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## RESEARCH ARTICLE

### FACTORS NOT LIVE WITH LESS NUTRITION EVENTS AND BAD IN CHILDREN WORKING IN THE HEALTH DISTRICT KUTABUMI TANGERANG

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#### ABSTRACT

Nutrition issues are incorporated into the Millennium Development Goals (MDGs) with the first goal of addressing malnutrition, improving child health and reducing child mortality where one of the factors is the caused by malnutrition. To identify indirect factors related to the incidence of malnutrition in children under the age of five in the working area of Kutabumi Community Health Center of Tangerang Regency. Research method of correlative descriptive research with cross sectional approach. Population in this research is all of mother all under-fives in the working area of Kutabumi Public Health Center of Tangerang Regency. Samples in research ii as many as 198 mother of kids taken by purposive sampling technique. Data Obtained by distributing questionnaires that have been valid and reliable. Univariate and bivariate analysis of data using the chi-square test for categorical correlation of data and person for numerical data. From 198 respondents, the average age was 31.67 years old, based on the level of education most of the respondents were of secondary education (SMA / SMK) as many as 110 respondents (55.6%) and 120 respondents (60.6%) with number of children little ( $\leq 2$  children). Of the 198 respondents most of the good nutrition that is 114 respondents (57.6%), there are 66 (33.3%) malnutrition and 18 (9.1%) malnutrition, not good enough that 116 respondents (58.6% ( $p = 0.042$ ), the number of children ( $p$  value = 0.002), the number of children ( $p$  value = 0.002), the number of children ( $p$  value = 0.002) knowledge ( $p$  value = 0.000), family income ( $p$  value = 0.000) and parenting ( $p$  value = 0.000) with less and less nutritional incidence in infants. There is no correlation between maternal age and the incidence of malnutrition in children under five ( $p$  value = 0.056). There is a relationship between maternal education, the number of children, knowledge, family income and the pattern of care with the incidence of malnutrition in children under five. PHC is recommended to the make the results of research as a reference in composing a strategy of malnutrition.

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#### INTRODUCTION

Toddlers are the age group most often suffer from malnutrition, and malnutrition. According to the United Nations Children's Fund / UNICEF (2013) recorded hundreds of millions of children in the world suffer from malnutrition means that this problem occurs in a very large amount of the population. Every year approximately 11 million children under five around the world die from diseases such as respiratory infections, diarrhea, malaria, measles, and others. Ironically, 54% of the deaths were associated with the presence of malnutrition and in 2010 the incidence of malnutrition among children under five increased from 27.5% to 28%. The prevalence of less severe in 2011 was 17.9%, consisting of 4.9% severe malnutrition and 13% malnutrition (WHO, 2011).

Basic Health Research (2013) showed the prevalence of underweight in 2013 in Indonesia is 19.6%, consisting of 5.7% to 13.9% malnutrition and undernourishment. The national prevalence rate when compared to 2007 (18.4%) and in 2010 (17.9%) are seen rising. Changes especially in the prevalence of malnutrition, namely from 5.4% in 2007, in 2010 (4.9%), and 5.7% in 2013. This shows that an increase in the number of undernourishment and malnutrition every year from in 2010 to 2013. Banten is one of sixteen provinces in Indonesia that showed the prevalence of underweight. By 2016 the number of malnutrition in children under five reached the 1051 toddlers scattered 8 city / county (BPS Bantam, 2016). Tangerang Regency is a regency in Banten province with the second largest number of poor nutrition after Lebak in 2016 that 243 infants (Tangerang Health Service, 2016). Kutabumi Health Center is one of the health centers in the Tangerang region who have cases of malnutrition and malnutrition in infants is still high. Based on the monitoring of nutritional status in Puskesmas Kutabumi Tangerang district known for 2 years in

