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Determinants of Nutritional Status in Toddlers

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ABSTRACT

Nutritional status is a common problem for toddlers. Of the 129 toddlers there were 26 toddlers (20.2%) with underweight nutritional status, 102 toddlers (79.1%) with normal nutritional status and 1 toddler (0.7%) with very obese nutritional status in February 2019 in Randugede Village, Plaosan District. m net. This study analysed the relationship between knowledge, income, education, parenting and nutrition status of children under five years of age. This kind of research is an analytical inquiry with a comprehensive approach. The research sample consisted of toddler and toddler mothers, all of whom accounted for 79 taken by simple random sampling. Data based on questionnaires and anthropometric measures of weight/size were compared to the z-score. Data analysis, both bivariate and multivariate. Based on the results of data analysis, it was found that the level of knowledge was p = 0.011, parents' income was p = 0.006, education level was p = 0.414, toddler's Dietary pattern was p = 0.010, and parenting pattern was p = 0.003. The results of the study can be concluded that there is relationship between knowledge, income, dietary pattern, parenting and nutritional status of toddlers and there is no relationship between education and nutritional status of toddlers.

Keywords: knowledge; income; education; Dietary pattern ary habits; parenting; nutritional status for toddler

INTRODUCTION

The toddler is a period in which the child grows up quickly, so the need for nutrients increases too. Toddlers are the age group with the greatest number of nutritional problems[(1)]. Nutritional status is the principal indicator of nutritional adequacy for children under five years of age. According to Supariasa (2012), nutritional status is the state of the organism as a result of food intake and nutrient utilization[(2)]. The nutritional state can be divided into five, namely the very thin, thin, normal, fat and very fat nutritional state [(2)]. According to Supariasa (2012), nutritional status can be determined by human, clinical, biochemical and biophysical tests[(2,3)].

According to data from the Ministry of Health of the Republic of Indonesia, the malnutrition rate among children under five is 3.80% of 23,848,283 children under five [(4,5)]. Data from the East Java Provincial Health Bureau, the number of malnourished children under the age of five is 7.4% of 2,319,878 children under the age of five [(6)]. Malnutrition rate for children under five in Magetan Regency was 6.2% of 34,450 children under five [(6)] and in Plaosan District, the number of malnutrition in children under five in 2016 was 0.17% of 2,876 children under five [(7)] and increased in in 2017 to 0.72% of 2,896 children under five [(8)]. One of the villages in Plaosan District is Randugede Village, based on data from Posyandu 129 toddlers there are 26 toddlers or 20.2% with underweight nutritional status, as many as 102 toddlers or 79.1% with normal nutritional status and 0.7% or 1 toddler very fat. Based on this data, it can be concluded that there are still many little ones with nutritional problems.

Malnutrition is a serious health condition that occurs when the body is undernourished. Nutrients must be needed so that the body can function properly. Malnutrition may occur when the body is malnourished for a prolonged period of time. According to Supariasa (2012: 13-14), there are two factors that play a role, namely the first is infectious diseases that can be caused by parenting, environmental health, health services and health maintenance[(2)]. The second factor is the Dietary pattern ary intake that may be caused by parental knowledge, parenting education, parental income, Dietary pattern , weaning age, undernutrition and large family members.

Nutritional problems in toddlers if not treated immediately will have an impact on suboptimal brain development, suboptimal physical growth, non-optimal growth of metabolic organs, decreased cognitive and educational abilities, and stunting [(4)]. Moreover, nutritional problems will also affect abnormal behavior in children. Nutritional problems also interfere with the child's motivation, concentration and enjoyment of learning. In undernourished children, the brain cell count is lower.

Activities for handling cases of nutrition are counseling to the public about signs of nutritional problems and ways as prevention efforts that can be carried out by the community, bringing services closer by setting up new posts or therapeutic feeding centers (if possible), providing nutrition and treatment services based on SOPs (guidelines). management of malnutrition in hospitalized or outpatient patients), provision of facilities, nutrition supplementation and infant formula. Efforts to prevent the growing number of nutritional cases by increasing body resistance through immunization, addition of food, improved environmental and other conditions[9].

Based on the above description, the researcher would like to examine the factors that can cause the nutritional state. This study should analyze the factors that cause nutritional status in toddler.

The purpose of this study was to identify the effect of parental knowledge; parent's income; parental education; Dietary pattern ary habit; parenting on nutritional status; analyze the determinants of nutritional status in children under five.

