JURNAL MIDPRO, Vol. 14 No. 01 (Juni, 2022) : 121-128 **E-ISSN: 2684-6764**
Terakreditasi Nasional Peringkat 4 No. 36/E/KPT/2019
Available Online at http: http://jurnalkesehatan.unisla.ac.id/index.php/midpro

Factors Correlating to Mothers' Knowledge on Toddler's Nutrition Need

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ABSTRACT

Good nutrition intake plays an important part in achieving optimum body growth, including brain growth as well highly determining an individual's intelligence. Toddlers are more interestedin environment and improving their motor skill than in food; therefore, the food served should be always varying. The objective of research is to find out the factors correlating to mothers' knowledge on nutrition need in toddlers. The result of observation conducted by the author in Cermee Village, Cermee Sub District, Bondowoso found many mothers with toddlers (1-3 year children) have poor knowledge on the nutrition need in 1-3 year old children. The method used was quantitative one, with descriptive correlational design and cross-sectional approach and exhaustive sampling technique taking 34 respondents being the sample. The result of univariate analysis shows that 67.7% of respondents have poor knowledge on toddler's nutrition need and factors correlating to mothers' knowledge on toddler nutrition are occupation and information source with substantially different proportion (>10%). Meanwhile, education and age factors have very small proportion difference.

Keywords: Knowledge, Nutrition Need, Toddler

Article history :

Received: 10 Februari 2022
Received in revised form: 17 Maret 2022
Accepted: 25 April 2022
Available online: 1 Juni 2022

INTRODUCTION

Childhood is an early stage of life and a very fast growth and development phase. To optimize growth, nutrition intake is required to meet the need. Children's optimum growth is determined by balanced nutrition consumed by children. If children experience the change of nutrition intake, either surplus or deficiency, it will affect their growth, either retarded or obesity [1].Nutrition highly affectsbrain (mind) and behavior development, working ability and productivity, and resistance to infectious disease [2]. Good nutrition intake plays an important part in achieving optimum body growth and likewise brain growth that highly determines an individual's intelligence. Toddlers are more interested in environment and in improving motor skill than in food, so that the food served should be varying. Toddlers' need for food material should be organized and adjusted, to give them necessary nutrition intake completely in one day. The factor causing malnutrition directly, particularly malnutrition in baby and toddler, is among other incompatibility of nutrition amount they obtain from food to their body's need [3]. The result of interview with the employees of Puskesmas (Public Health Center) of Cermee Village, Cermee Sub District, Bondowoso Regencyfound that many women with toddler have poor knowledge on children's nutrition need.

In 2010-2012, FAO estimated that about 870 millions out of 7.1 billions world populations or 1 out of 8 world populations suffer from malnutrition. Most of them (852 millions populations) live in developing countries. Most of children develop malnutrition live in Asian countries, 26% in Africa and 4% in Latin America like Caribbean islands. A half of 10.9 million child death cases are dominated by malnutrition, because malnutrition can lead to other diseases like measles and malaria [4].Underweight in under-five age children (weight according to age under 2nd grade of Elementary School), according to Primary Health Research (Indonesian: *Riset Kesehatan Dasar*, thereafter called Riskesdes) [5], shows fluctuating value from 17.7% (2010) to 19.6% (2013). There is a trend increase in the number of short-slim children (5.3%), in the number of short-normal children (2.1%), and in the number of fat-normal children (0.3%) in 2010 and 2013. Out of 33 provinces existing in Indonesia, 2 provinces have malnutrition cases belonging to very high category: Papua Barat (West Papua) and Nusa Tenggara Timur (East Nusa Tenggara). Meanwhile, to achieve the target of MDGs of 2015 (15.5%), the national malnutrition rate should be decreased by 4.1%. The preliminary study conducted in Cermee Village, Cermee Sub District, Bondowoso Regencythrough interviewing 10 women with 1-3 year old children found that 3 women answered 10 questions given correctly in which they know definition, feeding stage according to age and nutrition need in 1-3 year

old children, while 7 women could not answer the questions correctly, because they think that the food their children like have meet their nutrition need.

Poor knowledge on nutrition and health among parents, particularly mothers, is one of factors causing malnutrition in under-five age children. In addition, in rural areas food is affected by social, economic, and cultural conditions [6]. There is food abstinence in under-five age children, for example they may not consume fish as it can cause worm disease,and they may not consume beans as it can cause stomachache. Mothers' knowledge affects the family food resilience in which the selection of family food material is highly affected by mothers' knowledge on nutrition. Mothers with poor knowledge on nutrition requirement will affect adversely the feeding and food intake of under-five age children and then will affect their nutrition status [7].

