

The Effectiveness of Counseling and Posters in Improving Maternal Nutrition Knowledge and Nutritional Status of Children Aged 24-35 Months in District Buloa Tallo Makassar

Andi Nurlinda ^{1 +}, Andi Zainal ² and Awaluddin ³

¹ Nutrition Department, Faculty of Public Health, University of Muslim Indonesia

² Faculty of Law, University of Muslim Indonesia

³ Faculty of Public Health, University of Hasanuddin

Abstract. Nutrition is a main pillar of the health and well-being of life. Malnutrition in early life will cause interference physical growth, intelligence and productivity. [1] According to Unicef, 2013 children who experienced growth inhibition was 165 million, while in Indonesia there are 5.4% with malnourished children, and in Sulawesi Malnutrition in 2011 reached 286 cases. [2]

The purpose of this research is to analyze the effectiveness of counseling and posters in improving maternal nutrition knowledge and nutritional status of children aged 24-35 months. The research method is a pure experiment that will test the effectiveness of the groups using the difference-posters and group counseling using posters only. The population is all children aged 24-35 months, they are 410 children. The sampling technique was conducted randomly by dividing the sample into two groups: group counseling-poster are 33 children and 33 groups poster children. The result were processed using SPSS 16.0 and analyzed using Wilcoxon signed rank test and Mann-Whitney test.

The results showed that the groups were given counseling-poster increased nutritional knowledge but does not give effect to increase weight and height in children. In the group given the poster only, look no increase knowledge about nutrition and weight and height in children. Counseling and posters were given simultaneously effectively improve maternal nutrition knowledge compared to only give the poster, but the is not successful in improving the nutritional status of children.

Keywords: effectiveness, counseling, poster, nutritional knowledge, nutritional status, children aged 24-35 months.

1. Introduction

Children are the younger generation successor to the ideals of national struggle, he needs to get the widest possible opportunity to grow and develop optimally, both physically, mentally and socially so that the security required to guarantee the fulfillment of their rights review. Getting the right to basic health and welfare of the review as the prevention of disease, malnutrition and infant mortality reduction. [3]-[4] Nutrition is one of the important factors that determine the level of health and human welfare, where the optimal nutritional status level will be achieved when the optimal nutritional needs are met. [5] Malnutrition is a main health problem in the world, 800 million people are malnourished and mostly located in developing countries including 70% in Asia, 26% in Africa and 4% in Latin America and the Caribbean. In Indonesia, the prevalence of malnutrition according Basic Health Research in 2010 was 4.9% and 13.0% less nutrition. In South Sulawesi malnutrition was 6.4% and 18.6% less nutrition. Malnutrition prevention strategies emphasize that during the first two years, children should get intensive attention. The sooner malnutrition started during this period, the risk will be exposed to more serious diseases. Recent studies have shown

⁺ Andi Nurlida. Tel.: +6281389654321
E-mail address: andinurlinda58@yahoo.co.id

nutritional intervention during the initial period helps generate maximum impact on growth. [6] The purpose of this study is to analyze the effectiveness of counseling and posters on maternal nutrition knowledge and nutritional status of children aged 24-35 months.

2. Method

2.1. Design

This study is purely experimental. The design of the study conducted by the study sample was divided into experimental group and control group. Both groups were given a pretest, and given the different interventions. Experimental group was given counseling-poster while the control group was given a poster only. After that, both groups were given post-test to know the difference.

2.2. Population and Sampling

This research was conducted in the District Buloa Tallo Makassar in February-March 2014. The study population was all children aged 24-35 months along with her mother as much as 410 pairs. Samples were taken using Lemeshow calculation and obtained the number of samples was 29.52 people. Anticipating drop out when the study conducted, then each group was given a supplement of 10% so that the sample is 33 pairs for experimental group and 33 children for the control group. Samples were randomly selected with the inclusion criteria were mothers of children aged 24-35 months, end of high school education, lived in Buloa, willing to become respondents. Exclusion criteria respondents were sick and not willing to become respondents.

