



# Relationship of Characteristics of Mothers and Nutritional Status of Tolls in Puskesmas Suka Mulia Nagan Raya District

**Deni Yentipa <sup>a\*</sup>**

<sup>a</sup> Universitas Prima Indonesia, Indonesia.

**Author's contribution**

*The sole author designed, analyzed, interpreted and prepared the manuscript.*

**Article Information**

DOI: 10.9734/JOCAMR/2024/v25i3520

**Open Peer Review History:**

This journal follows the Advanced Open Peer Review policy. Identity of the Reviewers, Editor(s) and additional Reviewers, peer review comments, different versions of the manuscript, comments of the editors, etc are available here: <https://www.sdiarticle5.com/review-history/109081>

**Original Research Article**

**Received: 20/11/2023**

**Accepted: 25/01/2024**

**Published: 16/03/2024**

## ABSTRACT

The factors that influence the nutritional status of children under five are very substantial to be studied. This aims to find out what factors are related so that power action and efforts to improve nutrition can be taken in the community. Because health is a form of human right which is explicitly mandated by the 1945 Constitution. Education and time for mothers and the health of parents, especially mothers, are one of the causes of malnutrition in toddlers. This study aims to determine the relationship between maternal characteristics and the nutritional status of children under five at the Suka Mulia Public Health Center, Nagan Raya Regency. The research procedure was by measuring body weight, mothers of children under five were given a nutritional status questionnaire. Data analysis using the Chi-square test showed that from 45 samples. The majority of children's nutritional status is good (77.8%). There was no relationship between maternal age and nutritional status of children under five at the Suka Mulia Public Health Center, Nagan Raya Regency ( $p=0.519$ ). There is a relationship between mother's knowledge and nutritional status of

\*Corresponding author;

children under five at the Suka Mulia Public Health Center, Nagan Raya Regency ( $p = 0.001$ ). There is a relationship between maternal education and the nutritional status of children under five at the Suka Mulia Health Center, Nagan Raya Regency ( $p = 0.005$ ). There is no relationship between mother's work and the nutritional status of children under five at the Suka Mulia Public Health Center, Nagan Raya Regency ( $p=0.070$ ). There is a relationship between maternal parity and the nutritional status of children under five at the Suka Mulia Public Health Center, Nagan Raya Regency ( $p=0.003$ ). From the results of the study, it can be concluded that knowledge, occupation, education and parity of mothers are related to the nutritional status of children under five. It is recommended that all mothers continue to seek information about children's health, especially the procedure for providing nutritious food to toddlers. "

*Keywords: Toddler; nutritional status; age; knowledge; education; occupation; parity.*

## 1. INTRODUCTION

### 1.1 Background

The national medium-term development plan (RPJMN 2020-2024) in 2020 states that improving the nutritional status of the community is one of the priorities in reducing the prevalence of malnourished children under five to 8.1% and the prevalence of stunted children under five to 24.1% (RPJMN, 2020 ). Nutrition problems are also included in the Sustainable Development Goals (SDGs) with the first goal being to overcome the problem of malnutrition, improve child health and reduce child mortality due to factors caused by malnutrition. The problem of malnutrition and malnutrition has not been resolved properly on an international or national scale. With 34 provinces in Indonesia, there are 2 provinces that have nutritional problems in the acute category (short  $<20\%$  and thin  $\geq 5\%$ ) and of the 514 districts/cities there are 6 districts/cities in the good category/low nutritional problems (short  $<20\%$  and underweight  $<5\%$ ). (PSG, 2017).

The World Health Organization (WHO) in 2012 explained that the number of people suffering from malnutrition in the world reached 104 million children, where malnutrition is a factor in one third of the causes of child death throughout the world. South Asia is the region with the largest prevalence rate of malnutrition in the world, with 46%, followed by sub-Saharan Africa with 28%, Latin America/Caribbean with 7%, and the lowest in Central, Eastern Europe and the Commonwealth of Independent States (CEE/CIS). by 5%. Malnutrition in children under five can also be found in developing countries, including Indonesia.

