MOTHER KNOWLEDGE OF NUTRITION AND EFFECT ON NUTRITIONAL STATUS OF CHILDREN IN COMMUNITY HEALTH CENTER

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ABSTRACT

Background: *The level of nutritional knowledge from a mother will affect a person in the decision to provide a child's intake, so it will automatically affect the nutritional status of the child. Good knowledge is expected that children will get good nutrition so that children's growth is in accordance with the age of growth and development. Good knowledge of mothers will look to provide or prepare daily food in an amount sufficient for the nutritional needs of the child.*
Objective: *The purpose of this study was to determine the effect of maternal knowledge on nutrition on the nutritional status of toddlers at Puskesmas Harapan Raya Pekanbaru.*
Method: *This type of research is observational analytic, with aapproach design cross sectional. The study population was all mothers who have children under five at Puskesmas Harapan Raya Pekanbaru. The research sample consisted of 35 respondents using purposive random sampling technique. The research instrument used a questionnaire to measure the level of knowledge of the nutritional status of toddlers using parameters of body weight / height based on the Z score category. The results of the measurement of research data were then carried out by testing the hypothesis by using the Chi-Square test*
Result: *The results showed that from the results of the hypothesis test the effect of the level of maternal knowledge about nutrition on the nutritional status of toddlers, the value of p = 0.001 (p> 0.05) was obtained, so that Ho was rejected, which means that there was an effect of the level of mother's knowledge about nutrition on the nutritional status of toddlers. With OR: 14.7 with 95% CI: 2.31-93.44.*
Conclusion *: The level of mother's knowledge affects the nutritional status of children under five. The magnitude of the influence of a high level of maternal knowledge is 14.7 x fold compared to mothers with low knowledge.*

INTRODUCTION

Nutritional status is an indicator of health and nutrition for children under five years of age. If malnutrition is not handled immediately, it is feared that it will develop into malnutrition, which can cause physical growth, intelligence and productivity problems as adults. Nutrition is one of the important factors in determining nutrition data for children under five, to determine the quality of human resources, toddlers are a nutritionally vulnerable group (Depkes, 2005).

Nutrition knowledge of parents is very influential on children's diet. The level of nutritional knowledge that is practiced in family meal planning is apparently related to a positive attitude towards herself, the mother's ability to solve problems and organize the family (Sunita 2010).

According to the World Health Organization (WHO), the number of malnourished sufferers in the world is: 104 million children, and malnutrition is still the cause of one third of all causes of child mortality worldwide. South Asia is the region with the largest prevalence of undernutrition in the world, which is 46 percent, then in Sub-Saharan Africa 28 percent, Latin America 7 percent, and the lowest is in Central, Eastern Europe and the commonwealth of independent states *(CEE / CIS)* by 5% (Sigit, 2012). UNICEF reports that as many as 167 million pre-school children in the world who suffer from malnutrition (Underweight) are mostly in South Asia (Gupta, R., Chakrabarti, S., Chatterjee, 2016).

According to the results of Basic Health Research, Indonesia has 5.7 percent of children under five with malnutrition or as many as 26.18 percent of children, and 13.9 percent of under-nutrition and 4.5 percent of children under five with more nutrition (Riskesdas, 2013). The prevalence of malnutrition in Indonesian children under five according to the results of the Nutrition Status Monitoring (PSG) carried out by the Indonesian Ministry of Health, in 2014 was 4.7%, then in 2015 the rate of malnutrition was 3.4%, and 2016 the prevalence of malnutrition in Java middle of 4.1 % and has succeeded in below the national target of 5.7 % (PSG, 2016). The prevalence of malnutrition status in Pekanbaru City is 30.2%, the limit of public health problems for nutritional status is more than 20%, thus the problem of malnutrition is still a public health problem in Pekanbaru City (Medical, 2017). Children under five years of age are a group that shows rapid development, but this group is the most frequent group suffering from malnutrition that can affect brain development (Supariasa, IDM, Bakri, B., & Fajar, I. 2016).