METHODS

This type of research was an analytical survey that has a transversal research design[10]. The research was performed from March to April 2019. The study population was toddlers and parents of toddlers aged 0-5 years in February 2019 in Randugede Village, Plaosan Magetan District, with a total of 129 toddlers, a sample of 79 toddlers. The independent variables in this study were parental knowledge, parental income, parental education, nutrition and parenting habits, whereas the dependent variable in this study was nutritional status. Data were collected using questionnaires, then analyzed by Fisher's test. This ethical issue focuses on informed consent, anonymity and privacy[11].

RESULTS

Table 1. Distribution of nutritional status

Nutritional status	Frequency	Percentage
Very thin	0	0
Thin	14	17.7
Normal	52	65.8
Fat	9	11.4
Very fat	4	5.1

The results indicated that 14 toddlers (17.7%) had a nutritional underweight.

Table 2. Distribution of toddler parents' knowledge

Knowledge	Frequency	Percentage
Less	5	6.3
Sufficient	23	29.1
Good	51	64.6

The results showed that the majority of parents under five had knowledge in the good category (64.6%).

Table 3 Distribution of income complications for parents of toddlers

Income	Frequency	Percentage
Less	33	41.8
Sufficient	46	58.2

The results showed that the majority of parents of toddler had income in the sufficient category (58.2%).

Table 4. Distribution of education level of mothers toddler

Education	Frequency	Percentage
Low	29	36.7
High	50	63.3

The results showed that the majority of mothers of toddler had a high level of education (63.3%).

Table 5 Distribution of toddler dietary pattern

Dietary pattern	Frequency	Percentage
Not suitable for RDA	23	29.1
Suitable to RDA	56	70.9

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The results showed that the majority of toddlers had a Dietary pattern according to the RDA (Nutrition Adequacy Ratio).

Table 6. Distribution of parenting

Parenting	Frequency	Percentage
Permissive	12	15.2
Authoritarian	9	11.4
Democratic	58	73.4

The results showed that the majority of mothers under five applied democratic parenting (73.4%).

Table 7. Summary of ordinal regression test I

Variabel	p value
Knowledge*Nutritional Status	0.044
Income*Nutritional Status	0.009
Education*Nutritional Status	0.414
Dietary pattern *Nutritional Status	0.025
Parenting*Nutrition Status	0.003

From the results of the regression test the four variables had a p value <0.05, and one variable had a p value> 0.05, the knowledge variable obtained p value of 0.038 (<0.05), the income variable obtained p value of 0.009 (<0.05), education got p-value of 0.414 (>0.05), dietary pattern got p-value of 0.025 (<0.05), and parenting got p-value of 0.003 (< 0.05).

Table 13 Summary of ordinal regression test II

Variabel	p value
Knowledge*Nutritional Status	0.011
Income*Nutritional Status	0.006
Dietary pattern*Nutritional Status	0.010
Parenting*Nutrition Status	0.003

From the results of the second regression test, the results of the four variables had p value <0.05. In the knowledge variable, the p value of 0.011 (<0.05), the income variable, the p-value of 0.006 (<0.05), the dietary pattern ary pattern variable, the p-value of 0.010 (<0.05), and the parenting variable value of p value 0.003 (<0.05).

DISCUSSION

Relationship between Nutritional Status and Knowledge

Based on the results of data analysis using ordinal regression test, it can be concluded that there is a significant relationship between the level of knowledge of mothers with nutritional status toddler. The results of this study are in accordance with research conducted by Khayati 2010, that there is a relationship between the level of knowledge and the nutritional status of toddlers where the p value is 0.017 (<0.05). Another study also conducted by Puspasari 2017 showed that there was a relationship between the level of knowledge and the nutritional status of toddler where the p value was 0.000 (<0.05). It is mean that the nutritional status of toddler is influenced by the mother's level of knowledge about nutrition and intake of toddlers[12,13].

The results of this study are also in accordance with the theory of Supariasa which states that parental knowledge will affect the choice of food ingredients and the fulfillment of nutritional needs. The principle that someone with low knowledge has usually is that it is important to be filling, so that the portion of food sources of carbohydrates is more than other food groups. On the other hand, the group with parents with high knowledge tends to choose protein sources and will try to balance it with nutritional needs(2).

Mothers who have good knowledge, the better the nutritional status of their toddlers, while mothers who lack knowledge will affect eating patterns and food choices which will affect nutritional status. And one of the causes of nutritional disorders is a lack of nutritional knowledge or willingness to apply information about nutrition in daily life.