"Basic Health Research (2018) shows that the prevalence of underweight in Indonesia in 2013

was 13%, short toddlers with 19.3% and very short 11.5%. If we look at the national prevalence rate in 2007 (18.4%) and 2010 (17.9%) it appears to have increased. Changes especially in the prevalence of malnutrition, namely from 5.4% in 2007, 4.9% in 2010, and 5.7% in 2013. This explains that there is an increase in the number of malnutrition and malnutrition every year from 2010 to 2013" (R&D Ministry of Health, 2013).

## 2. LITERATURE REVIEW

### 2.1 Mother's Characteristics

The nutritional status of toddlers caused by nutritional intake is indirectly influenced by several factors. Among them are the characteristics of the mother. Maternal characteristics are related to child growth and development. The mother, as the person closest to the child's care environment, plays an important role in the child's growth and development process through the nutritional food provided. The characteristics of the mother also determine the nutritional condition of the child. The following are some of the characteristics of the mother.

### 2.2 Mother's Age

Pregnancy under 20 years of age is a high-risk pregnancy. The morbidity and mortality rates for mothers and babies are 2-4 times higher compared to pregnancies in women who are old enough [1].

### 2.3 Mother's Knowledge

"Knowledge is the result of a person's knowledge, which is obtained from sensing an object to produce knowledge which is influenced by the intensity of attention and perception of the object" (Notoatmodjo, 2010).

## 2.4 Maternal Nutrition Knowledge

"Mothers are people who play an important role in determining food consumption in the family, especially for children under five. The mother's knowledge influences the family's food consumption patterns. Mothers' lack of knowledge about nutrition results in low budgets for food shopping and poor quality and diversity of food. Families buy more goods due to the influence of habits, advertising and the environment. Apart from that, nutritional disorders are also caused by the mother's lack of ability to apply information about nutrition in everyday life" [2].

### 2.4.1 Factors affecting mother's knowledge

According to the Ministry of Education and Culture (1994), knowledge is everything that is known; cleverness. Nutrition is a basic food substance that is needed for growth and health of the body (Depdikbud, 1994).

## 2.5 Mother's Education

According to the Ministry of Education and Culture (1994: 991), knowledge is everything that is known; cleverness. Nutrition is the basic food substances needed for growth and health of the body (Depdikbud, 1994: 320). "Alita is a child under five years old (0-5). This age is a period of growth that requires special attention from parents. The parent who plays the most role in a child's growth and development is the mother, especially in terms of food so that the nutritional intake given to toddlers can be balanced. This is because toddlers are an age that is vulnerable to nutrition and needs special monitoring of nutritional problems so that they are able to grow and develop optimally. Mothers' sources of knowledge about toddler nutrition can be obtained from educational levels, namely a) formal education, b) informal education, c) non-formal education.

## 2.6 Nutritional Status of Toddlers

### 2.6.1 Understanding

"Nutritional status is a state of balance between intake and need for nutrients. Nutritional status is good if the amount of nutritional intake is in accordance with what is needed. Unbalanced nutritional status can be manifested in the form of less nutrition than required. Meanwhile, nutritional status is more when nutritional intake exceeds what is needed. So nutritional status is

the condition of the body as a result of food consumption and use of nutritional substances" [3]. Nutritional status is nutritional status, health status resulting from a balance between nutrient needs and input (Beck 2002).

## 3. METHODOLOGY

### 3.1 Research Types and Designs

This research uses a cross-sectional design, where data regarding the independent and dependent variables are collected at the same time. Each research subject is only observed once and measurements are made of the subject's character status or variables at the time of the examination (Notoatmodjo, 2005)."

### 3.2 Population and Sample

The population in this study were all mothers who had toddlers in the Suka Mulia Health Center work area, totaling 83 mothers who had toddlers.

The sample is a portion or representative of the population to be studied ([4]:109). The sample that will be used in this research is 45 mothers.

