






FACTORS RELATED TO INCIDENCE OF MALNUTRITION IN UNDER FIVE CHILDREN

Ja'a Oktafa Once¹ , Annasari Mustafa² , Ika Yudianti¹ 

¹ Bachelor of Applied Midwifery Study Programme. The Health Polytechnic of the Ministry of Health Malang, Malang

² Bachelor of Applied Nutrition Science Study Programme, The Health Polytechnic of the Ministry of Health Malang, Malang

Correspondence address:
Malang City, Indonesia
Email : kagoyaonce@gmail.com

Abstract

Background: Malnutrition is one of the main nutritional problems in Indonesia and East Java. Malnutrition is the cause of more than 1/3 of 9.2 million deaths in children under the age of 5 in the world. Toddlers are a very vulnerable group related to nutrition in society. If the nutrition of children under five is not fulfilled continuously it will cause stunting. **Method:** This study uses descriptive analysis to overview of the problem of factors related to the incidence of undernutrition in children under five at Posyandu Randugading, Tajinan District, Malang Regency. The sample consisted of 36 children under five using a total sampling technique. This data was obtained from the nutritional status report of the Tajinan Community Health Center which met the nutritional criteria of less than -3 SD to <-2 SD based on the z-score formula. This research instrument used a questionnaire, data collection was carried out by interviews to obtain data on variables Frequency of giving MP-ASI, Infectious diseases, Exclusive breastfeeding, Mother's weight gain during pregnancy, and Number of siblings. The data collection period was carried out on 18 April 2023–25 April 2023. **Result:** from 36 children showed that 30.55% giving MP-ASI at most was according to the child's request, children who have had history of an infectious disease 58.33%, exclusive breastfeeding was 50%, weight gain during pregnancy less as it should was 50%, children who have sibling is more than 2 was 63.89%. **Conclusion:** Malnutrition children under five year old in Posyandu Randugading, Tajinan District, Malang Regency have characteristic related to feeding meals was most of them according to the child's request, majority children have history of an infectious disease, Mother weight gain during pregnancy lower as it should, majority children have more than 2 sibling.

keyword : Malnutrition, Toddlers, Under five

INTRODUCTION

The national prevalence of undernutrition based on the weight/age index for Indonesian toddlers is still high. Based on the results of the 2022 Indonesian Nutritional Status Survey conducted by the Ministry of Health, 17.1% of children under the age of five experience nutritional problems, different from the previous year. Where from the 2018 data shows that there is an improvement in the nutritional status of toddlers, namely down with details of 3.9% of Indonesian toddlers experiencing malnutrition and 13.8% in the category of malnutrition. The

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prevalence of undernourished toddlers based on East Java Province in 2022 will reach 15.8%. Data collected by the Malang Regency Health Office in 2022, children suffering from malnutrition reached 13.4% (SSGI 2022).

.The results of a preliminary study conducted by researchers at the Tajinan Health Center found that the Indonesian Government's Toddler Nutrition Status program based on SSGI 2022 found that the nutritional status value could not be 13.4%. Areas where more than 13.4% of children under five are malnourished can be called nutrient-prone areas. Data on Nutrition Indicators of the Tajinan Health Center, the incidence of malnutrition is the second highest in Tajinan District, Malang Regency. In 2021 as many as 10% of children under five are undernourished out of a total of 357 under five, even in 2022 there is an increase of 15% under five out of a total of 299 under five. This shows an increase in malnutrition problems at Posyandu Randugading by 5% in one year. The incidence rate at Posyandu Randugading can lead to nutrition-prone areas if it is not handled immediately. The data collection that has been done shows the characteristics of toddlers who experience malnutrition with a vulnerable age of 12-59 months.

In 2019 there was an event that was affected by the Covid-19 pandemic which resulted in a large reduction in the workforce. So that the community's economy continues to decline and results in the inability to provide good nutrition to their babies. The reality on the ground regarding the provision of food to toddlers has not provided an overview of the problems that need to be paid attention to proportionally due to the impact of the Covid-19 pandemic. Likewise alternatives that might be suggested in promoting ways to feed toddlers properly to meet nutritional requirements, still easily served in the household in a simple and hygienic way adapted to the situation and conditions in the area so that efforts can be given correctly according to the indications. And advise people who have toddlers with malnutrition to be able to take advantage of local crops that can meet the nutrition of their toddlers. This is an effort that needs to be supported, because it is one way to prepare quality future generations. The purpose of this study was to Identify the factors associated with the incidence of malnutrition in children under five year old at Posyandu Randugading, Tajinan District, Malang Regency.