Relationship between Nutritional Status and Income

Based on the results of data analysis using ordinal regression test, it can be concluded that there is a significant relationship between parent's toddler income with toddler nutritional status. The results of this study are in accordance with research conducted by Khayati 2010, that there is a relationship between education level and nutritional status toddlers where the p-value is 0.008 (<0.05). Research conducted by Prehani 2018 shows that there is a relationship between education level and nutritional status of toddlers with a p-value of 0.001 (<0.05). The economy is a fairly dominant factor in increasing opportunities to buy food with better quantity and quality, it is better if a decrease in income will cause a decrease in food purchasing power both in quality and quantity [12-15].

One of the causes of nutritional status of toddler is the family's economic condition). Insufficient family income results in the family being limited in meeting the nutritional needs of the family in terms of quality and quantity. On the other hand, families with sufficient income will influence the family in choosing food both in terms of quality and quantity.

Relationship between Nutritional Status and Education

Based on the results of data analysis using ordinal regression test, it can be concluded that there is no significant relationship between education level mothers of toddlers with toddler nutritional status. The results of this study are in accordance with research conducted by Nilakesuma 2015, that there is no relationship between education level and nutritional status of toddlers where the p value is 0.581 (<0.05). Research conducted by Dhinul (2016) shows that there is no relationship between education level and nutritional status of toddler with p value 0.190 (<0.05).

There is no relationship between mother's education and the nutritional status of children under five, this happens because there are many other factors that also influence nutritional status of toddler. Although the mother's education is high but is unable to provide nutritious food sources, it will affect the nutritional status of toddler. In addition, education can not only be obtained through formal education, education can also be obtained through non-formal education, for example, mothers of toddlers take classes for mothers of toddlers and receive counseling about nutrition from health workers. In addition, mothers can also get information both from formal education and from (non-formal) media, such as radio, TV, internet, newspapers, magazines[16,17].

Relationship between Nutritional Status and Diet

Based on the results of data analysis using the ordinal regression test, it can concluded that there is a significant relationship between eating patterns and the nutritional status of toddlers. The results of this study are in accordance with research conducted by Fitriningsih 2009, that there is a relationship between the level of educati and nutritional status of toddlers where the p value is 0.017 (<0.05). Research conducted by Sari (2014) shows that there is a relationship between ucation level and nutritional status of toddlers with p-value 0 (<0.05). According to Sulistyoningsih 2011, th pattern of feeding is a variety of information about needs, selection of food ingredients, and nutritional status that provides an overview of the types and amounts of food eaten every day by toddlers and is a characteristic of a particular community group[15,18].

Toddlers have a risk of experiencing malnutrition problems, because at this time eating problems often occur because children have started to become active consumers at the age of 3-5 years who tend to be picky about the food to be consumed. Dietary factors are direct factors that affect nutritional status. This dietary factor is in the form of eating patterns that can be assessed from the amount and type of food consumed, as well as the way of feeding.

Relationship between Nutritional Status and Parenting

Based on the results of data analysis using the ordinal regression test, it can concluded that there is a significant relationship between eating patterns and the nutritional status of toddlers. The results of this study are in accordance with research conducted by Dwi Pratiwi 2013, that there is a relationship between parenting patterns and the utritional status of toddlers where the p value is 0.014 (<0.05). Research conducted by Handayani 2017 shows that there is a relationship between parenting and nutritional status of toddlers with a p value of 0.001 (<0.05). According to Engle, the mother's role is very influential in the nutritional status of children. Parenting plays an important role in the occurrence of growth disorders in children[19-22].

The behavior of mothers in caring for their toddlers has a close relationship with the nutritional status of toddlers. Mothers with good parenting will tend to have children with good nutritional status, and vice versa, mothers with less nutritional parenting tend to have children with poor nutritional status as well. Mother's parenting is the behavior of mothers in caring for their toddlers. Behavior itself is influenced by attitudes and knowledge. Good knowledge will create a good attitude, which then if the attitude is judged appropriate, then good behavior will appear as well[23,24].

CONCLUSION

From the results of the study, conclusions can be drawn regarding the analysis of risk factors that affect nutritional status of toddlers, namely, there is a relationship between the level of knowledge of mothers of toddlers, income levels of parents of toddlers, eating patterns of toddlers, parenting applied by mothers of toddlers with nutritional status of toddlers, there is no relationship between mother toddler's education with nutritional status.

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