis. The research objective is to determine the factors that influence the implementation of the empowerment of nutrition classes in the pattern of breastfeeding, complementary feeding and nutritional status of infants 6-12 months. The results of the study concluded that empowerment affects of breastfeeding, complementary feeding and the nutritional status of infants. Multivariate analysis shows that the complementary feeding's pattern was influenced by mother's attitudes, and the nutritional status of infants are influenced by complementary feedings' pattern. The pattern of complementary feedings was 79 times affects infant's nutritional status. This is cause by the improvement of the mother's attitude will increases their also care to improve the pattern of complementary feeding so that the nutritional status of infants aged 6-12 months will get better. This fact is expected to be able to prevent children from stunting but the food intake of children until they reach 2 years old still needs a lot of attention to finally overcome stunting.

Keywords: mother empowerment, mothers 'attitude, pattern of complementary feeding, nutritional status

1. Preliminary

The golden period of children's growth and development starts from the conception period until they reach two years old. If there is a nutritional problem at this stage, it can cause permanent disturbance in the development of children's intelligence. The First 1000 Days of Life Movement (golden periode) is a government program that aims to accelerate nutritional status to improve the lives of Indonesian children in the future and prevent stunting through meeting the nutritional needs of mothers during pregnancy [1]. The results of nutritional status assessment show that the nutritional status of children aged 0-23 months with underweight status is 8.0% [2]. Even though the percentage of children under five years old with poor nutritional status in the province of North Sumatra is lower than the average percentage of Indonesia it is still a big threat to cause nutritional status that can lead into stunting at a later stage [1]. Concluded that 75% of pregnant women in Percut village, Deli Serdang Regency, North Sumatra Province have anemia. Furthermore, in the Deli Serdang and Aceh Besar coastal areas, show that interventions by empowering pregnant women through counseling and nutritional counseling about fulfilling balanced nutrition-based nutrition, significantly increase maternal nutrition knowledge at the level of 0.001. Furthermore, the results showed that 100% of infants born were in good nutritional status [4, 5].

Referring to the results of the study, this study will show the result of giving interventions such as empowering mothers with 6-12-month-old infants, nutrition classes in the form of counseling, and demonstrating complementary food processing by utilizing local food ingredients. Furthermore, measurements were taken until the age of 12-month to determine the factors that influence the implementation of the interventions given in the pattern of breastfeeding, complementary feeding and nutritional status of 6-12 months infants, so that the factors that most influence the nutritional status of infants can be identified. This is expected to be important information to be able to prevent the occurrence of stunting so that a healthy, strong, intelligent and productive society can be created

2. Literature Review

Community empowerment is an effort or process to foster awareness, willingness, and the ability of people to recognize, overcome, maintain, protect, and improve their own welfare [5]. The opportunity, knowledge and skills to empower the community can be effectively carried out through counseling [6].

Intervention through empowerment with counseling and nutrition counseling methods can significantly improve nutritional knowledge and increase the nutritional intake of pregnant women so that there is an increase in maternal Hb levels and numbers of babies born in good nutritional. Conversely pregnant women who did not get

empowerment intervention, had nutritional knowledge and lower nutritional intake and 3.15% of babies were born under nutritional [1]. Growth faltering of short stature process starts in the womb, up to the age of two. By the time a child passes the age of two, it is too late to repair the damage cause in the early years [7].

Poor nutritional status in infants is influenced by 2 (two) factors, namely direct factors include: unbalanced food and infectious diseases suffered and indirect factors include: inadequate parenting such as breastfeeding patterns, poor sanitation and lack of empowerment of women and families, lack of use of human resources and weak economic status [8].

Breastfeeding behavior is influenced by predisposing factors (mother's age, education, occupation, knowledge, level of education, information/mass media, social culture, environment and experience), supporting factors (such as: hospital, primary health care and such) and driving factors (attitudes and behavior factors of community leaders, religious leaders, husband support, and health workers) [9].

Based on existing theories and the results of previous studies, it is expected that mothers who give birth to babies with good nutritional status can apply early breastfeeding and exclusive breastfeeding as well as the correct pattern of breastfeeding and giving complementary food so that babies aged 6-12 months will have achieved good nutritional status. This situation is expected to be able to prevent the occurrence of stunting in children aged 2 years and also improve the degree of public health.

3. Method

This research used mix method approach with a sequential explanatory design, which is a quantitative method with a retrospective cohort design [10, 11]. This study aims to determine the effect of maternal empowerment through nutrition classes on the implementation of breastfeeding, complementary feeding 6-12 month old infant nutritional status and the factors that influence it. The sample in this study were all selected mothers according to inclusion criteria using the formula 64 people were selected with each 32 people for the intervention and control groups [11]. Empowerment in nutrition classes, given to 32 mothers chosen in the intervention group in the form of counseling with the topics: breastfeeding, complementary breastfeeding, and infant nutritional status as well as demonstration of complementary feeding processing provided 4 (four) times in 1 month. Data analysis used multiple logistic regression analysis.

