EFFECTIVITY OF COMPLEMENTARY FEEDING GUIDELINES ON MOTHER'S KNOWLEDGE BABIES IN ARGASUNYA VILLAGE, CIREBON CITY

Uun Kunaepah[1], Alina Hizni[2], Anis Abdul Muis[3], Priyo Sulistiyono[4]
[1234] Nutrition Study Program of Cirebon Health Polytechnic Tasikmalaya

Corresponding author : Grand Beber Estate Blok N No. 10, Cirebon , Indonesia. 45172.
Email: uungizicirebon@gmail.com

Abstract

Complementary feeding (MP-ASI) with the right amount and quality of nutrition is an important factor in overcoming nutritional problems. Complementary feeding of 6-12 months of age is on stage important in determining the character and food habits of children to adulthood. There are still a lot of mothers' knowledge that is still lacking and the practice of giving inappropriate complementary foods. This study aims to determine the effect of implementation with practical guidelines of complementary feeding.

This research is experimental with one *group pre and post-test design* with the treatment in the form of implementation using the Practical Guidelines. The implementation is carried out for 2 (two) weeks with a frequency of four times of implementation (*home visit*). At the end of the implementation, all 50 mothers of babies were re-evaluated by giving the same questionnaire at the beginning of implementation. The success of implementation is measured by knowledge and practice of complementary feeding.

The practice of complementary feeding shows that there are still many inaccuracies in term of the shape/texture parameters, frequency, quantity and type of food given. 41,0-62,2 % of mothers have not provided complementary feeding as recommended to their babies.
This practical guidelines to feeding babies 6-12 months needs to be implemented in community nutrition development, there are still many mothers who have insufficient knowledge about complementary foods and inappropriate practices in providing complementary foods to their babies.

Keywords: babies, fomplementary feeding, knowledge, practice, practical guidelines.

INTRODUCTION

Nutrition is an important requirement in the process of growth and development of infants and children. Toddler nutrition needs to be considered especially by the mother of the toddler because the mother is the determinant of the intake or nutrition given to the child. Nutritional status and intake are still problems in infants after six months of age.

The nutritional status and intake of complementary feeding for infants are influenced by maternal and non-maternal factors such as economic status, support from husbands, and health workers. Maternal factors include knowledge, education, and work. Giving complementary feeding too early to babies can cause the baby does not suck all the milk produced by the mother, resulting in the baby being deficient in high-quality nutrients. The providing of complementary foods can also cause excess or deficiency of nutrition.

Delay in complementary feeding after the baby is 6 months old also causes malnutrition.Most cases of malnutrition can be avoided if you have sufficient knowledge of how to maintain nutrition and manage children's diets. Ignorance of how to feed babies and children, and the existence of habits that are detrimental to health, directly and indirectly, are the main causes of malnutrition and infection in children, especially those under 2 years of age. According to the 2012 IDHS, only 41.2% of infants aged 6-24 months are given food according to recommendations, namely complementary feeding (Khosman, 2007 in Mufida et al, 2015).

Complementary feeding must be given at the right age according to the needs and digestibility of the baby at the age of 0-6 months should be given breast milk only then aged 6-24 months will be given complementary feeding. In Ciledug Village, only 27% were given exclusive breastfeeding and those who had been given complementary feeding before the baby 6 months old, 73%. If the baby is given complementary feeding under 6 months the baby's digestive tract is not yet perfect, this will have an impact on the incidence of infections in babies such as diarrhea, respiratory infections, allergies to growth disorders.

Sometimes the information a mother gets is very minimal, because she doesn't have knowledge. Knowledge is the result of knowing, and this occurs after people sense a certain object (Notoatmodjo, 2010). Mother's behavior in giving complementary feeding, both in terms of frequency, texture, and quantity of food needs attention. Knowledge influences mothers in determining, selecting, processing, and promising daily complementary feeding (Kemenkes, 2013). Mother's knowledge will influence the practice of complementary feeding. It can be obtained by various means and media of nutrition education, including implementation, counseling, reading sources, magazines, the role of health cadres, and so on.

Nutrition education is designed to facilitate the community to be able to choose nutritious foods and to adopt other behaviors related to food and nutrition that can support the realization of community status. One of the nutrition education that can be carried out is training and providing Complementary Feeding Guidelines Many guidelines on complementary feeding have been published, but the content emphasizes knowledge and theories that are not easily understood by mothers of toddlers, so it is necessary to make a guide that is simpler and easier to understand.

Argasunya village is the working area of Puskesmas Sitopeng, which is one of the sub-districts in Cirebon City which is used as a target area for the Health Polytechnic of the Ministry of Health, Tasikmalaya in the Cirebon region. Nutritional problems in Argasunya Village still need to be addressed, including in children under five with malnutrition. Based on data from the Sitopeng Health Center in 2015, from 2003 under five, 33 (1.65%) with very poor nutritional status (index weight / age), 132 (6.59%) very short (index TB / U) and 3 (0, 15%) very thin (index weight / height). In giving exclusive breastfeeding of 231 babies aged <6 months, only 175 (75.75%) were given exclusive breastfeeding. This means that there are still the babies who are given other foods besides breastfeeding at the age of <6 months.

