

Nutritional Status of Children under Five Years in the Working Area of Puskesmas Manutapen

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Abstract. Nutritional problems in children under five, such as undernutrition can affect their health. The purpose of the study was to analyze the factors related to the nutritional status of children under five of age in the working area of the Manutapen Public Health Center in 2021. This was a quantitative study using a Cross-Sectional design involving 90 mothers of toddlers and children under five with the cluster random sampling technique. The results showed that the factors related to the nutritional status of children under five were the mother's education level ($p=0.030$), family income level ($p=0.014$), mother's level of knowledge ($p=0.001$), history of infectious disease ($p=0.026$), and the number of family members ($p=0.005$). The Manutapen Public Health Center is expected to maximize regular counseling activities about toddler nutrition and the use of health promotion media. Moreover, an active role from Nutrition Implementation Personnel and Health Promotion Programs is necessary to increase counseling efforts about the importance of nutritious food for toddlers.

Keywords: *Nutritional Status of Toddlers, Malnutrition, Mother*

Abstrak. Masalah gizi pada balita masih menjadi salah satu masalah kesehatan utama di Indonesia. Tujuan dari penelitian untuk menganalisis faktor-faktor yang berhubungan dengan status gizi balita di wilayah kerja Puskesmas Manutapen tahun 2021. Jenis penelitian adalah penelitian kuantitatif dengan menggunakan rancangan *Cross Sectional*. Populasi dalam penelitian ini seluruh ibu yang memiliki balita yang berusia 12-59 bulan. Sampel terdiri dari 90 ibu balita dengan teknik pengambilan secara *cluster random sampling*. Hasil penelitian menunjukkan bahwa faktor yang berhubungan dengan status gizi balita adalah tingkat pendidikan ibu ($\rho=0,030$), tingkat pendapatan keluarga ($\rho=0,014$), pengetahuan ibu ($\rho=0,001$), riwayat penyakit infeksi balita ($\rho=0,026$), dan jumlah anggota keluarga ($\rho=0,005$). Puskesmas diharapkan dapat memaksimalkan kegiatan penyuluhan maupun konseling secara berkala tentang gizi balita dan pemanfaatan media promosi kesehatan. Serta, sangat diperlukan peran aktif tenaga kesehatan, terutama Tenaga Pelaksana Gizi dan Promosi Kesehatan untuk meningkatkan upaya penyuluhan tentang pentingnya makanan yang bergizi bagi balita.

Kata kunci: *Status Gizi Balita, Gizi Kurang, Ibu*

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Introduction

The nutritional status of children under five is one of the indicators for assessing the nutritional status of the community. Children under five will have good nutritional status if the nutritional intake is to the needs of the body. Inadequate nutritional intake in food can cause children under five to suffer from undernutrition. On the other hand, toddlers whose nutritional intake is excessive will experience overnutrition (Par'i et al., 2017).

Nutritional problems such as undernutrition and malnutrition in children under five will affect the health of toddlers. Indirectly, these two nutritional problems can cause children under five to experience nutritional deficiencies which can have an impact on their health, growth, intelligence, as well as susceptibility to infectious diseases (Almushawwir, 2016).

Children under five who have nutritional problems, especially malnutrition will experience growth barriers both physically and mentally, have low immunity so they are susceptible to disease, and can increase morbidity and high risk of death (Gandini et al., 2016). Previous studies by Septianasari et al., 2015 showed that various factors can lead to unfulfilled nutritional intake in children under five. These factors are the mother's education level, mother's level of knowledge, family income, history of infectious diseases, and the number of family members.

The number of family members in one family also affects the nutritional status of children under five. Lack of parental attention due to a large number of family members, coupled with low family income will have an impact on the lack of

attention and ability of parents to meet the food and nutritional needs of family members, especially children under five according to their age (M. Putri et al., 2015).

Efforts to achieve the optimal nutritional status of children under five are closely related to the level of education and knowledge of parents, especially mothers, regarding nutrition. Mother is a caregiver and someone responsible for cooking and providing food for the family including children under five. The mother's low level of education affects the mother's level of knowledge on child care patterns, care, nutritional eating patterns, and guidance for children under five which will have an impact on health and undernutrition (R. F. Putri et al., 2015).

The results of initial interviews conducted by researchers with 10 mothers who have children under five in the work area of the Manutapen Public Health Center found that eight mothers did not know about the nutritional content contained in food and the nutritional needs needed by children under five, thus affecting the selection and processing of types of food that had an impact on the adequacy and nutritional needs of children under five. In addition, the results of initial interviews conducted by researchers with 10 mothers who had children under five with poor nutritional status showed that the mother's low level of education, low family income, history of infectious diseases suffered by children under five, as well as a large number of family members led to the low nutritional status of children under five in the working area of the Manutapen Public Health Center. This study aims to find out the determinants related to the nutritional status of children under five in the working area of the Manutapen Public Health Center in 2021.

