


Educational Methods for Providing Additional Food to Toddlers with Malnutrition

Melanya Jelita Duka^{1*}, Maria Sambriong², Meiyeriance Kapitan³

^{1*,2,3}Prodi D-III Keperawatan Kupang, Poltekkes Kemenkes Kupang, Indonesia

Article Info	ABSTRACT
Keywords: Malnutrition, Education, Additional Food	Malnutrition or undernutrition is a condition where a person has below average nutrition. Undernutrition is caused by a person lacking intake of carbohydrates, protein, fat and vitamins that are very much needed by the body. The purpose of the study was to obtain an overview of the educational method for providing additional food to parents with undernourished toddlers at the Alak Health Center. This type of research is a study using a descriptive design using a case study approach method to explore the educational method for providing additional food to children with undernourishment at the Alak Health Center. The subjects of the case study were 3 toddler patients who experienced undernourishment at the Alak Health Center. The results of this study showed an increase in respondents' knowledge about providing additional food to toddlers with undernourishment. This proves that education on providing additional food with the counseling method and flipchart media can increase knowledge about providing additional food to toddlers with undernourishment. Providing education with the counseling method using flipchart media can increase mothers' knowledge about providing additional food to toddlers with undernourishment.
This is an open access article under the CC BY-NC license 	Corresponding Author: Melanya Jelita Duka Prodi D-III Keperawatan Kupang, Poltekkes Kemenkes Kupang melanyaduka@gmail.com

INTRODUCTION

Malnutrition or undernutrition is a condition where a person has below average nutrition. Undernutrition is caused by a person lacking intake of carbohydrates, protein, fat and vitamins that are very much needed by the body. Pathophysiologically, undernutrition or poor nutrition in toddlers is experiencing protein energy deficiency, iron nutritional anemia, disorders due to lack of iodine and lack of vitamins. Lack of intake of these four sources in toddlers causes stunted growth and development, decreased immunity, low intelligence levels, decreased physical abilities, impaired physical and mental growth, stunting and the worst is death in toddlers (Sir et al., 2021).

In 2000-2018, undernutrition in toddlers in the world decreased from 32.6% to 21.9%, where the largest number was in Asia and Africa with 2 out of 5 toddlers experiencing stunting. Around 50.8 million children suffer from wasting and Southeast Asia ranks first with the most wasting. More than half of toddlers with wasting are in Southeast Asia and a quarter are in Sub-Saharan Africa. The prevalence of wasting in Southeast Asia has represented a

serious need for nutritional intervention. The prevalence of underweight decreases every year. It was recorded that in 2017 the prevalence of underweight in the world reached 13.5%, a decrease from 2010 which was 16.3%. The results of the 2018 Basic Health Research (Risksdas) showed a prevalence of underweight of 17.7%, underweight is seen based on body weight per age (BB/U) which indicates acute and chronic malnutrition. (Masturina et al., 2023).

Nutrition counseling is an activity of providing information or advice on nutrition and dietetics that are closely related to a person's nutritional and health conditions, nutrition counseling first begins with a nutritional assessment (Ministry of Health of the Republic of Indonesia 2012) lack of nutrition in toddlers is also caused by the mother's behavior in choosing food ingredients, the availability of sufficient food and the diversity of this food is influenced by the mother's level of knowledge about food and its nutrition. Mother's ignorance can cause mistakes in choosing food, especially for toddlers.

Flip-sheet media is a media for delivering health information that contains a collection of summaries, schemes, images, and tables that are opened sequentially based on learning topics. There is an increase in knowledge and attitudes of mothers of toddlers regarding balanced nutrition for toddlers. The flip-sheet media used is able to attract the attention of mothers of toddlers so that the mothers of toddlers can receive and understand the messages conveyed in health counseling.

METHODS

This type of research is a research using a descriptive design using a case study approach method to explore the educational method of providing additional food to children with malnutrition at the Alak Health Center. The instruments used in this study were ANC assessment format Rhodes Index Of Nausea Vomiting And Retching (INVR) Questionnaire.