### 3.3 Sampling Technique

The sampling technique used in this research was accidental sampling technique. According to Notoatmodjo (2012:125) accidental sampling is accidental sampling which is carried out by taking cases or respondents who happen to be present and willing in a place according to the research context".

## 4. RESULTS AND DISCUSSION

### 4.1 Nutritional Status of Toddlers at Suka Mulia Community Health Center, Nagan Raya Regency

Based on the results of Basic Health Research in 2019 in Susanti, et.al [5] it was stated that there was a decrease in children under five with malnutrition problems, namely around 19.4% in 2017 to 16.9% in 2019. Toddlers with malnutrition also experienced a decrease namely 5.9% in 2017 to 3.9% in 2019. Research conducted by Kartono, et.al. [6] in Sragen and Srawang districts also found a high percentage of children and toddlers with malnutrition status, namely above 20%, The prevalence of short toddlers is above 30%, and toddler energy consumption is below 70% of the recommended nutritional adequacy rate.

The prevalence of malnutrition among children under five in Aceh Province in 2015 (1.03%) decreased compared to the previous year (1.28%). The prevalence of malnutrition for children under five in 2015 was below the set target, namely 1.5%. Meanwhile, the prevalence of malnutrition apparently increased from 2014 by 6.6% to 7.7% in 2015. However, the prevalence of malnutrition was still below the provincial target in 2015, namely 8.8% [7].

“The results of research conducted on children showed that 22.2% of children had malnutrition. The emergence of malnutrition in children can be influenced by several factors, including internal and external factors. Internal factors are food intake and infectious diseases. External factors are parental education, type of work, parental income, mother's knowledge of food availability and food consumption patterns” [8].

“Lack of knowledge about nutrition and health of parents, especially mothers, is one of the causes of malnutrition in children under five. Mother's knowledge about nutrition is what the mother knows about healthy food, healthy food for certain age groups and how the mother chooses, processes and prepares food correctly. A mother's lack of nutritional knowledge will affect the nutritional status of her toddler and it will be difficult for her to choose nutritious food for her child and family. Knowledge about nutrition and the food that must be consumed to stay healthy is a determining factor in a person's health. The mother's level of knowledge about nutrition also plays a role in the magnitude of nutritional problems in Indonesia” (Notoatmodjo, 2010).

#### **4.2 Relationship between Mother's Knowledge and Nutritional Status of Toddlers at Suka Health Center Mulia Nagan Raya Regency**

" The research results showed that 31 mothers' knowledge was good (68.9%) while 14 mothers' knowledge was poor (31.1%). From the statistical test, a p value of 0.001 ( $\alpha < 0.05$ ) was obtained, which means there is a relationship between maternal knowledge and the nutritional status of toddlers at the Suka Mulia Public Health Center, Nagan Raya Regency. The results of this research are supported by research conducted by Susanti, et.al [5], Baculu, et.al [9] and Zuraida, et.al [10] stated that there was a significant relationship between knowledge and the variable nutritional status of toddlers (p value  $< \alpha 0.05$ ). "

According to Baculu, et.al [9] that the better the mother's knowledge about nutrition and healthy growth and development of toddlers, the better the assessment of food, meaning that the assessment of food is not based only on taste, but also pays attention to broader things such as content. rather than food. Apart from that, the good knowledge of mothers is also due to the average education of mothers at the Suka Mulia Community Health Center, most of whom are high school graduates to college graduates, and the results of the percentage of filling out questionnaires where the majority of mothers already understand about food as a source of nutrition for toddlers is 31 mothers with The average age is 31-40 years, which is the mature age for women and mothers really understand about good food processing for their toddlers (Perwira, et.al., 2017). "

#### **4.3 The Relationship between Maternal Education and Toddler Nutritional**

The results of the frequency distribution of research variables showed that the majority of mothers with higher education had toddlers with good nutritional status (62.2%) and the majority of mothers with low education had poor nutritional status of toddlers (17.8%). This means that the lower the mother's education, the risk of having a toddler with poor nutritional status is 3 times greater than that of a mother with higher education regarding the nutritional status of the toddler (Nurmaliza, et.al., 2019).

