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Factors Affecting The Nutrional Status Of Toddlers In Pkm Muara Nasal, Kaur District

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ABSTRACT

Intoduction: *In Indonesia, the problem of nutritional status still needs attention. Based on Riskesdas data, it is known that the prevalence of malnutrition and undernutrition in children under five is 17.7%, while the prevalence of nutritional obesity is 11.8%. The purpose of this study was to determine the factors that influence the nutritional status of children under five in PKM Muara Nasal, Kaur Regency.*
The method used is a descriptive research design with a cross sectional approach. The population in this study were all mothers who had toddlers in the PKM Muara Nasal Area, Kaur Regency. This study uses the Chi-Square test.
The results of the univariate analysis were obtained in the form of the majority of respondents with good nutritional status (82.6%), more than half of the respondents had a high education (57%), almost half of the respondents had good knowledge (41.9%), almost all of the respondents worked (77.9% and more than half of the respondents (64%) had income ≥Rp. 2,387,220. Meanwhile, the bivariate results revealed that there was a relationship between education and the nutritional status of toddlers (p-value: 0.000) , knowledge with under-five nutritional status (p-value: 0.032), work with under-five nutritional status (p-value: 0.014), and income with under-five nutritional status (p-value: 0.008)
The combination of education with knowledge and education with work and income will have an impact on mother's behavior related to the nutritional status of toddlers. Therefore, parents should increase their knowledge through both formal and non-formal education, and pay attention to the nutritional content consumed by their toddlers.

INTRODUCTION

The prevalence of nutritional problems in children under five is still above the limit of public health problems, besides that the problem of underweight nationally is still above the 2015 MDGs target. The World Health Organization states that 45 million children under five are stunted and 38.9 million people are obese. 45% die due to malnutrition (WHO, 2021).

In Indonesia, the problem of nutritional status still needs attention. Based on Riskesdas data, it is known that the prevalence of malnutrition and malnutrition in children under five is 17.7%, while the prevalence of obesity is 11.8%. (Ministry of Health RI, 2018). Bengkulu Province is the 4th largest case of obesity in toddlers with a prevalence of 13.1%, a prevalence of malnutrition of 13.2% and undernutrition of 13.2% (Riskesdas Bengkulu Ministry of Health RI, 2018).

Kaur Regency is one of the regencies in Bengkulu Province which is facing cases of nutritional problems. The prevalence of under-fives lacking protein energy (KEP) (malnutrition and undernutrition) in Kaur Regency in 2021 is 8.04%. The prevalence rate for the last three years is still around eight, which indicates that the efforts made in the context of the prevalence of KEP under five in Kaur District have not reached a maximum. The trend for the incidence of PEM which can be said to have settled in the last three years is Kaur District with a prevalence of 7.33% in 2019, 7.93% in 2020 and 7.93% in 2021. In addition, in the last three years Kaur District has the highest number of children under the red line (BGM) from other districts in Kaur District, namely 1.9% in 2013, 1.06% in 2014, and 1.06% in 2021 (Dinkes Kaur, 2022). Based on the number of severely malnourished children under five, the number of children under five receiving treatment in Kaur District in 2019 was 25% in 2021, dropping to 18%. Of the many health centers that exist, the area of the health center with the highest number of malnourished was the Nasal Health Center in Kaur District, with 29%. The area of the Nasal Health Center in Kaur Regency is the area with the most nutritional problems in toddlers (Dinaskes Kaur, 2022).

Nutritional problems can arise due to several factors. Such as economic limitations, family work, unfavorable environment, and lack of mother's knowledge. One of the factors that causes nutritional problems is the mother's lack of knowledge about the nutrients that children must fulfill during their growth period. Mothers usually buy good food for their children without knowing whether the food contains sufficient nutrients or not, and they don't balance it with healthy food that contains lots of nutrients (Dinkes Kaur, 2021).

Education is the initial foundation that can determine the mindset that is owned by the mother. This will be the basis for mothers to act especially in providing food for their toddlers. Research

conducted by Nurlmaliza found that there was a relationship between education and the nutritional status of toddlers with a p-value of 0.034 (Nurmaliza & Helina, 2019).