METHOD

This study uses descriptive analysis used by collecting data in accordance with the truth then the data is compiled, processed and analyzed to be able to provide an overview of the problem of factors related to the incidence of undernutrition in children under five at Posyandu Randugading, Tajinan District, Malang Regency. Bivariate analysis is an analysis used to link two variables, independent variables with variables Bivariate analysis is bound in this case researchers look for factors related to the incidence of undernutrition in children under five year old at Posyandu Randugading, Tajinan District, Malang Regency. This research instrument used a questionnaire, data collection was carried out by interviews to obtain data on variables Frequency of giving MP-ASI, Infectious diseases, Exclusive breastfeeding, Mother's weight gain during pregnancy, and Number of siblings and other data that supports the research. The variables that will be examined as the focus of this research study are independent variables consisting of frequency of complementary feeding, infectious diseases, exclusive breastfeeding, mother's weight during pregnancy, and number of siblings. The research subjects planned in the research carried out are: The nutritional status of children (malnutrition status), Children under five who are cared for by their own mothers for at least 2 hours/day. Then analyze using descriptive univariate to see factor related malnutrition. The researcher's ethical licensing was approved by the Malang Ministry of Health Polytechnic Ethics Committee with no 628/VI/KEPK POLKESMA/2023.

RESULT AND DISCUSSION

The general data of the respondents which contains the characteristics of the respondents but are not included in the research variables. In this section, data will be presented which are the characteristics of respondents based on the distribution of the sex of children under five and mother's education can be seen in the table below:

Table 1. Frequency distribution of children under five based on gender and level of education of mothers in children under five.

Gender	N	%
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1. Boy	14	38,89
2. Girls	22	61,11
Total	36	100
Mother's Education Background		
	N	%
1. Elementary Education	13	36,11
2. Middle school education	10	27,78
3. High school education	10	27,78
4. Education S1	3	8,33
Total	36	100

From Table 1.1 the distribution of respondents based on the sex of the majority of children under five was 22 people (61.11%). Based on the distribution of respondents based on the education level of the mother, the majority were elementary schooled 13 people (36.11%) and the minority were educated S1 as many as 3 people (8,33%).

Table 2 Distribution of the frequency of giving MP-ASI, medical history, giving MP-ASI, increase in body weight during pregnancy, and the number of children they have at Posyandu Randugading in 2023.

Variable	N	%
MP ASI Frequency		
1. On demand	11	30,55
2. 1 time a day	8	22,22
3. 2 times a day	9	25,00
4. 3 times a day	8	22,22
Total	36	100
History of Disease		
1. Yes	21	58,33
2. No	15	41,67
Total	36	100
Exclusive Breastfeeding		
1. Yes	18	50,00
2. No	18	50,00
Total	36	100
Pregnancy Weight Gain		
1. Less	18	50,00
2. Normal	13	36,11
3. Excessive	5	13,89
Total	36	100
Number of Siblings Owned		
1. ≤ 2	23	63,83
2. > 2	13	36,11
Total	36	100

From Table 2 of giving MP-ASI at most was according to the child's request as many as 11 people (30.55%). It can be seen that the distribution of respondents based on a history of infectious diseases, the majority are toddlers who have had an infectious disease as many as 21 people (58.33%) and the minority are toddlers who do not have infectious diseases as many as 15 people (41.67%). It can be seen that the distribution of respondents based on breastfeeding was 18 children (50.00%) who were breastfed and 18 children (50.00%) who were not breastfed. It can be seen that the distribution of respondents based on the highest weight gain during pregnancy is less than 18 people (50.00%). It can be seen that the distribution of respondents based on the number of siblings that the majority of toddlers have is ≤ 2 as many as 23 people (63.89%), and more than 2 as many as 13 people (36.11%).

Incidence of Undernutrition in Randugading Village

The incidence of malnutrition in Randugading Village, Tajinan District, which meets the criteria based on z-score from -3 elementary school to <-2 elementary school, there are 36 children under five. According to researchers, the incidence of undernutrition is influenced by several factors, namely the frequency of breastfeeding, infectious diseases, exclusive breastfeeding, maternal weight gain during pregnancy, and the number of siblings. These factors will be explained further in the following points.

Khaidirmuhaj (2009), said that undernutrition is a health disorder due to an imbalance of nutrients needed for life such as growth, thinking activities, and others. While malnourished toddlers according to the Ministry of Health (2012) are toddlers with malnutrition status seen based on the BB / U indicator with z-score values are <-2 SD to -3 SD. Children with less nutritional intake will experience stunted growth and development than children with adequate nutritional intake. As in growth which includes low height, weight, brain development, intelligence level, and psychic is also low and susceptible to infectious diseases (Hasdianah, 2014). The growth and development of the child's brain is very rapid at the age of toddlers. In fact, the rapid growth spurt phase of the brain only occurs until the age of 18 months (1.5 years). Although then the brain still continues to develop until the child is 5 years old, but the speed has begun to decline (Khomsan, 2017).