#### **4.4 The Relationship between Mother's Employment and the Nutritional Status of Toddlers**

From the results of the data frequency distribution, it was found that 42.2% of mothers who worked at the Suka Mulia Community Health Center, Nagan Raya Regency, the majority had toddlers with good nutritional status, 26.7% and 57.8% of mothers who did not work also had toddlers with good nutritional status, 51.1%. . The statistical test results obtained a p value of 0.070 ( $\alpha < 0.05$ ), which means there is no significant relationship between maternal employment and the nutritional status of toddlers at the Suka Mulia Public Health Center, Nagan Raya Regency. This research is supported by research conducted by Asmi. L, [11]; Kartikasari, et.al. [12] and Andra, et.al [13] stated that there is a relationship between work and the nutritional status of children under five (p value  $< \alpha 0.05$ ).

The above research is similar to the results of research conducted by Labada, A. [14] in his research which stated that there was no significant relationship between maternal employment and the nutritional status of toddlers with  $p=0.432$ . This is because the mother's job will influence the mother's income which will influence the toddler's nutritional intake during the period of growth and development, where mothers who have a higher income can provide more varied and nutritious food, so that it will affect the nutritional status of the toddler [15].

#### **4.5 The Relationship between Maternal Parity and the Nutritional Status of Toddlers**

The results of the research showed that there were 32 mothers with parity <4 children with good nutritional status of 29 children under five (64.4%). Meanwhile, there were 13 mothers with a parity of >4 children whose nutritional status was less than 7 children (15.6%). The statistical test results obtained a p value of 0.003 ( $\alpha < 0.05$ ), which means there is a significant relationship between maternal parity and the nutritional status of toddlers at the Suka Mulia Public Health Center, Nagan Raya Regency. This research is supported by research conducted by Marmi, S, [16]; and Kartikasari, et.al [12] stated that there is a relationship between the number of parities and the nutritional status of children under five (p value <  $\alpha 0.05$ )”.

According to Kusnandi, [17] mothers with more than three times parity have a higher risk than mothers with  $\leq 3$  times parity of having toddlers with poor nutritional status due to their ability to divide their time and parenting patterns that are not optimal. And mothers who have many children will cause many complications for the family, if income is not sufficient for the needs of family members, research in Indonesia has proven that if a family has only three children, it can reduce the rate of infant malnutrition by 60%. Mothers who have many children also cause unequal distribution of love and attention to each child [18].

### **5. CONCLUSIONS AND RECOMMENDATIONS**

#### **5.1 Conclusion**

Based on research conducted by researchers to find the relationship between maternal

characteristics and the nutritional status of toddlers at the Suka Mulia Public Health Center, Nagan Raya Regency, the researchers drew conclusions:

1. The majority of children's nutritional status at the Suka Mulia Public Health Center, Nagan Raya Regency is good (77.8%)”.
2. There was no significant relationship between maternal age and the nutritional status of toddlers at the Suka Mulia Public Health Center, Nagan Raya Regency ( $p= 0.519<0.05$ ). ”
3. There is a significant relationship between maternal knowledge and the nutritional status of toddlers at the Suka Mulia Community Health Center, Nagan Raya Regency ( $p= 0.001<0.05$ ).
4. There is a significant relationship between maternal education and the nutritional status of toddlers at the Suka Mulia Community Health Center, Nagan Raya Regency ( $p= 0.005 <0.05$ ).
5. There is no significant relationship between maternal employment and the nutritional status of toddlers at the Suka Mulia Community Health Center, Nagan Raya Regency ( $p= 0.070<0.05$ ). ”
6. There is a significant relationship between maternal parity and the nutritional status of toddlers at the Suka Mulia Public Health Center, Nagan Raya Regency ( $p= 0.003<0.05$ ).

#### **5.2 Suggestions**

##### **1. Suka Mulia Community Health Center**

It is hoped that with the results of this research, health workers can follow up on children under five who have poor nutritional status and provide education to parents about the importance of providing balanced and nutritious food to children under five for their growth and development. So that in the future no more children under five will be found who have Malnutrition status in the Suka Mulia Community Health Center working area.