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2016 found 16 infant malnutrition and malnutrition as many as 133 children under five, in 2017 found 17 infant malnutrition and undernourishment of 144 infants. Some studies say that many factors that cause the occurrence of malnutrition and undernourishment. Research Lastanto, et al. (2015) states that the factors affecting the incidence of stunting in Puskesmas Cebongan is mother knowledge level, the level of family income, breastfeeding, and LBW. Research Helmi (2013) stated there was a significant correlation between infectious diseases, energy intake, carbohydrate intake, protein intake in sub-district Puskesmas Margototo Kibang Metro East Lampung district. Research Octavianus (2016) reported an association between nutritional status of children with the mother's knowledge, family income and exclusive breastfeeding in Lubuk Kilangan Puskesmas Padang. The impact of malnutrition are complex, the child may experience a disruption in mental development, social, cognitive and growth in the form of the immaturity of organ function, where manifestations may be weak immune which cause susceptibility to diseases such as respiratory infections, diarrhea, fever (Supartini, 2014). The problem of undernourishment and malnutrition is a problem that multicomplex. In an effort to chain termination of malnutrition is certainly needed the proper mapping to ascertain the main problems that lead to undernourishment and malnutrition. Based on the above background, penelitu interested in conducting research related to malnutrition among children under five. Research on factors not directly related to the incidence of malnutrition and poor in infants in Puskesmas Kutabumi Tangerang District has never been done, so the authors are interested in doing the research.

## RESEARCH METHODS

This type of research is quantitative research with descriptive correlational design using analytic method with cross sectional approach. The experiment was conducted in March 2018. Samples were taken from mothers in Puskesmas Kutabumi Tangerang Regency. The sample size is calculated using the formula obtained Solvin 198 mothers. The sampling technique in this research is purposive sampling. The data were obtained using a questionnaire and measurement of nutritional status. Toddler Nutrition Status measurement by using the MCH section Standard Anthropometric Nutrition Status Assessment, the decision of the Minister of Health number: 1995 / Menkes / SK / XII / 2010 on Nutritional status index calculation using W / criteria Malnutrition (Z score <-3 SD), nutritional Less (Z score <2 SD s / d -3 SD) and Good Nutrition (Z Score 2 SD). The data were analyzed by univariate and bivariate with chi-square test for categorical data and Pearson correlation for numeric data.

## RESEARCH RESULT

**Univariate Analysis:** Based on the above table it is known that of the 198 infants are mostly good nutrition that 114 respondents (57.6%), there were 66 (33.3%) malnutrition and 18 (9.1%) malnutrition. Based on the above table it is known that out of 198 respondents' average age was 31, 67 years with a median of 31.50 years and a standard deviation of 6664. The youngest 18 years old and the oldest 51 years old. The most age was 35 years. Interval estimation results concluded that 95% believed the average age of the mother is from 30.74 to 32.61 Years.

**Table 1. Overview of Nutritional Status Toddler in Puskesmas Kutabumi Tangerang Regency Period March 2018**

Nutritional status	f	%
Bad	18	9.1
Less	66	33.3
Well	114	57.6

Source: Primary Data 2018

**Table 2. Overview Minimum Capital Toddler in Puskesmas Kutabumi Tangerang Regency Period March 2018**

Age	Value
mean	31.67
median	31,50
modus	35
SD	6.664
Min-Max	18-51
95% CI	30.74 to 32.61

Source: Primary Data 2018

Based on the above table it is known that out of 198 respondents sost educated middle class (SMA / SMK) a total of 110 respondents (55.6%), 120 respondents (60.6%) with the number of children a little ( $\leq 2$  children), well that is 116 less knowledgeable respondents (58.6%) , family income is less than MSE ie 118 respondents (59.6%) and good parenting: 125 respondents (63.1%).

## The Bivariate Analysis

**Age Relationship with Nutritional Status:** The bivariate analysis using Pearson correlation test. Significant test performed using a significance limit alpha (0.05) and Confidence Interval (confidence level) of 95%. The results of the analysis are presented in the following table: Statistical test results obtained by using the correlation person variables maternal age and nutritional status obtained P value = 0.056 ( $>$  alpha = 0.05) using the alpha 5% (0.05) it can be concluded that Ho accepted, which means there is no relationship between maternal age with the incidence of malnutrition and bad Kutabumi district Puskesmas Tangerang. Values marked positive correlation means that the higher the mother's age, the better the nutritional status of children.

