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THE RELATIONSHIP BETWEEN KNOWLEDGE, ATTITUDE, AND BEHAVIOR OF BREASTFEEDING AND INTAKE OF COMPLEMENTARY FEEDING WITH NUTRITIONAL STATUS OF CHILDREN AGED 6-24 MONTHS AT KESUNEAN HEALTH CENTER CIREBON

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ABSTRACT

Background: *The insufficient nutrient intake in the certain time may affect physical growth and development of children. The percentage of babies with exclusive breast feeding are only 37.3%. It is still under the national target. This research aims to examine the correlation of knowledge, attitude, and behavior of breastfeeding and intake of complementary feeding with nutritional status of children.*

Methodology: *This study was a cross sectional research conducted in Kesunean Health Center, Cirebon City. Totally 100 mothers of children aged 6 to 24 months was selected by consecutive sampling. The nutritional status was calculated based on weight of age whereas the predictors (knowledge, attitude, behavior) was asked by 31 questions. The statistical analysis used Spearman test.*

Results: *The results of this study found that knowledge ($p=0.001$ and $r=0.561$), attitude ($p=0.001$ and $r=0.498$), and behavior ($p=0.001$ and $r=0.606$) had a correlation with nutritional status in Kesunean Health Center.*

Conclusion: *Knowledge, attitude, and behavior of mother had correlation with nutritional status. Public health center should promote the importance of breast milk and provide the counseling to the mother.*

Keywords: *breastfeeding, intake of complementary feeding, nutritional status of children*

INTRODUCTION

WHO in 2016 released data showing that 155 million children had thin bodies in which the highest prevalence was in Asia of 36 million children [1]. Research data from the Ministry of Health of the Republic of Indonesia stated that nutritional status in 2018 had increased from 2017 to 3.9% [2,3]. In West Java, the prevalence of malnutrition children in 2018 was 3.9%. This number increased compared to the prevalence in 2017 [2,3]. Based on Health Profile Indonesia 2018, there was an increasing percentage of babies with exclusive breastfeeding for 37.3% but it is still under the prediction [2]. It indicates some factors that cause lack of breastfeeding such as mother's characteristic, baby factor, environment, health education,

socioeconomic, and culture [4]. The mother's characteristic include knowledge, attitude, and behavior about breastfeeding and intake of complementary feeding [5]. Therefore, both mother's knowledge and attitude are important because good knowledge and attitude about breastfeeding and intake of complementary feeding will caused mother to be able to prepare a good menu which will be consumed by infants [5]. Among 22 health center in Cirebon, Kesunean health center has the most cases of underweight children, 17.61% (159 children) are thin from total 903 children [6].

One of the factors that cause infant and children mortality is malnutrition. The main causes nutritional problem are internal and external factors. Internal factors include age, health status, and gender. Meanwhile, external factors include knowledge, attitude, and behavior of complementary feeding. Giving inappropriate food may cause malnutrition and if it is excessive, obesity will occur. When children in six month old, breastfeeding isn't to enough fulfill children's nutritional needs. So, children are given exclusive breastfeeding in the first six months, followed by complementary feeding for two years or more. Gastrointestinal function has developed and the child is ready to receive additional food besides breastmilk in the child exactly 6 months [7]. Therefore, this research aims to examine the correlation of knowledge, attitude, and behavior of breastfeeding and intake of complementary feeding with nutritional status in 6-24 months old children at kesunean health center in Cirebon.

METHODS

This was a cross-sectional observational study conducted from December to February involving 100 mothers of children aged 6-24 month from Kesunean health center Cirebon, West Java, Indonesia. The samples were recruited by consecutive sampling technique and sample size was calculated using the Isac and Michael table. Isac and Michael table can directly determine the sample based on the number of population and the desired level of error [8]. The inclusion criteria was mother of children aged 6-24 month in Kesunean health center. The exclusion criteria were low birth weight < 2500 gram, congenital abnormalities, children who are not registered in Kesunean Health Center, and mother of children who are not willing to take part in this study. .

Nutritional status is calculated for weight and age of individual children. Subject was given questionnaire with 31 questions about knowledge, attitude, and behavior of breastfeeding and intake of complementary feeding. The level of knowledge, attitude, and behavior can be divided into good > median value and poor < median value [9]. The questionnaire was obtained from Historical Ties of Exclusive Breastfeeding with Nutritional Status of Infant aged 6-12 Months in Care Health Center MKB Lompoe Parepare City in 2012 by Hasmini Nurdin [9]. The data were analyzed using the Spearman's correlation for bivariate analysis to know the correlation between dependent and independent variable.

Ethical clearance approval No. 43/EC/FK/XI/2018 was obtained from Ethical Committee of Faculty of Medicine Universitas Swadaya Gunung Jati. Informed written consent was obtained from the mother to allow her child in the study.