Malnutrition in children can cause several negative effects, such as slow body growth, susceptibility to disease, decreased intelligence, and mental disorders. Serious malnutrition can lead to child death (Santoso 2004). Malnutrition at the age of children under 5 years of age will cause irreversivel

damage. It can be seen from the short body size and has an impact on brain development. As a result of lack of nutritional intake, nutritional status is divided into two characteristics, namely acute nutritional status and chronic nutritional status. Nutritional status Acute as a result of conditions that last for a short time, such as decreased appetite due to illness or suffering from diarrhea (Sunita 2010).

The nutritional status of children under five is influenced by many factors, both direct and indirect. Direct causes that affect nutritional status are food intake and infectious diseases suffered by toddlers, indirect causes include food availability, in this case knowing the work and income of parents, child care patterns, and health and environmental health services. The three indirect causes are related to the level of education, knowledge and skills of the family (Adisasmito 2007).

METHODS

Type of research is an observational analytic study with aresearch design cross sectional study, this design is a design research that is measurement or observations are done in a way together between data retrieval and technical measurement results sampling accidental sampling.

The instrument used in this research is a questionnaire that has been tested for its validity and reliability on the respondent's diet, while diabetes is based on a doctor's diagnosis and measurement of the respondent's blood sugar. The data analysis used was univariate and bivariate analysis. Univariate analysis aims to determine the frequency distribution of the characteristics of age, education, occupation and respondent information sources, whilebivariate analysis is carried out to analyze the effect of the independent variable (Effect of Knowledge level) on the dependent variable (nutritional status of children under five), the analysis is carried out through a data processing process with using the program *Statistic Package for Social Science* (SPSS) version 20, with Bivariate analysis which aims to obtain the relationship of each variable. The statistical test used is the Person *Chi-square* with a significance level or degree of error (α) 0,05. And to determine the strength of the influence of the independent variable on the dependent variable, the test is carried out by looking at the Odd Ratio and CI 95%

RESULTS

Univariate

Data analysis Univariate that is seen is the characteristics of the respondents which include the age of the respondent, the respondent's education, the respondent's occupation and the variable source of information obtained by the mother about nutrition. From the four variables, it can be seen that the mean value (30) means that the average respondent is 30 years old and the Min-Max value (25-48) means that the

youngest age is 25 years and the oldest is 48 years, while the CI 95% value: 28.70-31.30, from this value it can be concluded that the reliable average age distribution of the respondents is between 28.70 - 31.30 years. From the variable of the respondent's education level, it can be seen that the average education of the respondent is high school education (68.6%), while the rest is distributed to primary and junior high school education, namely 14.3% respectively. Job Variable can be seen that most of the respondent's work is taking care of the household (88.57%), while the variable source of information about nutrition can be seen that on average comes from Health Officers about toddler nutrition, namely 50%) and from the internet 39.29%, frequency distribution The characteristics of the respondents are shown in table 1.

Table 1. Respondent Characteristics

Variable	F	%
Age:		
Mean	30	
Standard Deviation	3.78	
Min-Max	25-48	
CI 95%	28.70-31.30	
Education		
Elementary School	5	14.3
Junior High School	5	14.3
Senior High School	24	68.6
College	1	2.9
Occupation		
Housewife	31	88.57
Self-employed	4	11.43
Information Sources		
Internet	11	39.29
Print Media	3	10.71
Health Officers	14	50