**Education Relationship with Nutritional Status:** The results of the cross table between education and nutrition status is known from 58 to low education mostly kedaan nutrition in the poor category as many as 25 respondents (43.1%). Chi Square test results obtained value of P value of 0.042 ( $<$ alpha = 0.05), with alpha of 5% (0.05) it can be concluded that Ho is rejected, which means there is a relationship between maternal education with the incidence of malnutrition and poor in infants in Puskesmas Kutabumi Tangerang Regency.

**Relations Number of Children with Nutritional Status:** Results Table cross between the number of children with unknown Nutritional Status Of the 78 respondents to the number of children a lot ( $> 2$  children) mostly with kedaan nutrition in the poor category as much as 34 respondents (43.6%) of respondents. Chi Square test results obtained value of P value 0.002 ( $<$ alpha = 0.05), with alpha of 5% (0.05) it can be concluded that Ho is rejected, which means there is a relationship between the number of children with the incidence of malnutrition and poor in infants in Puskesmas Kutabumi Tangerang Regency.

**Table 3. Overview of Education, Number of Children, Knowledge, Mother Parenting Family Income Toddler in Puskesmas Kutabumi Tangerang Regency Period March 2018**

No.	Variables	f	%
1	Education		
	Low	58	29.3
	secondary	110	55.6
	High	30	15.1
2	Number of children		
	Many (> 2 Children)	78	39.4
	Few ( $\leq$ 2 Children)	120	60.6
3	Knowledge		
	Less	116	58.6
	Well	82	41.4
4	Income		
	<UMK	118	59.6
	$\geq$ UMK	80	40.4
5	Parenting		
	Not good	73	36.9
	Well	125	63.1

Source: Primary Data 2018

**Table 4. Relationship Age Mothers with Nutritional Status in Toddlers in Puskesmas Kutabumi Tangerang Regency Period March 2018**

<u>Variabel Bebas</u>	<u>Variabel Terikat</u>	<u>Nilai korelasi</u>	<u>P value</u>
<u>Usia Ibu</u>	<u>Status Gizi</u>	0,136	0,056

**Table 5. Relationship Education with the Nutritional Status in Toddlers in Puskesmas Kutabumi Tangerang Regency Period March 2018**

<u>Pendidikan</u>	<u>Status Gizi</u>						<u>Total</u>	<u>P Value</u>	
	<u>Buruk</u>		<u>Kurang</u>		<u>Baik</u>				
	<u>N</u>	<u>%</u>	<u>n</u>	<u>%</u>	<u>n</u>	<u>%</u>			
<u>Rendah</u>	9	15,5	25	43,1	24	41,4	58	100	0,042
<u>Menengah</u>	7	6,4	33	30	70	63,6	110	100	
<u>Tinggi</u>	2	6,7	8	26,7	20	66,7	30	100	
<u>Jumlah</u>	<b>18</b>	<b>9,1</b>	<b>66</b>	<b>33,3</b>	<b>114</b>	<b>57,6</b>	<b>198</b>	<b>100</b>	

**Table 6. Relationship Number of Children with Nutritional Status in Toddlers in Puskesmas Kutabumi Tangerang Regency Period March 2018**

<u>Jumlah Anak</u>	<u>Status Gizi</u>						<u>Total</u>	<u>P Value</u>	
	<u>Buruk</u>		<u>Kurang</u>		<u>Baik</u>				
	<u>n</u>	<u>%</u>	<u>n</u>	<u>%</u>	<u>n</u>	<u>%</u>			
<u>Banyak</u>	11	14,1	34	43,6	33	42,3	78	100	0,002
<u>Sedikit</u>	7	5,8	32	26,7	81	67,5	120	100	
<u>Jumlah</u>	<b>18</b>	<b>9,1</b>	<b>66</b>	<b>33,3</b>	<b>114</b>	<b>57,6</b>	<b>198</b>	<b>100</b>	