2.3. Data Collection and Analysis

Data of maternal nutrition knowledge using a questionnaire. Nutritional status are child's weight are collected using weight scale and height using microtoice. Differences in maternal knowledge before and after the intervention was obtained using the Wilcoxon Signed Rank test. Post test result data of each group was obtained by using the Mann-Whitney test.

2.4. Steps of the Study

The first stage is the caretaker's license, Taking secondary data and identify. Then choose a subject at random. Selected subjects were divided into 2 groups, each group was given a pretest to measure maternal nutritional knowledge and nutritional status of children. The experimental group was given counseling-poster while the control group was given a poster. The experimental group visited every day for 2 weeks, then given a reinforcement at week 3, and an independent remedy chance at week 4. The control group only in the one-time visit at the time of the poster. The last stage is each group was given a posttest.

3. Result.

3.1. Mother Nutrition Knowledge

Maternal nutrition knowledge is divided into three categories, such us good, sufficient and less. At the time of pre-test, in general, mothers have less knowledge in each group. After the post-test, mothers knowledge got better increase in the experimental group, but not in the control group, Table 1.

Table 1: Results of the pretest and post-test mother nutrition knowledge

Mother Knowledge	Experimental				Control			
	Pre-test		Post-test		Pre-test		Post-test	
	n	%	n	%	n	%	n	%
Less	20	60,6	0	0	19	57,6	18	54,5
Sufficient	12	36,4	5	15,2	14	42,4	15	45,5
Good	1	3	28	84,8	0	0	0	0
Total	33	100	33	100	33	100	33	100

Source : Primer Data 2014

Based on Wilcoxon test were conducted, it was found that knowledge scores increased in the experimental group, Table 2.

Table 2: Rerate mother's knowledge scores in the pre and post test

Group	Mother knowledge score		Value	P
	Pre-test	Post-test		
Experimental	56	83.33	Z= - 5.092 ^a	0.000
Control	55.83	60	Z= - 333 ^a	0.739

Wilcoxon signeg rank test p<0.05

Table 3: Differences in maternal knowledge before the intervention and after intervention

Knowledge score	Group		SD	Mean	Value	P
	Experimental	Control				
Before intervention	56	55.83	0.52800	1.4242	Z=-142	0.887
After intervention	83.33	60	0.82727	2.1515	Z=-6948	0.000

Mann Whitney test p<0.005

Based on the Mann Whitney test, it is known that there is no significant difference in knowledge before the intervention in both groups, whereas after intervention maternal knowledge scores increased in experimental group, Table 3.

3.2. Nutritional Status of Children

The result measurement of the nutritional status shows that no increase in weight and height in each group both experimental and control groups, Table 4.

Table 4: Results of measurements of weight and heigh

Z score weight based on age	Experimental				Control			
	Pre-test		Post-test		Pre-test		Post-test	
	n	%	n	%	n	%	n	%
-2 SD - + 2 SD	29	87,9	29	87,9	33	100	33	100
> + 2 SD	4	12,1	4	12,1	0	0	0	0
Total	33	100	33	100	33	100	33	100
Z score height based on age								
-2 SD - + 2 SD	32	97	32	97	30	90,9	30	90,9
> + 2 SD	1	3	1	3	3	9,1	3	9,1
Total	33	100	33	100	33	100	33	100

Source : Primer Data 2014

4. Discussion

4.1. Mother Nutritional Knowledge

Some factors such as working status, income, age, educational level and nutritional knowledge level of the mother are effective on feeding their children. [7]-[9] It is assumed that the mothers who have true nutritional knowledge prefer right foods for themselves and for their children. [10] Stated that there is a correlation between nutritional knowledge of the mothers and their nutrition status, nutritional habits and nutritional knowledge of their children. In other different study, it is found that nutritional attitude and knowledge scores in mothers are positively related with diet scores of their children. [11] This is related to the empowerment of families regarding the level of nutritional adequacy. One form of family empowerment activities is the mother mentoring activities aimed at improving the family's ability to prevent and resolve their own problems nutritional family members. In this study, counseling-poster given for two weeks, and its proved that there is significant increase in mother nutritional knowledge, in contrast to the poster only, it able to provide an increase in knowledge. This means that counseling is more effective than giving poster only. On the effects of nutrition assistance to changes in nutritional status, also discusses research in Newcastle showed that the group who received treatment in the form of home visits by health workers have a better appetite than children in the control group. [12], [13]