Method

This study used an analytical survey method with a cross-sectional study approach. This research was conducted in the work area of the Manutapen Public Health Center, Alak District, Kupang City from June 2020 to - July 2021. The population in this study were all mothers that had children under five aged 12-59 months at the Manutapen Public Health Center. Sampling was done by applying the cluster random sampling technique.

The variables in this study were divided into two, namely the independent variable consisting of education, family income, knowledge, history of infectious diseases, and the number of family members and children under five, and the dependent variable, namely the nutritional status of children under five.

The data collected are primary data and secondary data. Primary data were obtained from interviews which included several variables, namely education, family income, mother's knowledge, infectious diseases, and the number of family members. Meanwhile, secondary data were obtained from the Manutapen Public Health Center which included data on the number of children under five and data on the number of visits by children under five, and data on children under five nutrition cases. The data collection technique was carried out by interviews using a questionnaire to obtain information on the variables studied. Data analysis in this research is univariate and bivariate analysis obtained by using a computerized system. This research has passed the ethics committee of the Faculty of Public Health, Nusa Cendana University with an ethics certificate number. 2019172-KEPK on July 31st, 2019.

Result

Table 1.

Distribution of Respondents' Characteristics by Age and Occupation in 2021

Characteristics	N	%
Age		
<35 years	74	82.2
≥35 years	16	17.8
Total	90	100.0
Occupation		
Civil Servant	25	27.8
Entrepreneur	20	22.2
Fisherman	15	16.7
Craftsman	13	14.4
Farmer	9	10.0
Taxi biker	8	8.9
Total	90	100.0

Table 1 shows the number of respondents aged <35 years by 82.2% and respondents aged 35 years by 17.8%. Most of the respondents work as civil servants, namely 27.8% and the least are taxi bikers, namely 8.9%.

Table 2.

Distribution of Respondents' Characteristics Based on Education Level, Income, Knowledge, History of Infectious Diseases, Number of Family Members, and Nutritional Status of children under five in the working area of the Manutapen Public Health Center in 2021

Characteristics	N	%
Education Level		
High	44	48.9
Low	46	51.1
Total	90	100.0
Level of Income		
High	48	53.3
Low	42	46.7
Total	90	100.0
Level of Knowledge		
Good	33	36.7
Less	57	63.3
Total	90	100.0
History of Infectious Disease		
None	37	41.1

Yes	53	58.9
Total	90	100
Number of Family Members		
Big	52	57.8
Small	38	42.2
Total	90	100.0
Nutritional Status (Weight/Age)		
Good	52	57.8
Poor	38	42.2
Total	90	100.0

Table 2 shows the number of respondents with a low level of education is 51.1% and the number of respondents with a higher education level is 48.9%. The number of respondents with a high level of income is 53.3% and a low level of income is 46.7%. The number of respondents with a low level of knowledge is 63.3% and a good level of knowledge is 36.7%. The number of respondents with a history of infectious disease is 58.9% and no history of infectious disease is 41.1%. The number of respondents in the big family category is 57.8% and in the small family category is 42.2%. The number of respondents with good nutritional status is 57.8% and poor nutritional status is 42.2%.

Table 3.

Cross Tabulation Results on Education Level, Level of Income, Level of Knowledge, History of Infectious Diseases, Number of Family Members with Nutritional Status of children under five

Independent Variable	Nutritional status of children under five				Total		<i>p-value</i>
	Poor		Good		N	%	
	N	%	N	%			
Education Level							
High	13	29.5	31	70.5	44	100	0.030
Low	25	54.3	21	45.7	46	100	
Level of Income							
High	14	29.2	34	70.8	48	100	0.014
Low	24	57.1	18	42.9	42	100	
Level of Knowledge							
							0.001

Good	6	18.2	27	81.8	33	100	
Low	32	56.1	25	43.9	57	100	
History of Infectious Disease							
None	10	27.0	27	73.0	37	100	0.026
Yes	28	52.8	25	47.2	53	100	
Number of Family Members							
Big	29	55.8	23	44.2	52	100	0.005
Small	9	23.7	29	76.3	38	100	

Table 3 shows that the level of education, income, knowledge, history of infectious diseases, and the number of family members have a significant relationship with the nutritional status of children under five in the working area of the Manutapen Public Health Center with a p value of <0.05 .

Discussion

Nutritional problems have spacious dimensions, not only health problems but also social, economic, cultural, parenting, educational, and environmental problems (Suminar & Wibowo, 2021). The nutritional problems were triggered by various factors, such as the education level of the mother, family income, number of family members, and others factors that differ between regions or communities.