Source: Primary Data 2018

**Table 7 Relationship Knowledge of the Nutritional Status in Toddlers in Puskesmas Kutabumi Tangerang Regency Period March 2018**

Pengetahuan Ibu	Status Gizi						Total	P Value	
	Buruk		Kurang		Baik				
	n	%	n	%	n	%			
Kurang	15	12,9	52	44,8	49	42,2	116	100	0,000
Baik	3	3,7	14	17,1	65	79,3	82	100	
Jumlah	18	9,1	66	33,3	114	57,6	198	100	

Source: Primary Data 2018

**Table 8. Relationships Family Income by Nutritional Status in Toddlers in Puskesmas Kutabumi Tangerang Regency Period March 2018**

Pendapatan Keluarga	Status Gizi						Total	P Value	
	Buruk		Kurang		Baik				
	n	%	n	%	n	%			
< UMK	14	11,9	54	45,8	50	42,4	118	100	0,000
≥ UMK	4	5,0	12	15,0	64	80,0	80	100	
Jumlah	18	9,1	66	33,3	114	57,6	198	100	

Sumber : Data Primer 2018

**Table 9. Relationships Parenting by Nutritional Status in Toddlers in Puskesmas Kutabumi Tangerang Regency Period March 2018**

Pola Asuh	Status Gizi						Total	P Value	
	Buruk		Kurang		Baik				
	n	%	n	%	n	%			
Tidak Baik	10	13,7	36	49,3	27	37,0	73	100	0,000
Baik	8	6,4	30	24,0	87	69,6	125	100	
Jumlah	18	9,1	66	33,3	114	57,6	198	100	

Sumber : Data Primer 2018

**Knowledge Relationship with Nutritional Status:** Results Table cross between knowledge of mothers with known nutritional status of 116 respondents mothers with less knowledge mostly with kedaan nutrition in the poor category as many as 52 respondents (44.8%). Chi Square test results obtained value of P value of 0.000 (<alpha = 0.05), with alpha of 5% (0.05) it can be concluded that Ho is rejected, which means there is a relationship between knowledge of mothers withthe incidence of malnutrition and poor in infants in Puskesmas Kutabumi Tangerang Regency.

Results Table cross between income families with known nutritional status of 118 respondents with household income <UMK mostly with kedaan nutrition in the poor category. Chi Square test results obtained value of P value of 0.000 (<alpha = 0.05), with alpha of 5% (0.05) it can be concluded that Ho is rejected, which means there is a relationship between family income bythe incidence of malnutrition and poor in infants in Puskesmas Kutabumi Tangerang Regency.

**Parenting Relationship with Nutritional Status:** Results Table cross between parenting with known nutritional status of 73 respondents with good parenting is not largely kedaan nutrition in the poor category were 36 respondents (49.3%) of respondents. Chi Square test results obtained value of P value of 0.000 (<alpha = 0.05), with alpha of 5% (0.05) it can be concluded that Ho is rejected, which means there is a relationship between parenting withthe incidence of malnutrition and poor in infants in Puskesmas Kutabumi Tangerang Regency.

## DISCUSSION

**Age:** Statistical test results obtained by using Pearson correlation variables maternal age and nutritional status obtained P value = 0.056 (> alpha = 0.05), with alpha of 5% (0.05) it can be concluded that Ho accepted, which means there is no relationship between the incidence of maternal age undernourishment and bad Puskesmas Kutabumi Tangerang Regency. These results are in line with Lubada research, et al. (2016) found no relationship between age and nutritional status (p value = 0.513). But unlike the hOutcome of this study with penelitian Khotimah & Kuswandi (2014) suggests there is a significant association between maternal age with the incidence of malnutrition among children under five in Puskesmas Cikulur in 2013 (p value = 0.000).