Considering the problems occurring within society, mothers' poor knowledge on nutrition need in under-five age children, the appropriate measure to be taken firstly is to identify the factors relating to mothers' knowledge on nutrition need in toddlers. Knowing those factors, anticipative measures can be taken later.

METHOD

This study is a descriptive explorative research, the one conducted by solving the problems explored widely concerning the causes or the factors affecting something occurring based on the facts found in the field. The population of research consisted of all women with 1-3 year old children in Cermee Village, including 34 women, and the sample was taken using exhaustive sampling technique. This research was conducted in Cermee Village, Cermee Sub District, Bondowoso Regency. Data collection was carried out from May to July 2019. The variables measured are mothers' knowledge on toddlers' nutrition need and factors relating them. The research instrument used was questionnaire. Data collection was carried out during *posyandu* (integrated service post) activity in the village office. Data analysis was conducted using descriptive analysis.

RESULTS

Table 1. Distribution of Last Education in Cermee Village, Cermee Sub District, Bondowoso Regency in July 2019

No	Last Education	Frequency	Percentage (%)
1	Not in school yet	9	26.5
2	SD (Elementary School)	12	35.3
3	SMP (Junior High School)	8	23.5
4	SMA (Senior High School)	4	11.8
5	University	1	2.9
Total		34	100.0

From table 1, it can be seen that the education of respondents is largely elementary school (35.5%). Meanwhile, only 1 (one) respondent does attend education up to university level.

Table 2. Distribution of Respondents' Occupation in Cermee Village, Cermee Sub District, Bondowoso Regency in July 2019

No	Occupation	Frequency	Percentage (%)
1	Farmer	10	29.4
2	PNS (Civil servant)	3	8.8
3	Entrepreneur)	1	2.9
4	Not working/housewife	20	58.8
Total		34	100.0

From table 2, it can be seen that most respondents (58%) are not working or working as housewives.

Table 3. Distribution of Respondents' Age in Cermee Village, Cermee Sub District, Bondowoso Regency in July 2019.

No	Mothers' age	Frequency	Percentage (%)
1	19-25 years	18	52,9
2	26-36 years	16	47,1
Total		34	100.0

From table 3, it can be seen that most respondents (52.9%) are 19-25 years old.

Table 4. Distribution of Respondents' information source in Cermee Village, Cermee Sub District, Bondowoso Regency in July 2019

No	Source of Information	Frequency	Percentage (%)
1	Television/radio	17	50.0
2	Book/magazine	0	0
3	Family	16	47.1
4	Internet	1	2,9
5	Never hearing	0	0
Total		34	100.0

From Table 4, it can be seen that all respondents have ever acquired information on nutrition need in toddlers, a half (50%) of respondents acquired information from television/radio. Only 1 (one) respondent have acquired information from internet, and no one have acquired it from book/magazine.

Table 5. Distribution of Respondents' Knowledge on Nutrition Need in Cermee Village, Cermee Sub District, Bondowoso Regency in July 2019

No	Item	Frequency	Percentage (%)
1	Good knowledge	2	3.9
2	Fair knowledge	9	24.4
3	Poor knowledge	23	67.7
Total		34	100.0

From Table 5, it can be seen that most respondents have poor knowledge. Mean score of knowledge is 53.53 belonging to poor category.

Table 6. Cross table of Education and Knowledge

			Knowledge			
			Good	Fair	Poor	Total
Education	University	Count	0	1	0	1
		% within education	0.0%	100%	0.0%	100%
	SD (Elementary School)	Count	1	4	7	12
		% within education	8.3%	33.3%	58.3%	100.0%
	SMA (Senior High School)	Count	0	0	4	4
		% within education	0.0%	0.0%	100.0%	100.0%
	SMP (Junior High school)	Count	0	5	3	8
		% within education	0.0%	62.5%	37.5%	100.0%
	Not in school yet	Count	1	1	7	9
		% within education	11.1%	11.1%	77.8%	100.0%
Total		Count	2	11	21	34
		% within education	5.9%	32.4%	61.8%	100.0%

From the cross table above, it can be seen that 8.3% of respondents with Elementary School (SD) education have good knowledge and 11.1% of respondents not attending formal school have good knowledge. No respondent with university, Senior High School (SMA) and Junior High School (SMP) has good knowledge.