Source: Primary Data, 2020

Bivariate Analysis

The Effect of Knowledge Level on Nutritional Status of Toddlers

The results of the bivariate analysis of the effect of the mother's level of knowledge about nutrition on nutritional status can be seen the comparison between the nutritional status of children under five who is good on average in mothers with low knowledge levels (60%), high rate (14.3%). And the results of the bivariate analysis of the influence of the level of knowledge on the nutritional status of toddlers can be concluded that there is an influence between the level of knowledge on the nutritional status of toddlers, this is evidenced by the results of statistical tests with person Chi-Square. Pekanbaru It can be seen from the p-value in the study is 0.001 which means it is smaller than (p-value 0.05). And a low level of knowledge has a risk for their children to experience malnutrition by 14.7 times compared to mothers who have a high level of knowledge, this is evidenced by the OR value of 14.7 with CI95% 2.31 - 93.44. The distribution of the influence of the level of knowledge on the nutritional status of children under five is shown in the table below.

Tabel 2. Effect Of Knowledge Level On Nutritional Status Of Toddlers

Know ledge	Status of Nutritional		*p-value*	*OR / CI 95%*
	Good	**Poor**		
Low	21 (60%)	2 (5.7%)	0.001	14.7 / 2, 31-93.44
High	5 (14.3%)	7 (20%)		

Source: Primary Data, 2020

DISCUSSION

Based on cross tabulation between the relationship between maternal knowledge about nutrition and nutritional status of children under five at Puskesmas Harapan Raya Pekanbaru, with the relationship between knowledge about maternal nutrition In toddlers, it appears that the mother has a low level of knowledge (60%), while in children who experience poor nutritional status, the knowledge of the mother is in the high category (20%).

According to (Notoatmodjo 2012) that knowledge is the result of knowing from humans, and this happens after people sense a certain object. Sensing occurs through the five human senses, namely the sense of sight, listener, smell, taste, and touch. Most of the mother's knowledge about toddler nutrition should be guided by balanced nutrition and must meet the nutritional adequacy standard for children under five. Balanced nutrition is a condition that ensures the body gets adequate food and contains all the nutrients in the required amount. With balanced nutrition, the growth and development of toddlers will be optimal and their immune system will be good so they don't get sick easily (Febry, Pujiastuti, Fajar, 2013).

Research conducted by (Putri, Sulastri, and Lestari 2015) which examined the "Factors Associated with the Nutritional Status of Children under Five in the Work Area of the Puskesmas Nanggolo, Padang" which describes 32 children under five with malnutrition status, as many as 31 people (31, 6%) came from the group of mothers with low education and 1 person (12.5%) came from the group of mothers with higher education. The results of this study were obtained as described due to the lack of knowledge of mothers about toddler nutrition.

Nutritional status is the state of the body which is the final result of the balance between the nutrients that enter the body and their use ”(Mustika, 2012). "Nutritional status is a manifestation of nutriture in the form of certain variables. Example: Endemic goiter is a state of imbalance in the intake and excretion of iodine in the body ”(Soetjiningsih. 2012). Nutritional status is influenced by several factors, both directly and indirectly, including food intake, history of infection, parental occupation and weighing in 1 year.

The results of statistical tests showed that there was an influence between knowledge and nutritional status of children under five (P value 0.001). With the odd ratio value of 14, 7 and 95% CI (2.31-93.44), this

means that the level of knowledge of the mother has an effect on nutritional status. toddlers are 14.7 times that of their toddlers when compared with low knowledge levels. According to researchers, a mother's knowledge will affect the nutritional status of her toddler, where a mother who knows how the nutritional needs of her toddler will try to meet the nutritional needs of her toddler according to the knowledge she has. With this knowledge, a mother will try various variations of food according to the needs of her toddler and try to use various tricks so that her toddler wants to eat. This research is in accordance with the research conducted by (Suryani 2017) entitled "Factors Affecting the Nutritional Status of Toddlers in the Work Area of Puskesmas Payung Sekaki Pekanbaru". The results of this research prove that there is a significant influence between knowledge and nutritional status of children under five.