Complementary feeding, infectious diseases, exclusive breastfeeding, mother's weight during pregnancy, and number of siblings on undernutrition in children under five

The distribution of respondents based on the history of infectious diseases was the majority of children under five who had had infectious diseases as many as 21 people (58.33%) and minorities are children under five who do not have infectious diseases as many as 15 people (41.67%). Infectious diseases that have been suffered by children under five include ARI, diarrhea, and tuberculosis. Malnutrition will result in children susceptible to disease, The presence of infectious diseases suffered by toddlers results in decreased body resistance and has an impact on weight loss and energy loss in the body. So that malnutrition in children under five becomes increasing. The results of this study are in line with the results of research from Fitria and Silvia (2021) which states that there is a significant relationship between infectious diseases, knowledge, socio-economic, and food intake with the incidence of undernutrition in children under five in PKM Bato Aceh. In the study, there was a relationship between the frequency of breastfeeding and the incidence of malnutrition. The habit of toddlers who do not eat dinner and only consume biscuits, bread, or other snacks results in an imbalance between energy intake and energy expended. Insufficient energy intake can cause energy imbalance. Setyawati (2018) that toddlers affected by infectious diseases tend to experience weight loss, this is because there is an increase in metabolism in the toddler's body and usually also followed by a decrease in appetite. Continuous weight loss can lead to a decrease in nutritional status.

The distribution of respondents based on exclusive breastfeeding was 18 children under five (50.00%) and 18 people who were not exclusively breastfed (50.00%). Exclusive breastfeeding on the nutritional status of toddlers is very influential. The first 4-6 months after the baby is born, the best method to exclusively breastfeed. At the age of four months, the baby's weight can be doubled, after which the growth and length of the baby's body will slow down slightly. The results of this study are in line with the results of research by Abdurrahman S, R. and Amadea D.S.F. (2022) " which states that there is a relationship between exclusive breastfeeding and the nutritional status of toddlers. Exclusive breastfeeding with the nutritional status of toddlers in this study showed a

statistically influential relationship with a p-value of 0.024. In addition, Hanifah (2020) in her research also stated that the majority of toddlers who get exclusive breastfeeding from their mothers have normal nutritional status, with a p-value of 0.000. These results show that there is significance between exclusive breastfeeding and the nutritional status of toddlers. The first 4-6 months after the baby is born, the best method to exclusively breastfeed.

The distribution of respondents based on weight gain during pregnancy was the majority of less than 18 people (50.00%), Normal as many as 13 people (36.11%) and more as many as 5 people (13.89%). The more pregnant women who experience underweight, the incidence of undernutrition increases in children under five, because the intake channeled during pregnancy to the fetus is not properly exposed. The results of this study are in line with the results of research from Ratna, et al (2020) states that the results of the analysis using chi-square, obtained P-Value = 0.004 so that P-Value $< \alpha$ (0.000 $<$ 0.05) it can be concluded that there is a relationship between the mother's BB history during pregnancy and the incidence of stunting in children aged 1-3 years in the Working Area of Kalirejo Health Center, Pesawaran Regency in 2019, with an OR value of 7,667 which means that mothers with weight do not increase 7 times the risk of giving birth to children with a risk of stunting, compared to mothers who have a history of increased weight.

The distribution of respondents based on the number of siblings owned by the majority of children under five was ≤ 2 as many as 23 people (63.89%), and more than 2 as many as 13 people (36.11%). The greater the number of siblings, the more chances of experiencing undernutrition. This is because the intake obtained is uneven. The results of this study are in line with the results of Linda, S (2017) research which stated that the results of the study obtained 72.6% of respondents had 5-6 family members. The number of children in a family affects the family's food availability. Different income levels will result in different levels of food availability. A large number of children in families with low economic status have the opportunity for children to suffer from malnutrition. This research is also in line with the results of research from Teguh A and Dedi S (2021) which states that there is a relationship between the number of family members and the incidence of underweight. The number of family members in one house greatly determines the amount of family food needs, the more the number of family members means the



more the number of needs that must be met including food. Vice versa, the fewer family members in one house means fewer needs that must be met, so that families can allocate income to buy good quality foodstuffs. The larger the size of the household means that more household members will eventually have a heavier burden on the household to meet their daily needs.

CONCLUSION AND SUGGESTION

Malnutrition children under five year old in Posyandu Randugading, Tajinan District, Malang Regency have characteristic related to feeding meals was most of them according to the child's request, majority children have history of an infectious disease, Mother wight gain during pregnancy lower as it should, majority children have more than 2 sibling. Therefore, nutrition transfer workers play a very important role in providing information about nutrition to the community, especially mothers in providing nutritious food to their children under five. Midwives can make preventive efforts to socialize exclusive breastfeeding and family planning to regulate the number of children.

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