The level of education is one of the important factors in the nutritional status of children under five because the level of education of the mothers will affect the quality and quantity of food given to their children under five. In addition, the mothers' education level will affect the mothers' knowledge and ability to understand all the given health information so that they can provide good parenting for their children (Susanti, 2018).

The results of this study revealed that there was a significant relationship between the mother's level of education and the nutritional status of children under five in the working area of the Manutapen Public Health Center (p value= 0.030).

Mothers with low educational background certainly have a low understanding of the needs of children under five for their growth and development and have a slow response in dealing with nutritional problems of children under five. On the other hand, mothers with higher education levels will find it easier to understand the information obtained and at the same time implement it in feeding their children under five (Nurhayati & Hidayat, 2019).

The lack of knowledge about nutrition in mothers will affect the appropriate feeding pattern to meet the nutritional needs of children under five's growth and development. Because the adequacy and nutritional needs of children under five are influenced by the food intake given by the mothers or the parenting pattern. A mother will try to provide food according to the nutritional needs of each family member based on her knowledge (Jago et al., 2019).

Increasing the knowledge of mothers about balanced nutrition is an important effort in improving the nutritional status of children under five. Mothers' level of knowledge about the nutrition of children under five is very significant to the nutritional status of children under five because the mother is the one who has the biggest role for the children. Mothers have the greatest responsibility for the growth and development of children under five so good knowledge of mothers is the main key to fulfilling nutrition for children under five (Nurtina et al., 2017).

The results revealed that there was a significant relationship between the level of family income and the nutritional status of children under five in the working area of the Manutapen Public Health Center (*p value= 0.014*). Most of the respondents with low education levels have children under five with poor nutritional status. On the other hand, most of the respondents with higher education have children with good nutritional status.

This study found that most of the respondents who have a low level of income are respondents who do not have jobs (housewives) so family income only comes

from their husbands. In addition, income is also influenced by the respondent's education level, so respondents who have a low level of education will find it difficult to find job opportunities and special skills (Nurhayati & Hidayat, 2019).

High income in the family has a big impact on the fulfillment of nutrition in the family, especially for children under five. High income affects the purchasing power of the family in meeting the food needs to be consumed (Jago et al., 2019). The higher the income, the better, and more food is purchased so that it has balanced nutrition. Low income tends not to pay attention to the nutritional content of the food consumed, but the material value is more a focus of consideration, causing low purchasing power and resulting in poor nutritional status of children under five (Hidayah et al., 2018).

One of the influencing factors is a history of infectious disease. The factor of history of infectious disease is a serious problem that must be faced by a mother. This study revealed that there was a significant relationship between the history of infectious disease and the nutritional status of children under five (p value= 0.026). All diseases that have been suffered by children under five are caused by bacteria from contaminated food and unhygienic environmental sanitation (Aminudin, 2016).

The history of infectious disease causes problems in the nutritional status of children under five. In this case, the history of infectious disease can cause the bodies of children under five to be unable to absorb nutrients from the food that enters the body, causing undernutrition. This study found that the diseases that children under five often suffer from are mild infections (cough, cold, and fever) to severe infections (ARI /Acute Respiratory Infection and diarrhea). Irawati (2007) stated that infection is a disease that often occurs in toddlers, where one of the causes of infection is the lack of nutritional status toddlers, which is directly influenced by the mother's lack of knowledge, especially about nutritious food.

One of the factors that can also cause undernutrition in children under five is a large number of family members. This study found that there was a significant relationship between a large number of family members and the nutritional status of children under five ($p\ value= 0.005$). This means that the more family members, the more expenditures for meeting the nutritional needs of the family so that the arrangement in providing food is uneven and nutritional needs are not met properly. Meanwhile, a family with a small number of family members can meet their food needs because the smaller the number of family members, the smaller the expenditure spent to meet other needs (Aminudin, 2016).

However, some families have high incomes but have children under five with undernutrition due to a large number of family members. This means that the greater the number of family members, the greater the expenditure to meet nutritional needs and other needs. A large number of family members causes food for each family member to decrease, and the distribution of food becomes uneven which results in inadequate nutritional intake, causing children under five in the family to suffer from undernutrition (Oktavianis, 2016).

Conclusion

Education level, level of income, level of knowledge, history of infectious disease, and several family members have a significant relationship with the nutritional status of children under five in the working area of the Manutapen Public Health Center, Kupang City in 2021.

Suggestion

Various efforts must be done to prevent malnutrition in children under five, including the Posyandu revitalization in increasing the coverage of weighing preschool children, counseling and mentoring, providing vitamins, increasing

access, quality of malnutrition in-hospital care in the public health center, training for community members who do not work or as housewives for the cost of daily life. Therefore, the family must pay attention to the food consumption and the nutritional content in it, so that children can get good nutrition so that the nutritional status of the child is controlled and the process of growth and development is good.

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