Productive age mothers of reproductive age plays a role in helping the growth and development of children. Mother productive age range 20-35 years. According to Hurlock (2012) states that young age factor also tends to make a mother more attention to their own interests than the interests of the child. Such conditions would cause the quantity and quality of child care are lacking. Conversely, mothers aged more likely to accept the role with a vengeance. The opposite Arinta (2010) that a person who is already old then acceptance of the new terms would be lower. This is because people who are included in the elderly have a tendency always persist with the old values that is expected to be difficult to accept the things that are new. In this study, maternal age was not associated with poor nutrition for many other things that contribute to the nutritional status of children, such as mother's young age have

a good knowledge so that it can provide nutritious food for their children and increasing maternal age will increasingly experience in parenting so keep good nutrition.

**Education:** The results of the cross table between education and nutrition status is known from 58 to low education mostly kedaan nutrition in the poor category as many as 25 respondents (43.1%). Chi Square test results obtained value of P value of 0.042 ( $<\alpha = 0.05$ ), with alpha of 5% (0.05) it can be concluded that  $H_0$  is rejected, which means there is a relationship between maternal education with the incidence of malnutrition and poor in infants in Puskesmas Kutabumi Tangerang Regency. The results are consistent with the research conducted Nurafriyanti (2015) shows the test results of bivariate sig  $<0.05$  is (0.024) this shows that there is significant influence between level of education and nutritional status of children in IHC Kunir White 13 Puskesmas I. Similarly Umbulharjo with the results Lubada *et al.* (2016) that education regarding the nutritional status of children. The level of education is very influential on health status, in this case of malnutrition and malnutrition as people who have higher levels of education tend to be more likely exposed to health information and level of understanding of health information is also better (Lastanto, 2015). Researchers concluded that a person's health status is influenced by educational status to determine the quality of parenting. Low maternal education and poor parenting patterns of mental stimulation is still frequently encountered. All these things often cause irregularities child development, especially in the age of the children. To consider that the level of education also contribute to determining whether or not a person is easy to absorb and understand the nutritional knowledge acquired.

**Number of Children:** Results Table cross between the number of children with unknown Nutritional Status Of the 78 respondents to the number of children a lot ( $> 2$  children) mostly with kedaan nutrition in the poor category as much as 34 respondents (43.6%) of respondents. Chi Square test results obtained value of P value 0.002 ( $<\alpha = 0.05$ ), with alpha of 5% (0.05) it can be concluded that  $H_0$  is rejected, which means there is a relationship between the number of children with the incidence of malnutrition and poor in infants in Puskesmas Kutabumi Tangerang Regency. The results are consistent with penelitian Gandhini, et al. (2016) shows that the number of children in the family have been associated with malnutrition or undernourishment / bad ( $p$  value = 0.009). Nurafriyanti research (2015) shows the results of the analysis that a significant number of family members on nutritional status ( $p$  value = 0.039). The number of family members will affect the allocation of family income to meet the food needs of their families. The relationship between high birth rate and malnutrition is evident in each family. Family food sources, especially the very poor, it will be easier to meet if the food should be fed small amounts. Children who grow up in a poor family is the most vulnerable to malnutrition among all members of the family and the youngest children are usually most affected by food shortages.

**Knowledge Capital:** Results Table cross between knowledge of mothers with known nutritional status of 116 respondents mothers with less knowledge mostly with kedaan nutrition in the poor category as many as 52 respondents (44.8%). Chi Square test results obtained value of P value of 0.000 ( $<\alpha = 0.05$ ), with alpha of 5% (0.05) it can be concluded that  $H_0$  is rejected, which means there is a relationship between

knowledge of mothers with the incidence of malnutrition and poor in infants in Puskesmas Kutabumi Tangerang Regency. The results are consistent with the result Research Octavianus (2016) states there is a relationship between the nutritional status of children with the mother's knowledge, family income and exclusive breastfeeding in Lubuk Kilangan Puskesmas Padang. From the analysis Lastanto study (2015) by using the chi-square test was obtained P value 0.029  $<0.05$ , which means there is a significant relationship between the knowledge of the incidence of malnutrition among children under five in Puskesmas Cebongan. In this study, the majority of respondents (58.6%) were mothers with less knowledge of where the better the level of mother's knowledge the better the nutritional status of children so as to reduce the incidence of malnutrition. Lack of public knowledge problem can be caused by the lack of information or culture causes not concerned with healthy lifestyles. So that curiosity is still lacking, particularly in the treatment or prevention of malnutrition.