Knowledge is the result obtained by the mother from the mother's last education. Knowledge is the basic thing that helps mothers to make a decision in choosing the right food for their own toddler. If the mother's knowledge is not good, it allows the occurrence of malnutrition or obesity in infants. Research conducted by Mustar found that there was a relationship between mother's knowledge and the nutritional status of toddlers with a p-value <0.05 (Mustar, 2021).

Occupations that are closely related to the level of education held by the mother. Jobs that take up a lot of time, such as office work, farming, etc., can make mothers not have enough time to prepare good nutritious food for their toddlers. Research conducted by Fauzia et al found that there was a relationship between mother's work and the nutritional status of toddlers with a p-value <0.05 (Fauzia et al., 2019).

From the results of a survey conducted by researchers at PKM Muara Nasal Kaur District, it was found that out of 10 respondents it was found that 7 people had basic education (SD) and 3 people had high school education; 8 people have less knowledge, 1 person has enough knowledge, and 1 person has good knowledge; 7 people work as farmers and 3 people do not work; 9 people have income below UMR (below IDR 2,3887,222) and 1 person has UMR.

RESEARCH METHODS

This type of research is descriptive with the cross-sectional approach method, where the research measures the independent variables and the dependent variable simultaneously and the results obtained describe the conditions that occurred when the research was carried out (Harlan & Johan, 2018)

RESULTS

Univariate analysis

Univariate analysis aims to describe the research variables. The independent variables of this study are education, knowledge, employment and income while the dependent variable is the nutritional status of toddlers. Univariate analysis results are shown in the table below:Cat hygiene with chronic toxoplasmosis infections can be seen in Table 1 that of the 19 cat traps, 8 of them (42%) will bathe the cat when it looks dirty, they will bathe the cat by using special soap cats as many as 17 people (90%), and most of them from They will cut the cat's nails 2 weeks 1 time as much as 10 people (53%).

Table 1. Frequency Distribution of Toddler Nutritional Status at the Muara Nasal Health Center in 2022

No	Status Gizi Balita	Frekuensi	(%)
1	Gizi buruk	4	4,7
2	Gizi lebih	8	9,3
3	Gizi kurang	3	3,5
4	Gizi baik	71	82,6
Jumlah		**86**	**100**

Based on table 1 above, it can be seen from 86 respondents. A small portion of the respondents had under-five status with severe malnutrition as many as 4 respondents (4.7%), excess nutrition as many as 8 respondents (9.3%), and malnutrition as many as 3 respondents (3 ,5%). While almost all of the respondents had nutritional status in the form of good nutrition as many as 71 respondents (82.6%).

Table 2.Distribution of Mother's Education Frequency at the Muara Nasal Health Center in 2022

No	*Pendidikan*	*Frekuensi*	*(%)*
1	*Dasar*	*9*	*10,4*
2	*Menengah*	*28*	*32,6*
3	*Tinggi*	*49*	*57,0*
Jumlah		***86***	***100***

Based on table 2 above, it can be seen from 86 respondents. A small proportion of the respondents had basic education, namely 9 respondents (10.4%); almost half of the respondents had secondary education as many as 28 respondents (32.6%) and high as many as 49 respondents (57%).

Table 3. Distribution of Knowledge Frequency of Mothers at the Muara Nasal Health Center in 2022

No	Pengetahuan	Frekuensi	(%)
1	Kurang	15	17,4
2	Cukup	35	40,7
3	Baik	36	41,9
Jumlah		**86**	**100**

Based on table 3 above, it can be seen from 86 respondents. A small portion of the respondents had less knowledge, namely 15 respondents (17.4%); almost some of the respondents had sufficient knowledge as many as 35 respondents (40.7%) and good knowledge as many as 36 respondents (41.9%).

Table 4. Income Frequency Distribution at the Muara Nasal Health Center in 2022

No	Pekerjaan	Frekuensi	(%)
1	Tidak bekerja	19	22,1
2	Bekerja	67	77,9
Jumlah		**86**	**100**

Based on table 4 above, it can be seen that 86 respondents. A small portion of the respondents did not work, namely 19 respondents (22.1%) and almost all of the respondents worked, namely 67 respondents (77.9%).