According to, (Supariasa, IDM, Bakri, B., & Fajar, I. 2016) nutritional status is an expression of a state of balance in the form of certain variables or the manifestation of *nutriture* in the form of certain variables. The nutritional status of toddlers is strongly influenced by the level of knowledge of a mother because it will be well accompanied by the behavior of providing nutritious food for toddlers. (Shoewu et al. 2016) Knowledge can be obtained from information from various media such as TV, radio or newspapers as in this study. mothers get information about the nutritional needs of toddlers from counseling provided by the health center for every Posyandu program implementation (Hermawati, N. Ayu Gustia 2018).

This information increases the mother's knowledge accompanied by new behaviors in providing nutritious food for toddlers, so that the nutritional status of toddlers becomes good. Nutritional status is an expression of a state of balance in a certain form or a manifestation of nutriture in a certain variable. (Afriansyah and Fikrinnisa 2018) According to researchers, food intake is a factor that can affect the good nutritional status of children because food is one of the factors that directly affects children. The nutritional condition of a person because the consumption of food that is not in accordance with the needs of the body, both quality and quantity can cause nutritional problems. The factors that influence nutritional status are infectious diseases, parents 'occupation, and parents' income. This opinion is supported by the theory of this research in accordance with what has been done by (Rona Firmana Putri, Delmi Sulastri 2015) with the title "Factors Related to the Nutritional Status of Toddlers in the Work Area of the Puskesmas Nanggalo Padang". That information will also have an influence on someone's knowledge. Even though a person has low education, if he / she gets good information from various media such as TV, radio and newspapers, it will increase one's knowledge (Istiono et al. 2009)

The factor that can affect the nutritional status of toddlers is food intake in children. and infectious diseases which are direct causes, while the indirect causes are food supplies at home, knowledge, child care patterns, health services and environmental health and poverty. (Riyadi et al. 2011) Knowledge in this study is the understanding of mothers under five about nutritional needs. toddlers include the definition of nutrients, types, benefits and signs of malnutrition. In terms of proportion, it shows that the majority of mothers with good knowledge have toddlers with good nutrition, this is in accordance with the research (Mahardika 2016). Research conducted by Panambunan and Sjane also found that more mothers with low knowledge had toddlers with less nutritional status than those with good nutritional status. However, this is different from the research conducted by Yoseph which shows that children with less nutritional status come from groups of mothers with high knowledge compared to groups of mothers with low knowledge. This is because mothers do not apply the knowledge they have about the nutritional needs that must be met for their children. Based on research conducted by Indra, one of the causes of malnutrition is a lack of knowledge about nutrition or a lack of application of this information in everyday life (Masithah 2005), (Panambunan W 2006).

The results of this study are similar to those conducted by Rahmawati *et al.* who get the results that there is a significant relationship between maternal knowledge and nutritional status of children under five. According to theory, the level of maternal knowledge greatly affects the nutritional status of children under five because the needs and nutritional adequacy of children under five depend on the mother's knowledge of the types of food provided by the mother (Woge, Yoseph and 2017), (Rahmawati, Sudargo, and Pramastri 2007).

Nutritional knowledge good will cause someone to be able to prepare a good menu for consumption. As well as the more knowledge of a person's nutrition, so that he will increasingly take into account the type and amount of food he gets for consumption (Sediaoetama, 2006), but no matter how good a mother's knowledge about health is if it is not applied when caring for toddlers, it will not affect nutritional status (Afriansyah). and Fikrinnisa 2018).

CONCLUSION

The level of maternal knowledge about nutrition has a very significant effect on the nutritional status of children under five. The magnitude of the influence of the high level of maternal knowledge has the potential of 14.7 x times to have children with good nutritional status when compared to mothers who have low knowledge.

RECOMENDATION

With the significant results of statistical tests the level of knowledge on nutritional status in toddlers, so the researchers recommend that mothers who have toddlers to keep their knowledge updated both formally and non-formally, especially those related to parenting and nutritional consumption patterns for their children to ensure and improve the nutritional status of their children, so as to improve the quality of their children's health and quality of life

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