RESULT

Characteristics of respondents

Table 1. Characteristics of respondents

No	Characteristics	Frequency (N)	Percentage (%)
1.	Age of mother		
	17-25 years old	35	35
	26-35 years old	52	52
	>35 years old	13	13
2.	Maternal education		
	Not graduated from elementary school	2	2
	Elementary school	21	21
	Junior high school	22	22
	Senior high school	48	48
	Graduated from university	7	7
5.	Age of the first pregnancy		
	< 20 years old	18	18
	20-35 years old	79	79
	>35 years old	3	3
6.	Knowledge		
	Good	69	69
	Poor	31	31
7.	Attitude		
	Good	59	59
	Poor	41	41
8.	Behavior		
	Good	71	71
	Poor	29	29
9.	Nutritional Status		
	Malnutrition status	37	37
	Good nutritional status	63	63

Most of mothers in this study were 26-35 years old (52%) followed by 17-25 years old and >35 years old (35 % and 13% respectively). The frequency of mothers who did not get any education are 2%, graduated from elementary school are 21%, graduated from junior high school are 22%, graduated from high school

are 48% and graduated from college are 7%. The frequency fathers who did not get any education are 5%, graduated from elementary school are 17%, graduated from junior high school are 25%, graduated from high school are 42% and graduated from college are 11%. Frequency of fathers who unemployed are 1% and those who employed are 99%. Frequent mother's age for the first time pregnant is 20-35 years old (79%) followed by <20 years old and >35 years old with 18% and 3% respectively.

The highest level of knowledge was at the level of good knowledge for 69 respondents and with a level of poor knowledge for 31 respondents. The highest frequent of attitude is found in good attitude for 59 respondents and 41 respondents with poor attitude. Frequent good behavior is found in 71 respondents and 29 respondents poor behavior. A total of 63 respondents have better nutritional status and 37 respondents have malnutrition status.

Bivariate analysis

The relationship of knowledge, attitude, and behavior of breastfeeding and intake of complementary feeding with nutritional status of children were analyzed by using Spearman's correlation using significant level $p < 0.05$.

Tabel 2. Correlation of knowledge, attitude, and behavior of breastfeeding and intake of complementary feeding with nutritional status of children aged 6-24 months

Characteristics	Nutritional status		Total	r	p value
	Good	Malnutrition			
	N	N			
Knowledge					
Good	56 (81.2%)	13 (18.8%)	69 (100%)	0.561	0.001
Poor	7 (22.6%)	24 (77.4%)	31 (100%)		
Attitude					
Good	49 (83.1%)	10 (16.9%)	59 (100%)	0.498	0.001
Poor	14 (34.1%)	27 (65.9%)	41 (100%)		
Behavior					
Good	58 (81.7%)	13 (18.3%)	71 (100%)	0.606	0.001

Poor	5	24	29
	(17.2)	(82.8%)	(100%)

Spearman’s correlation analysis showed positive correlation to the frequency of knowledge, attitude, and behavior of breastfeeding and intake complementary feeding ($r=0.561$, $r=0.498$, and $r=0.606$ respectively) and $p=0.001$ ($p<0.05$) for the knowledge, attitude, and behavior of breastfeeding and intake complementary feeding, showing that there is a statistically significant effect.

DISCUSSION

Knowledge is closely linked to education which one of important factors for mother to provide appropriate care for their children and determinant of children’s growth and development [10]. Another study shows significant impact on nutritional status such as age and sex, parent’s education, and socioeconomic. In Indonesia, a study reported parent’s socio-demographic factors, there was no significant association between paternal age, education level, and occupation with children linear growth pattern [11]. Mother’s education level is quite important in determining the children’s health. Mothers with high education level will increase awareness a healthy behavior, sanitation practice for the children [12]. It is expected that someone who has a higher education has more knowledge. However, it doesn't mean that someone who has low level of education has lack of knowledge. Knowledge can be obtained not only from formal education, it can be also obtained from non-formal education directly or indirectly such as mass media, conseling, leaflets and program from public health center such as supplementary feeding, toddler and pregnant women classes [10,13]. A study in the Jiggiga Town was done in an urban poor-resouce setting showing a statistically significant associated with nutritional status [10]. Knowledge can also be influenced by faith, facility, social culture and source of information. Knowledge that is based on appropriate understanding will develop positive attitude. This study shows that mother’s knowledge has a moderate positive correlation with nutritional status ($p\text{-value}=0.001$, $r=0.561$).

There are three components of attitude, trust, emotional life, and tendency to behave that will give complete attitude. A mother who has received information about malnutrition status (causes, effect, and prevention). With the knowledge or information that the mother gets, it will bring her up to think and try her best to prevent their children from affected by malnutrition. In this case, the emotional and faith components start to work. So the mother will intend to provide food intake especially breastfeeding and intake of complementary feeding according to the children’s needs [14]. The attitude of mothers regarding feeding to children is a factor that determines someone to behave providing the appropriated food for children. The appropriate food for children is given in order [7].

One of the factors that determine and shapes behavior is knowledge [15]. As well as the actions and decisions taken by a mother in terms of giving breastfeeding and feeding to their children. Without this knowledge, mothers will not give breast milk and complementary foods breast milk to their children which will impact on children's nutritional status [9]. Public health center are expected to be able to improve more counseling, especially about breastfeeding and intake of complementary feeding. The factors that cause lack of giving complementary breastfeeding children age from 6-24 month are younger mother age, poverty, poor health service and malnutrition [16]. The limitation of the study is that it merely analyzes nutritional status based on knowledge, attitudes, and behavior while there are still many other factors that can influence this issue such as social and culture factors. The implication of this study is that public health center has a new data about malnutrition and leads its cadres contribute more in detecting malnutrition in children.

CONCLUSION

This study showed that knowledge, attitude, and behavior correlates positively with nutritional status of children aged 6-24 months. For future research, it is recommended to examine other factors related with nutritional status and public health center gives more information and counseling about breastfeeding and intake of complementary feeding.

CONFLICT OF INTEREST

The authors declare no conflict of interest.

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