The subjects of the case study were 3 toddler patients who were malnourished at the Alak Health Center with the following inclusion criteria: heads of families who live in the Alak Health Center work area, heads of families who can speak Indonesian, heads of families who have toddlers with malnutrition, willing to be respondents and sign informed consent and the exclusion criteria were heads of families who were unwilling to be interviewed, heads of families who resigned due to certain conditions.

The focus of this case study is the educational method of providing additional food to toddlers with malnutrition at the Alak Health Center. The data collection measuring instrument used in this study was a questionnaire that had been created by the researcher and referred to the literature consisting of several questions in which respondents filled out the questionnaire themselves or with assistance.

The data collection method in this study used Observation carried out by measuring height and weight in the observation technique can be done using instruments such as weight scales and microtoice as well as filling out questionnaires to get answers from respondents and researchers obtained data from the Sikumana Kupang Health Center based on reports of tuberculosis cases at the Health Center.

Data analysis is done by presenting facts, then comparing them with existing theories and then poured into discussion opinions. The analysis technique used is by narrating the answers from the case study subjects obtained from the results of in-depth interview interpretations conducted to answer the formulation of the research problem. The analysis technique is used by means of observation by researchers and documentation studies that produce data to be further interpreted by researchers compared to existing theories as material for providing recommendations in the intervention.

RESULTS AND DISCUSSION

Research Results

Research Location Overview

Alak Health Center is located in Nunbaun Sabu Village, Alak District, Kupang City, East Nusa Tenggara. The working area of Alak Health Center currently consists of 6 villages, namely Alak, Nunhila, Nunbaun Delha, Nunbaun Sabu, Namosain and Penkase-Oeleta villages. The north is bordered by Kupang Bay, the south is bordered by West Kupang District/Maulafa District, the east is bordered by Kelapa Lima District/Oebobo District, the west is bordered by Kupang Regency, West Kupang District.

The respondents in this study were 3 (three) heads of families who had children with malnutrition and lived in the same research location, namely RT 17/ RW 09, Nunbaun Delha Village, Alak District and were registered in the medical record at the Alak Health Center.

Respondent Characteristics

Respondents in this study were 3 heads of families and children with malnutrition, who were registered in the medical record at the Alak Health Center. The characteristics of the respondents studied were characteristics based on age, gender, education, occupation, height and weight in children.

Table 1. Respondent Characteristics based on age, education, occupation n=(3)

Characteristics	Respondent 1 (Mrs. An.T)	Respondent 2 (Guardian An.L)	Respondent 3 (Mrs. An.A)
Mother's Age	23 Years High	62 Years of	30 Years of
Education	School	Junior High	Elementary
Occupation Child's	Housewife	School IRT	School
Age	16 months	20 months	housewife
Child's BB/TB	7.3/73.8	7.6/78.3	11 Months 6.5/69

Source: Primary Data, 2024

Based on table 1 shows the characteristics of respondents based on age, respondent 1 is 23 years old, respondent 2 is 62 years old, and respondent 3 is 30 years old. Based on education with the latest diploma ownership, respondent 1 has a high school education, respondent 2 has a junior high school education, while respondent 3 has an elementary school education. Based on occupation, respondents 1, 2, and 3 have similarities, namely working as housewives. Based on the age of the child, respondent 1 is 16 months old, respondent 2 is 20 months old, respondent 3 is 11 months old. Based on the weight and height of the child,

respondent 1 has a weight of 7.3 and a height of 73.8, respondent 2 has a weight of 7.6 and a height of 78.3, and respondent 3 has a weight of 6.5 and a height of 69.

Type of Education

Table 2. Type of Education n=(3)

Respondents	Types of Education
Respondent 1	Counseling
Respondent 2	Counseling
Respondent 3	Counseling

Source: Primary Data, 2024

Based on table 2, it shows that the type of education used by respondents 1, 2 and 3 is counseling.