##### **2. Mothers who have toddlers**

Mothers who have toddlers in the Suka Mulia Community Health Center working area with technological developments are expected to continue to explore information about children's health, especially procedures for providing nutritious food to

toddlers, so that toddlers can grow and develop according to their age.

## CONSENT AND ETHICAL APPROVAL

It is not applicable.

## COMPETING INTERESTS

Author has declared that no competing interests exist.

## REFERENCES

1. UNICEF Indonesia. Study summary. UNICEF; 2013.
2. Sri. factors associated with the nutritional status of toddlers in Situwangi Village, Rakit District, Banjarnegara Regency; 2010.
3. Almatsier, Sunita. Basic principles of nutrition science. Jakarta: Gramedia Pustaka Utama; 2003.
4. Arikunto, Suharsimi. Research Procedures A Practice Approach . Revised Edition. Rineka Cipta. Jakarta; 2002.
5. Susanti et.al. The Relationship between Several Mother's Characteristics and the Nutritional Status of Toddlers Aged 2-3 Years in Mojekertolaten; 2020. Available:https://jurnal.fk.unand.ac.id . Labor Law No.14 of 1969 Article 12 Paragraph 1
6. Kartono E. The relationship between maternal knowledge and attitudes and the nutritional status of toddlers at the Batang Kais Community Health Center; 2018. Available:https://jurnal.unnes.ac.id/0845/babi.gty.
7. Aceh Health Service. Aceh Health Profile. 2015;23-25.
8. Adriani, Wiratmadi. The Relationship Between Mother's Knowledge About Nutrition and the Nutritional Status of Toddlers Aged 1-3 Years in Mobodis Village, East Nusa Tenggara; 2014. Available:http://jurnale-biomed.samratulangit.ac.id.
9. Boculu et.al. The relationship between maternal knowledge and carbohydrate intake and nutritional status in children under five in Kalangkangan Village, Galang District, Tolitoli Regency. Promotive. 2017;7(1):14-17.
10. Zuraida et.al.. The relationship between maternal knowledge about toddler nutrition and toddler eating patterns on toddler nutritional status. Thesis. Faculty of engineering UNY; 2019.
11. Asmi L. The Relationship Between Knowledge and Attitudes of Parents Regarding Nutrition in Improving the Nutritional Status of Pre-School Age Children in the Working Area of the Sonorejo Sukoharjo Community Health Center; 2013. Available:http://digilib.unimus.ac.id/files/disk1/132/jtptunimus - gdl - noorrofiqo 6586 - 2.
12. Kartikasari et. al. The relationship between education, parity and maternal employment with the nutritional status of pregnant women in the third trimester at the Bangetayu Community Health Center, Genuk District, Semarang City; 2017. Available:http://jurnal.animus.ac.id
13. Andra et.al. Relationship between Mother's Characteristics and Nutritional Status of Toddlers in Kendal Regency. Faculty of Medicine, Muhammadiyah University, Semarang; 2019.
14. Labada A. The Relationship Between Mother's Characteristics and the Nutritional Status of Toddlers Who Visit the Bahu Manado Community Health Center. eJournal of Nursing (eKp) May 2016;4(1).
15. Widita et.al. Nutritional Status Assessment. Jakarta: EGC Medical Books; 2019.
16. Marni S. Relationship between parity and nutritional status with the incidence of anemia On Toddlers. Journal of Midwifery Science. 2017;5(1):41-48
17. Kusnandi. Food and Nutrition for Health. Jakarta: PT Grafindo Persada; 2018.
18. Supariasa. Nutritional Status Assessment. Jakarta: EGC.; 2012.

© Copyright (2024): Author(s). The licensee is the journal publisher. This is an Open Access article distributed under the terms of the Creative Commons Attribution License (<http://creativecommons.org/licenses/by/4.0>), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

Peer-review history:

The peer review history for this paper can be accessed here:

<https://www.sdiarticle5.com/review-history/109081>