**Income Families:** The results of the cross table between family income with known nutritional status of 118 respondents with household income  $<UMK$  mostly with kedaan nutrition in the poor category. Chi Square test results obtained value of P value of 0.000 ( $<\alpha = 0.05$ ), with alpha of 5% (0.05) it can be concluded that  $H_0$  is rejected, which means there is a relationship between family income by the incidence of malnutrition and poor in infants in Puskesmas Kutabumi Tangerang Regency. In line with Nurafriyanti research (2015) there are significant analytical results obtained between the income of parents with infant nutritional status (sig 0.019) in IHC Kunir White 13 Puskesmas Umbulharjo I. According to Mustafa (2010), Bannet found that increased revenue will result in the individual tends to improve the quality food consumption with a higher price per unit of nutrients which ultimately have a positive impact on nutritional status. Sufficient level of income, the mother more freedom to choose and buy the baby needs such as buying beef, fish, fruit. Instead, mothers who do not have sufficient income, it will be difficult to provide good nutrition to the baby where the mother only gives vegetables and side dishes with a menu that rarely varied so as to make a baby with undernourishment (Lastanto, 2015). Analysis of investigators that economic factors affecting the purchasing power of a person in meeting their needs, especially staples like food. Nutritional status was strongly influenced by the intake consumed each day.

**Parenting:** Results Table cross between parenting with known nutritional status of 73 respondents with good parenting is not largely kedaan nutrition in the poor category were 36 respondents (49.3%) of respondents. From the results obtained Chi Square test p value of 0.000 ( $<\alpha = 0.05$ ), with alpha of 5% (0.05) it can be concluded that  $H_0$  is rejected, which means there is a relationship between parenting with the incidence of malnutrition and poor in infants in Puskesmas Kutabumi Tangerang Regency. These results are in line with Handayani study (2017) of a statistical test results obtained value of P value = 0.003 ( $p <0.05$ ), means there is a significant relationship between parenting and nutritional status in children under five in Puskesmas Seberang Padang. Research Tenny (2014) obtained the value of P value = 0.004 ( $p <0.005$ ) that between mother's parenting is associated with the nutritional status of children under five. The role of the family, especially the mother in parenting will determine the development of the child, the mother's behavior in nursing or

feeding, eating healthy, nutritious feed and control a large portion will be spent improving the nutritional status of children. Children who are raised well by her mother will be interacting positively than if taken care of by other than his mother. Parenting a child by her own mother of a relationship the child communicates and the mother as a role model for children with regard to verbal skills directly (Hidayat, in Hand, 2017). Pattern foster parents of children affects the nutritional status. Parenting parents to teach their children to consume nutritious foods is one form of a clean and healthy lifestyle. Parenting has become a regular habit to do every day. So it will have an impact on the nutritional status of children.

## Conclusion

There was no association between maternal age with the incidence of malnutrition and poor in infants. There is a relationship between the mother's education, number of children, knowledge, family income and parenting with the incidence of malnutrition and poor in infants.

## Suggestion

- The results of this study can be a reference for policy makers (stakeholders) in formulating the strategy of malnutrition and poor handling.
- The results of this study are expected to be one enter in order to improve health services and an input for nurses in health centers in providing nursing care in infants with malnutrition and poor.
- Nurses actively participate in community programs with the involvement of community nurses and provide comprehensive care to mothers who have children. Education about the benefits of a nutritious diet and nutritious food types that affect the nutritional status of children.
- be expected nurses can improve the quality of services, especially from the aspects of service quality Maternal and Child Health (MCH), such as regular weighing, feeding, and visit (follow up) in infants with less or poor nutritional status.

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