From the description above, the researcher is interested in researching "The Effect of Implementation and the use of Guidelines on Knowledge and Practices of providing

complementary feeding to Mother babies (babies aged 6-12 months) in Argasunya Village, Cirebon City".

This study aims to determine the effect of implementing the practical guide on feeding babies 6-12 months on the knowledge and practice of giving MP-ASI in Argasunya Village, Cirebon City.

METHODS

Study design

The research is experimental with one *group pre and post-test design* with the treatment given the implementation of the Practical Guide to Feeding Babies 6-12 Months, for 2 (two) weeks with a frequency of four times of implementation (home visit). The success of implementation is measured by knowledge and practice of complementary feeding.

Setting

The implementation is carried out for 2 (two) weeks with a frequency of four times of implementation (*home visit*). At the end of the implementation, all 50 mothers of babies were re-evaluated by giving the same questionnaire at the beginning of implementation process was carried out by Posyandu cadres and Cirebon Nutrition D.III Study Program students who had technical training for implementation and the contents of the guidelines.

Participant/Subject

The research subjects were mothers (who have babies 6-12 months) in RW.04 Surapandan and RW.10 Kedung Jumbleng, Argasunya Village. The implementation process was carried out by Posyandu cadres and Cirebon Nutrition D.III Study Program students who had technical training for implementation and the contents of the guidelines consisted of: WHO recommendations, understanding of complementary foods, stages of giving according to age, giving complementary foods based on the amount, frequency and texture, examples food ingredients for the manufacture of complementary foods along with pictures, delivery schedules, and complementary feeding recipes along with pictures.

As many as 50 subjects, selected by *systematic random sampling.* Selected subjects fulfill the following inclusion criteria; having babies aged 6-12 months in good health, mothers can read, willing to be the subject of research.

Main and secondary outcome measure

The success of implementation is measured by the knowledge and practice of complementary feeding.

Data management and statistical analysis

Maternal knowledge is measured by 10 questions that have been tested for validity and reliability on mothers of toddlers with the same characteristics as the subject, including texture/shape of complementary feeding, frequency of provision, amount, and type of complementary foods given. The weighted value of each question is 10 points. The practice of giving complementary foods by assessing; texture, frequency, amount, and type of complementary feeding.

The data obtained were analyzed statistically using the t-test for numerical data and the Wilcoxon test for categorical data. Statistical tests were carried out to determine whether or not there was a significant difference between before and after implementation using the guidelines.

RESULTS

Table 1. Maternal Subject's Knowledge About Complementary Feeding in Argasunya Village

Knowledge	± SD	Min	Mak	*p*-value
Before Implementation (Pre)	48.72 ± 13.01	20	80	0.000
After Implementation (Post)	70.77 ± 18.41	40	100	

Table 1 shows that after implementation, the mean value of subject knowledge increased by 22.5 points and there was an increase in the minimum and the maximum score of 20 points. The mean of subject knowledge before implementation was "lacking", but after implementation, it increased to "sufficient"

The results of measuring the mother's knowledge with 10 simple questions about complementary foods showed that the average was only able to answer 4-5 questions correctly, some even answered 2 questions correctly. (Figure 1).