On the effect of nutritional counseling on exclusive breastfeeding in poor mother states that there are differences in the level of nutritional knowledge among mothers who were given nutritional counseling and were not given nutritional counseling. [14] However, the level of nutrition knowledge is better in women who were given nutritional counseling. Improvement of child care practices, especially at the end of the nutrition assistance is closely related to the increase in knowledge of the mother who holds a dominant role in the care of his son. That is, messages nutrition and related health care of children can be carried out by the

mother as a nanny. Knowledge related to health issues will affect the occurrence of health problems in a particular group. Lack of knowledge about nutrition will result in reduced ability to apply information in everyday life which is one of the causes of malnutrition. [15] These results are consistent with studies showing that the results of the health and nutrition education interventions in the elderly or families with young children will change the behavior of the family, especially in terms of the care and feeding of administration in children that will improve the nutritional status of children in the family. Likewise with other research in the area of Tabanan, Bali. In this study indicate that maternal nutritional counseling affect nutrient intake and nutritional status of children. [16] Another line of research is the study with the title mother's level of knowledge about the relationship of nutrition to the nutritional status of children in the Village District of Karangpandan Ngemplak Karanganyar. Statistically, there is a relationship between mother knowledge about nutrition and nutritional status of children. [17]

Childcare in this study relates to feeding in children, children need the knowledge to implement them. In the transfer of knowledge of children, there is a topic that was given the responsibility for receiving and running. Childcare responsibilities for family Makassar dominant tribe played by the mother. Attitudes and knowledge needed to improve the diet of children, if the child nutritional adequacy are met and in this way they can grow and develop properly. [18], [19] Recovery program toddler malnutrition or malnutrition should be integrated, namely through programs involving cross-program and cross-sector and community-based initiatives and empowerment. Therefore, in addition to supplementary feeding, recovery of children under five malnutrition and malnutrition must be supported by effective counseling strategies, medical examination and treatment as well as foster community potential for initiative through community empowerment. [20]-[26]

4.2. Nutritional Status of Children

Nutritional status can be defined as a condition of the human body as a result of the consumption of a food and use nutrients from the food that distinguished between the nutritional status of obese, normal and underweight. [27] Nutritional status reflects how far someone's physiological needs for nutrients have been fulfilled. When the nutrients are consumed in sufficient quantities to meet the needs of the body and metabolism, it is said the nutritional status to be optimal. This situation will support good growth and development, health care, and physical activity, and help prevent disease. Conversely, when nutrients are consumed in excessive or less amount, the body will adapt to achieve homeostatic state that maintains physiological functions. When excess or deficiency condition last long, it will result in interference with the functions of the body and the occurrence of diseases. [28]

In this study reported that the activities of counseling-poster have been able to improve maternal nutrition knowledge to be better, however it has not been able to improve the nutritional status of children, even z-score of weight for age or height by age. The importance of parenting and child care so that puts the lack of child care as the third element of the causes of malnutrition, in addition to the insufficiency of food and health care. [29] The families with low socioeconomic conditions, lacking in providing stimulation and participation in the activities of children. [30] Research results states that mothers who have a good knowledge of food to children, know how to give food, try to get the special food available for consumption, are likely to have children with good nutritional status. [31]

5. Conclusion

Counseling and posters were given simultaneously effectively improve maternal nutrition knowledge compared to only give the poster, but is not successful in improving the nutritional status of children.

6. Suggestion

Interventions need feeding and supplements to improve the nutritional status of children because of the increase in knowledge alone is not enough.

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