Educational Media

Table 3. Type of Education n=(3)

Respondents	Types of Education
Respondent 1	Flip sheet
Respondent 2	Flip sheet
Respondent 3	Flip sheet

Source: Primary Data, 2024

Based on table 3, it shows that the educational media given to respondents 1, 2 and 3 were flipcharts.

Research Discussions

Family Characteristics

Table 1 shows that one of the 3 respondents has an elementary school education. According to researchers, maternal education affects the nutritional status of children. The low level of education of a mother affects the level of knowledge and behavior in feeding toddlers.

This study is in line with the results of research conducted by (Kumalasari, 2014) that there is a relationship between the level of maternal education and the nutritional status of toddlers. There is a relationship between maternal education and maternal parenting patterns with the nutritional status of toddlers. There is a relationship between knowledge and education on the nutritional status of toddlers. shows that there is a relationship between maternal parenting patterns and the nutritional status of toddlers, shows that there is a relationship between parenting patterns and nutritional status of toddlers. And shows that there is a relationship between toddler care practices and the nutritional status of toddlers. The level of maternal education largely determines attitudes and behaviors in dealing with various problems, one of which is nutritional problems in children. A mother has an important role in the health and growth of children. This can be shown by the fact that, among others, children from mothers who have a higher educational background will get the opportunity to live and grow better and easily receive broader insights about nutrition. Children with low-educated mothers have a higher mortality rate than children with highly educated mothers. The role of parents is very influential, especially for mothers, because a mother plays a role in managing the household and plays a role in determining the type of food that her family will

consume. Lack of nutritional intake can be caused by the limited amount of food consumed or the food does not meet the required nutritional elements. This is in line with research showing that there is a relationship between the level of maternal education and the nutritional status of toddlers. It also shows that there is a relationship between maternal education and maternal parenting patterns with the nutritional status of toddlers. And also shows that there is a relationship between knowledge and education on the nutritional status of toddlers.

Types of Educational Counseling for Providing Additional Food Using Flip Sheet Media

The type of education used by researchers is counseling. According to researchers, education with the type of counseling can improve mothers' knowledge about providing additional food to toddlers with malnutrition. This study is in line with research (Nugraha, 2017) The results of the pre-test and post-test counseling in the treatment group showed a slight increase. According to researchers, the application of education using flipcharts can increase respondents' knowledge in providing food for toddlers with malnutrition.

This study is in line with Fitriani's research (2015), that there is a significant difference in knowledge by providing health education using flipchart media. There is also research according to Marliana (2016), which states that the flipchart method has effectiveness on knowledge. According to this research, it can be concluded that all reviewed articles show that the use of flipchart media is effective as a promotional medium for health problems.

Table 4.Types of Food Before and After Providing Additional Food Education n=(3)

Respondents	Before (Pre)	After (Post)	
		(Observation I)	(Observation II)
Respondent I	Rice and sausage	Rice, vegetables fish and milk	Rice, vegetables, and fish
Respondent II	Rice and eggs	Rice, vegetables tempeh	Rice, vegetables, fish, tempeh, peanut porridge green
Respondent III	Porridge	Leaf porridge Moringa	Riceteam, broth moringa leaves and potato cakes know