4. Results and Discussion

Before the intervention was given, the control group and the intervention group were homogeneous (p-value > 0.05). The results of data analysis showed that intervention with empowerment through nutrition class significantly affected each variable (p-value < 0.05) which has been observed and showed significant differences between the control group and the intervention group

[12]. Based on the results of bivariate analysis, it is known that the empowerment provided to the control group affects the mother's knowledge. There are 90.6% of mothers who have good nutritional knowledge.

Table 1: Effect of Empowerment on Mother's Attitude

No	Group	Attitude				p-value
		Not good		Good		
		f	%	f	%	
1	Without Empowerment	11	34,4	21	65,6	0,016
2	With Empowerment	3	9,40	29	90,6	
Total		14	21,9	50	78,1	

Increasing of good breastfeeding pattern by mothers occurs due to increased knowledge and attitudes that mothers have after receiving empowerment interventions in nutrition classes. The data in Table 1 shows that there is a significant influence between the empowerment of mothers in nutrition classes on the pattern of complementary feeding. There were 83.1% of mothers who applied the pattern of giving good complementary feeding where in the group that did not get empowerment, there were 53.1% whose pattern of giving of complementary feeding was not good.

Table 2: The Effect of Empowerment on the Pattern of Complementary Feeding

No	Group	Pattern of Complementary Feeding				p-value
		Not good		Good		
		f	%	f	%	
1	Without Empowerment	17	53,1	15	46,9	0,004
2	With Empowerment	6	18,8	26	81,3	
Total		23	35,9	41	64,1	

The empowerment that was given also affected the pattern of breastfeeding shown in Table 3, that 71.9% of mothers applying a good pattern of breastfeeding in the group that was given empowerment. While in the control group, 53.1% of mothers observed with a poor breastfeeding pattern, as presented below:

Table 3: Effect of Empowerment on Breastfeeding Patterns

No	Group	Breastfeeding's Pattern				p-value
		Not good		Good		
		f	%	f	%	
1	Without Empowerment	17	53,1	15	46,9	0,042
2	With Empowerment	9	28,1	23	71,9	
Total		26	40,6	38	59,4	

The results of the data analysis in Table 4 show that 81.3% of infants aged 6-12 months with mothers who have been empowered have good nutritional status, while 46.9 % of infants with mothers who have not been empowered still have poor nutritional status. This means that empowerment affects the nutritional status of infants, as shown in the following Table:

Table 4: Effect of Empowerment on Baby Nutrition Status

No	roup	Baby Nutritional Status				p-value
		Not Good		Good		
		f	%	f	%	

1	Without Empowerment	15	46,9	17	53,1	0,017
2	With Empowerment	6	18,8	26	81,3	
	Total	21	32,8	43	67,2	

Furthermore, using multiple linear regression, the results of multivariate analysis indicate that the variables that influence the nutritional status of infants aged 6-12 months the most are maternal attitudes after the intervention and the pattern of complementary feeding after intervention as shown in Table 5 below:

	B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I. for EXP(B)	
							Lower	Upper
MP-ASI	4.251	.884	23.136	1	.000	70.200	12.417	396.894
Constant	-5.532	1.244	19.773	1	.000	.004		

The results of the data analysis showed that nutrition counseling and demonstration of complementary feeding processing given to the intervention group were able to improve knowledge, attitudes, patterns of breastfeeding and patterns of complementary feeding which were expected to also be able to have a significant influence on improving the nutritional status of infants. This happens because the counseling and demonstrations provided have been able to help mothers make decisions and determine actions including reducing personal and social barriers to take action through increased ability and confidence in taking a good use of their ability and their environment [6].

Improve knowledge, attitudes and patterns of giving good complementary feeding have a positive impact on the nutritional status of infants. Multivariate analysis conducted, showed that the dominant variables affecting the nutritional status of infants were knowledge, complementary feeding patterns and mother's attitude after receiving the intervention. This means that knowledge and attitudes have increase the mother's interest in giving good complementary food according to the material and examples of complementary feeding demonstrated in nutrition class activities. In addition, it is known through evaluation activities that mothers have also tried various complementary feeding recipes to give to their babies. Giving a good complementary feeding, has provided benefits to the baby through weight gain because the nutritional needs have been met so that the baby has a good nutritional status. The results of this study need to be applied elsewhere and are expected to be able to anticipate the occurrence of stunting. However, to ensure that children can avoid stunting, efforts should be made to keep on paying to provide the nutritional needs of children up to the age of 2 years in accordance to The First 1000 Days of Life Movement (golden periode) program [3]. Based on these results, it is recommended to conduct research on the empowerment of mothers in making processed foods according to the potential of local food production which is cheap, easily obtained, easily processed and preferred by children aged 1-2 years to fulfill their nutritional

needs, so that the stunting incident can be prevented.

5. Conclusion

Based on the results of data analysis conducted quantitatively and qualitatively, it can be concluded that the intervention of empowering mothers in nutrition classes with nutrition counseling methods and demonstrations of complementary food processing, is able to improve the nutritional status of infants through increased knowledge and attitudes of mothers as well as the application of the good pattern on giving complementary feeding. The pattern of complementary feedings was 79 times affects infant's nutritional status. Mother's attitude will increases their also care to improve the pattern of complementary feeding so that the nutritional status of infants aged 6-12 months will get better.

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