Table 5. Distribution of Work Frequency at the Muara Nasal Health Center in 2022

No	Pendapatan	Frekuensi	(%)
1	<Rp2.387.220	31	36
2	≥Rp.2.387.220	55	64
Jumlah		**86**	**100**

Based on table 5 above, it can be seen that 86 respondents, most of the respondents had income <Rp. 2,387,220, namely 31 respondents (36%) and most of the respondents had income ≥Rp.2,387,220, namely 55 respondents (64%).

Bivariate analysis

Relationship between Education and Nutritional Status of Toddlers

It is known that of the 4 respondents who had severe malnutrition, there were 4 respondents (100%) who had basic education; of the 8 respondents who had excess nutrition, there were 4 respondents (50%) who had secondary education; of the 3 respondents who had malnutrition, there were 2 respondents who had basic education (66.7%); and from 71 respondents who have good nutrition, there are 48 respondents (67.6%) have higher and middle education. From the chi square test, the results are 49,775 with a df of 6.

It is known from df 6 and α : 0.05, it is known that the chi square table is 12.592, which means that the chi square result is greater than the chi square table. Statistical test results obtained with a p-value of 0.000 which means it is smaller than α (0.05) then Ho is rejected Ha is accepted, meaning that there is a significant relationship between education and the nutritional status of toddlers.

Relationship of Knowledge with Toddler Nutritional Status

It is known that out of 4 respondents, it is known that out of 4 respondents who have malnutrition, there are 3 respondents (75%) who have less knowledge;, out of 8 respondents who have more nutrition, there are 5 respondents (62.5%) who have sufficient knowledge; of the 3 respondents with malnutrition, there were 2 respondents (66.7%) who had sufficient knowledge;

and from 71 respondents who have good nutrition, there are 34 respondents (47.9%) have good knowledge. The chi square test was obtained at 13.816 which was greater than the chi square table, which was 12.592.

The results of the statistical test obtained a p-value of 0.001 which means it is smaller than α (0.05) then Ho is rejected Ha is accepted, meaning that there is a significant relationship between knowledge and the nutritional status of toddlers.

Relationship between work and children's nutritional status

It is known that of the 4 respondents who have malnutrition, there are 3 respondents (75%) who do not work; of the 8 respondents who had excess nutrition, there were 8 respondents (100%) who worked; of the 3 respondents who had malnutrition, there were 3 respondents (100%) who worked; and from 71 respondents who have good nutrition, there are 55 respondents (77.5%) have a job. From the chi square test, the results were 10.561 with a df of 3 and α: 0.05, it is known that the chi square table is 7.815, which means that the chi square result is greater than the chi square table. The results of the statistical test obtained a p-value of 0.002 which means it is smaller than α (0.05) then Ho is rejected Ha is accepted, meaning that there is a significant relationship between work and the nutritional status of toddlers.

Relationship between Income and Nutritional Status of Toddlers

It was known that of the 4 respondents who had severe malnutrition, there were 4 respondents (100%) who had income <Rp. 2,387,220; of the 4 respondents who had more nutrition, there were 4 respondents (50%) who had income ≥Rp.2,387,220, of the 3 respondents who had malnutrition, there were 3 respondents (100%) who had income ≥Rp.2,387,220; and from 71 respondents who have good nutrition, there are 48 respondents (67.7%) have income ≥Rp.2,387,220. From the chi square test, the results were 10.911 with a df of 3 and α: 0.05, it was known that the chi square table was 7.815, which means that the chi square result is greater than the chi square table. Statistical test results obtained with a p-value of 0.015 which means it is smaller than α (0.05) then Ho is rejected Ha is accepted, meaning that there is a significant relationship between income and nutritional status of toddlers.

DISCUSSION

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Frequency Distribution of Toddler Nutritional Status at the Muara Nasal Health Center in 2022

Based on the results of research conducted by Apriyanti (2020) it was found that most of the respondents had normal nutritional status, namely as many as 49 people (64.5%), almost half of the respondents had poor nutritional status, namely as many as 24 people (31.6%), some a small number of respondents had more nutritional status, namely as many as 3 people (3.9%), and no respondents had very poor nutritional status.