Table 7. Cross table of occupation and knowledge

			Knowledge			
			Good	Fair	Poor	Total
Occupation	Housewife	Count	1	6	13	20
		% within occupation	5.0%	30.0%	65.0%	100.0%
	Farmer	Count	0	3	7	10
		% within occupation	0.0%	30.0%	70.0%	100.0%
	PNS (Civil	Count	1	2	0	3
	Servant)	% within occupation	33.3%	66.7%	0.0%	100.0%
	Entrepreneur	Count	0	0	1	1
		% within occupation	0.0%	0.0%	100.0%	100.0%
Total		Count	2	11	21	34
		% within occupation	5.9%	32.4%	61.8%	100.0%

From the cross table above, it can be seen that 5% of respondents working as housewives have good knowledge, 33.3% of respondents working as PNS (Civi

From table above, it can be seen that 5.9% of respondents aged 19-25 years have good knowledge and 6.3% of respondents aged > 26 years have good knowledge.

Table 9. Cross Table of information source and knowledge

			Knowledge			
			Good	Fair	Poor	Total
Information	Internet	Count	1	0	0	1
		% within information	100.0%	0.0%	0.0%	100.0%
	Family	Count	1	2	13	16
		% within information	6.3%	12.5%	81.3%	100.0%
	TV/radio	Count	0	9	8	17
		% within information	0.0%	52.9%	47.1%	100.0%
Total		Count	2	11	21	34
		% within information	5.9%	32.4%	61.8%	100.0%

From the table above, it can be seen that 100 of respondents acquiring information from internet have good knowledge, and 6.3% of respondents acquiring information from family have good knowledge.

DISCUSSION

From the result of research, it can be seen that most respondents' knowledge (67.7%) belongs to poor category, with mean score of respondent knowledge of 53.53 belonging to poor category. Overall, knowledge is the result of knowing and it is obtained after sensing made by human's five senses including sight, hearing, smell, taste, and touch. Most of human knowledge is acquired through sight and hearing [8]. There are some factors that can affect the respondents' knowledge: education, occupation, age, and information source.

From the result of cross tabulation of Education level and knowledge, it can be seen that 8.3% of respondents with Elementary School education have good knowledge and 11.1% of respondents not attending formal school have good knowledge. No respondent with university, Senior High School (SMA) and Junior High School (SMP) education has good knowledge. The difference of percentage less than 10% indicates that respondents' education level does not evidently result in good knowledge. Budiman & Riyanto (2013) say that it does not mean that an individual having higher education, accepting information more easily, having better knowledge, and having broader insight than the one with lower education have lower knowledge. An individual's higher formal education level does not surely ensure that she has higher knowledge on toddlers' nutrition. Some other factors contribute to determining an individual's knowledge.

The result of cross tabulation of occupation and knowledge shows that 5% of housewives or respondents not working have good knowledge, 33.3% of respondents working as Civil Servant have good knowledge, and no respondent working as farmer or entrepreneur has good knowledge. The difference of value less than 10% indicates that working as civil servant makes respondents interact with external environment and have broader insight, so that they acquire more information and knowledge. Work environment make an individual gets better experience and knowledge either directly or indirectly.

The result of cross tabulation of respondents' age and knowledge shows that 5.9% of respondents aged 19-25 years have good knowledge and 6.3% of respondents aged > 26 years have good knowledge. The difference of percentage less than 10% indicates that age does not become the main factor determining an individual's knowledge. The older the age of an individual, the more matureand the stronger is her thinking and performance [10]. However, in fact, older age does not make the respondents' knowledge better. Some other factors contribute to affecting it.

The result of cross tabulation of information and knowledge indicates that 100% of respondents acquiring information from internet have good knowledge, 6.3% of respondents acquiring information from family have good knowledge, and no respondent acquiring information from television/radio has good knowledge. The difference of percentage more than 10% indicates that information source highly determines the respondents' knowledge on toddler's nutrition. An individual with much information, according to Wawan & Dewi, (2010), will have broader information. This finding proves that the more the information accepted the better will be the respondents' knowledge.

CONCLUSIONS

This research shows that the knowledge of mothers with 1-3 year old children on toddler's nutrition belongs to poor category in Cermee Village, Cermee Sub District and there are some factors relating to it. They are occupation and information source with a substantial difference of percentage (>10%). Meanwhile the difference of percentage between education and age factors is very small.

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