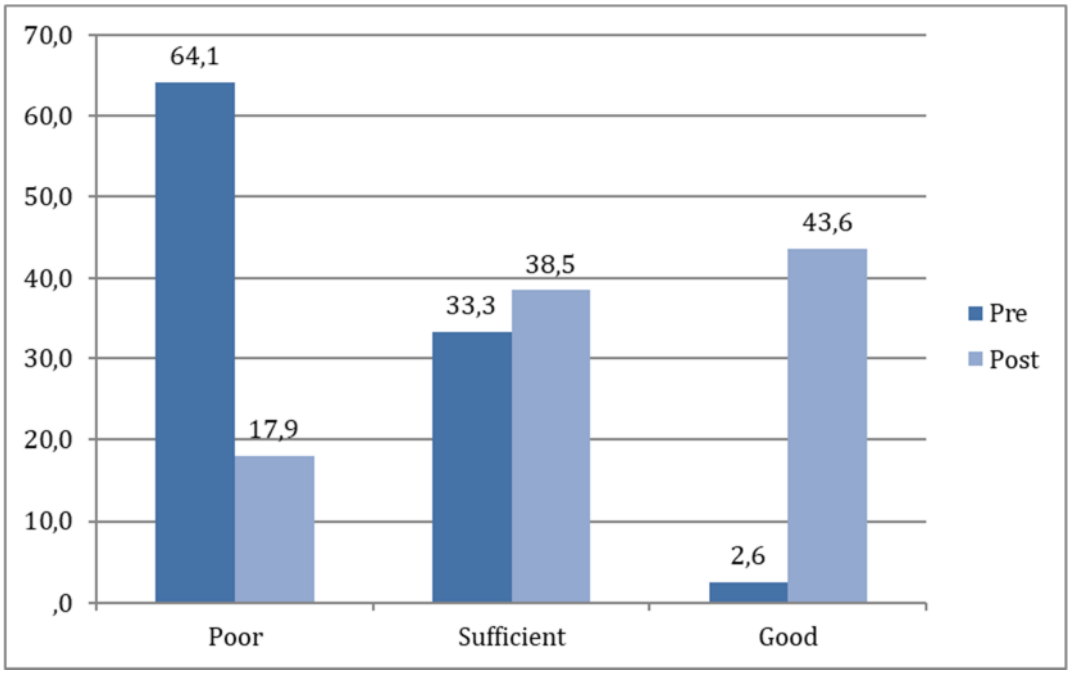

Figure1.Categories of Subject Knowledge Levels

Before and After Implementation Activities

Complementary Feeding Practices

Table 2.The Complementary feeding practices for the subject's mother before and after implementation in Argasunya Village

Complementary feeding practices	before		after		*p-value*
	n	%	n	%	
Texture					
Good	23	59.0	31	79.5	0.021
Poor	16	41.0	8	20.5	
Frequency					
Good	21	53.8	27	69.2	0.083
Poor	18	46.2	12	30.8	
Amount					
Good	12	30.8	21	53.8	0.020
Poor	27	69.2	18	46.2	
Type					
Good	18	46,2	33	84,6	0,000
Poor	21	53,8	6	15,4 The	

Description of the practice of complementary feeding by mothers for their babies does not differ from their knowledge. The practice of complementary feeding shows that there are still many inaccuracies in terms of the shape/texture parameters, frequency, quantity, and type of food given (Khosman, 2007) as many as 41.0-69.2% of mothers have not provided complementary foods as recommended to their babies. The limitation of this research is that is only taken from one city with a limited sample, so that it cannot be generalized to all problem of complementary feeding.

DISCUSSIONS

The results showed that the implementation process which was carried out four times was able to increase the mean value of the subject's knowledge by 22.5 points and also an increase in the minimum and maximum value of the subject. The average level of subject knowledge before implementation was "poor", but after implementation, it increased to be in the "sufficient" category. Wahyuningsih's (2014) research on the effect of the educational model on knowledge of complementary foods and the nutritional status of children under five, shows that the education model has a positive effect on the knowledge of the subject/mother ($p = 0.030$). Azzahra's (2015) research on the effect of counseling on the knowledge and attitudes of mothers about complementary feeding shows a good effect and statistically, the increase in knowledge is significant ($p = 0.005$).

Subjects with the level of knowledge about complementary feeding in the "poor" category decreased from 64.1% before implementation to 17.9% after implementation. The level of "good" knowledge increased from 2.6% to 43.6%. The result *t-test* shows *p* (0.000) which means that there is a significant difference between the knowledge before and after implementation. The Wilcoxon test for the category of subject knowledge before and after implementation shows a significant difference with value *p* (0.000).

These results show that if an intensive approach and education is carried out, the knowledge of the desired program targets will increase. It remains only the willingness to provide nutrition education to the community, it can be done continuously with sufficient intensity or not. If not, then don't hope that nutrition problems in the community will be resolved. Edgar Dale's cone theory which states that the reception of information will be more optimal when using images or videos captured by the senses of observation.The same was expressed several researchers associated effect of using the media to increase knowledge such as research Sugiyono (2006) in Puskesmas Jetis, Bantul on the knowledge and practice of giving breastfeeding increases with counseling methods

Complementary Feeding Practices

The practice of distributing breastfeeding is measured through interviews and observations. The practice of giving complementary foods include; suitability of texture or shape, the suitability of frequency of administration, the suitability of quantity, and suitability of species with complementary feeding recommendations.

The implementation process using practical guidelines generally has an impact on improving the practice of complementary feeding in all parameters, an average increase of 24.4%. The texture or shape parameter of the "good" category of food increased by 20.5%. The "good" frequency parameter increased by 15.4%. The number or portion parameter in the "good" category increased by 23.1%. Parameters for species in the "good" category increased by 38.5%. The Wilcoxon test results showed a significant difference in the practice of complementary feeding by subjects before and after implementation, except for the frequency parameters of complementary feeding.

CONCLUSIONS

The response of the subject's mother to the implementation activity using practical guidelines showed a very good and enthusiastic response. The subject stated the contents that were easy to understand and useful for increasing knowledge about how to provide complementary feeding to babies.

The suggestion from this research is complementary feeding practices can be disseminated to communities in collaboration with the government.

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Conflict of interest

This study does not have a conflict of interest for either the researcher or the funding institution.

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