Distribution of Mother's Education Frequency at the Muara Nasal Health Center in 2022

From research conducted by Nurmaliza et al (2019) obtained the results that more than half of the respondents had higher education, namely 41 respondents (58.6%) and almost half of the respondents had low education, namely 29 respondents (41.4%)

Distribution of Knowledge Frequency of Mothers at the Muara Nasal Health Center in 2022

From research conducted by Ayuningtyas (2021) found that more than half of the respondents had a high level of knowledge, namely 66 respondents (68%), and almost half had a low level of knowledge, namely 31 respondents (32%).

Income Frequency Distribution at the Muara Nasal Health Center in 2022

Research conducted by Kasumayanti and Zurrahmi (2021) found that out of 74 respondents there were 51 respondents (68.9%) who had unfulfilled income and there were 23 respondents (31.1%) who had fulfilled income.

Distribution of Work Frequency at the Muara Nasal Health Center in 2022

Research conducted by Oktarindaarira (2020) found that 51 respondents (56.7%) were found and 39 respondents (43.3%) did not work.

Bivariat

Relationship between Education and Nutritional Status of Toddlers

Previous research was in line with researchers conducted by Shulhaeni (2018) who found that there was a relationship between education and the nutritional status of toddlers with a p-value of 0.009. Other research has found that there is a relationship between mother's education and the nutritional status of toddlers with a p-value of 0.001 (Jannah & Maesaroh, 2019).

Relationship of Knowledge with Toddler Nutritional Status

Similar research conducted by Nurmaliza (2019) found that there was a relationship between mother's knowledge and the nutritional status of toddlers with a p-value of 0.006. Another study showed the same results obtained by Oktarindasarira (2020) who found that there was a relationship between knowledge and the nutritional status of toddlers with a p-value of 0.002.

Relationship between work and children's nutritional status

Similar research conducted by Niska (2018) found that there is a relationship between work and the nutritional status of toddlers with a p-value of 0.001. Another study showing the same results was conducted by Akbariny (2018) found that there was a relationship between the working status of the mother and the nutritional status of toddlers with a p-value of 0.000.

Relationship between Income and Nutritional Status of Toddlers

Another study showed the same results obtained by Oktarindasarira (2020) who found that there was a relationship between income and the nutritional status of toddlers with a p-value of 0.012.

CONCLUSIONS AND RECOMMENDATIONS

Conclusion

From the results of the study it can be concluded as follows:

1. It is known that almost all of the respondents have nutritional status in the form of good nutrition as many as 71 respondents (82.6%) at PKM Muara Nasal, Kaur Regency
2. It is known that almost half of the respondents have higher education as many as 49 respondents (57%) at PKM Muara Nasal Kaur Regency
3. It is known that almost half of the respondents have good knowledge as many as 36 respondents (41.9%) at PKM Muara Nasal Kaur Regency
4. It is known that almost all of the respondents work as many as 67 respondents (77.9%) at PKM Muara Nasal Kaur Regency
5. It is known that most of the respondents have income ≥Rp.2,387,220 as many as 55 respondents (64%) at PKM Muara Nasal, Kaur Regency
6. There is a significant relationship between education and the nutritional status of toddlers with a p-value of 0.000 and a chi square test result of 49.755 at PKM Muara Nasal, Kaur District
7. There is a significant relationship between knowledge and the nutritional status of toddlers with a p-value of 0.032 and a chi square test result of 13.816 at PKM Muara Nasal, Kaur District
8. There is a significant relationship between work and the nutritional status of toddlers with a p-value of 0.014 and a chi square test result of 10.561 at PKM Muara Nasal, Kaur District
9. There is a significant relationship between income and the nutritional status of toddlers with a p-value of 0.008 and a chi square test result of 11.911 at PKM Muara Nasal, Kaur District

Recommendations

1. Faculty of Health, Dehasen University, Bengkulu
   As input material for conducting research development that has the same research outcome.
2. General public.
   As input material or information media regarding the nutritional status of toddlers associated with the variables of education, knowledge, employment and income.
3. Kaur District Health Office.
   As information material and condition reference regarding field conditions related to the nutritional status of toddlers so that it can be used as material in the development of programs to overcome problems in toddler nutritions.

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