Source: Primary Data, 2024

Based on table 4 shows the types of food given by respondents to patients before education was carried out. In the first visit assessment of respondent 1 04 July 2024. Based on table 4 shows the types of food given by respondents to patients before education was carried out. In the assessment of the first visit of respondent 1 on July 4, 2024, the results of the interview showed that respondent 1 gave food in the form of rice and sausages to the patient. And the first visit of respondent 2 on July 6, 2024, the results of the interview showed that respondent 2 gave food to the patient in the form of rice and eggs. And the first visit of respondent 3 on July 8, 2024, the results of the interview showed that respondent 3 gave

food in the form of porridge to the patient. After receiving education, there was a change in the type of food given by respondents, the type of food given by respondents to patients after receiving education. The second day's visit, response 1 was observed on the first day on July 5, the results showed that respondent 1 gave food to the patient in the form of rice, vegetables and fish. . The second day's visit, response 2 was observed on the first day on July 7, the results showed that respondent 2 gave food to the patient in the form of rice, vegetables, tempeh. . The second day of the visit, response 3, carried out observations on the first day on July 9. The results obtained were that Respondent 3 gave food to the patient in the form of porridge and moringa leaves.

The third day visit of response 1 was observed on the second day on July 6, the results obtained were that respondent 1 gave food to the patient in the form of rice, vegetables, fish and milk. The third day visit of respondent 2 was observed on the second day on July 8, the results obtained were that respondent 2 gave food to the patient in the form of rice, vegetables, fish, tempeh, and green bean porridge. The third day visit of respondent 3 was observed on the second day on July 10, the results obtained were that respondent 3 gave food to the patient in the form of steamed rice, moringa leaf soup and tofu.

CONCLUSION

Based on the results of the research conducted, conclusions can be drawn regarding the educational method of providing additional food to toddlers with malnutrition at the Alak Health Center. 1) The mother's education level can influence the mother's knowledge and behavior in providing food to toddlers with malnutrition. 2) Providing education with a counseling method using flipchart media can increase mothers' knowledge about providing additional food to toddlers with malnutrition.

REFERENCE

- Mardiana. (2023). Cookies Recipe Book for Toddler Supplements. Publisher NEM.
- Masturina, M.L., Salam, A., Indriasari, R., Thaha, A.R., & Jafar, N.(2023). Description of family characteristics and nutritional status in toddlers. *Community Research of Epidemiology (CORE)*, 3(2), 101–114. <https://doi.org/10.24252/corejournal.vi.37731>
- Sir, SG, Aritonang, EY, & Jumirah, J. (2021). Feeding Practices and Health Practices with the Incidence of Undernourished Toddlers. *Journal of Telenursing (JOTING)*, 3(1), 37–42. <https://doi.org/10.31539/joting.v3i1.2091>
- Sutrisno, S., & Sinanto, RA (2022). Effectiveness of Using Flip Sheets as a Health Promotion Media: A Systematic Review. *Integrated Health Journal*, 13(1), 1–11. <https://doi.org/10.32695/jkt.v13i1.129>
- Veranda, MY, Jutomo, L., Boeky, DLA, & Yuniarsi Veranda, M. (2022). Study of Growth and Infectious Diseases in Children Under Five in the Work Area of Sikumana Health Center, Kupang City. *Public Health Media*, 4(1), 29–39. <https://doi.org/10.35508/mkm>
<https://ejournal.undana.ac.id/MKM>
- Vilda. (2018). Basic Textbook of Public Health Nutrition Science.

Deepublish. [https://books.google.co.id/books?id=YACDDwAAQBAJ&pg=PA5&dq=type+++nutrition+lack&hl=en&newbks=1&newbks_redir=0&source=gb_mobile_search&sa=X&ved=2ahUKEwi594HmhZOEAxVE1jgGHR2mBUkQuwV6BAgJEAc#v=onepage&q=types of malnutrition&f=false](https://books.google.co.id/books?id=YACDDwAAQBAJ&pg=PA5&dq=type+++nutrition+lack&hl=en&newbks=1&newbks_redir=0&source=gb_mobile_search&sa=X&ved=2ahUKEwi594HmhZOEAxVE1jgGHR2mBUkQuwV6BAgJEAc#v=onepage&q=types%20of%20malnutrition&f=false) A5
Wigati, A., Sari, FYK, & Suwanto, T. (2022). The Importance of Balanced Nutrition Education for Stunting Prevention in Toddlers. Indonesian Community Service Journal,