The Influence of Sociodemography and Nutritional Knowledge of Mothers on Stunting in Kampung KB, Medan City

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Abstract: The WHO (2018) said in 2017 by 22.2% (150.8 million) children under five has stunted. Based on basic health survey (Kemenkes RI 2013), the stunting prevalence in Indonesia amounted to 30.8%. The objective of research was analyzed the influence of sociodemography and maternal nutritional knowledge on stunting. The type of design was cross sectional study. The study was conducted in Kampung KB of Medan Marelan and Medan Belawan sub district in Medan. The population was all infants recorded in Kampung KB. The samples were taken proportionally as simple random 104 samples. Data was analyzed by chi-square test. The proportion based on the highest age in the 20-35 year group amounted to 72.1%, higher education (above Senior High School) of 52.8%, mother not working at 86.5%. The results showed that there was no significant influence between maternal age and stunting (p= 0,752). Although in the case there is no influence maternal age on stunting but the risk of greater stunting incidence in mothers whose reproduction age was not ideal. There is no influence between mother's education on stunting ($p = 1$). This is because higher levels of education do not mean that mothers have good knowledge of good nutrients. There is no influence on the work of mothers on stunting (p= 0,174). This is because the parenting pattern is not determined by the mother's work but the contribution of time given by mothers to children. There is a significant influence between mother's knowledge of nutrition on stunting ($p = 0.001$).

1 INTRODUCTION

Stunting is a major nutritional problem facing Indonesia. Based on nutritional status data for the past three years, short has the highest prevalence compared to nutritional problems such as malnutrition, height, and fat. National health problems are Stunting, Pulmonary TB, and Immunization. Stunting is a problem that grows in children under five because of malnutrition so that the child is too short compared to his age. Stunting is only seen after the baby has been removed for 2 years. Short toddlers (stunted) and very short stunted (very stunted) are toddlers with body length or tall bodies according to the 2006 WHO-MGRS standard, z-scores less than -2SD are categorized as short toddlers and z-scores less -3SD are categorized as very short.

Based on data from the Republic of Indonesia Ministry of Health 2017 stated that more than 22.2% or around 150.8 million children under five were stunted. While at the Asian level, Indonesia is the country with the fifth highest stunting prevalence.

Based on the results of Riskesdas in 2013, there were 37.2% of children under five who were stunted. Of these, 19.2% were short children and 18% were very short. The lowest prevalence is in Riau Islands, DI Yogyakarta, DKI Jakarta and East Kalimantan <30% and the highest prevalence >50% in East Nusa Tenggara (Kemenkes RI, 2013).

Stunting in North Sumatra Province in 2017 based on the results of Nutrition Status Monitoring (PSG) obtained a prevalence of 28.4%, which means an increase of 4% from the situation in 2016 (24.4%). PSG results in 2017 there are 22 districts/ cities in North Sumatra which have a prevalence of short under-fives above the provincial prevalence. The highest prevalence is West Nias Regency by 47.5% followed by North Nias Regency by 41.6% (Sekretariat Wakil Presiden RI, 2017).

Based on the Medan City Health Profile in 2016, the number of children under five who experienced stunting in 2015 was 29.6% (Dinas Kesehatan Kota Medan, 2016). Areas with high risk for stunting occurrences are areas where the level of community income is low and the number of children is large.

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KB Village is an area where the number of pre-Prosperous Families (KS) and KS-1 (poor) is above average and the number of KB participants is below the average achievement of KB participants at the village/ subdistrict level. The purpose of establishing a KB village is to improve the degree of public health including the nutritional status of children under five.

Stunting problems illustrate the existence of chronic nutritional problems, influenced by the condition of the mother/prospective mother, the fetus, and infancy/toddler, including illnesses suffered during infancy. Therefore, improvement efforts must include efforts to prevent and reduce interference directly (specific nutrition interventions) as well as efforts to prevent and reduce indirect interference (sensitive nutrition interventions). Specific nutrition intervention efforts focused on the First 1,000 Days of Life (HPK) group, namely pregnant women, nursing mothers and children 0-23 months. Sensitive nutrition interventions are contributions from other sectors such as food security, availability of clean water, sanitation, poverty, education, social, etc.

Research Ni'mah, et al. (2015) about the factors that influence the incidence of stunting in infants in the working area of the Tanah Kali Kedinding Health Center, Surabaya. Variable length of low birth babies (OR = 4,091; CI = 1,162-14,397), toddlers not exclusive breastfeeding (OR = 4,643; CI = 1,328-16,223), maternal knowledge about malnutrition (OR = 3,387; CI = 1,410-10,658) , low family income (OR = 3,250; CI = 1,150-9,187) and low maternal education (OR = 3,378; CI = 1,246-9,157) are factors that influence the incidence of Stunting in infants with p values <0.05. Based on Aridiyah's research (2014) about the factors that influence the incidence of Stunting in children under five in rural and urban areas in Jember Regency.

The specific objectives of this study are as follows:
1. To analyze the influence of sociodemography (age, education, occupation) on Stunting events.
2. To analyze the effect of mother's knowledge on the Stunting incident

2 METHOD

This research model is an observational study with a cross sectional design in which the free and bound variables are measured once at the same time. The population of this study were all children under five years old who were registered in KB Village,

namely Environment VII, VIII, IX of Payah Pasir Sub-District, Medan Marelan District and Environment V and IX of Sicanang Sub-District, Medan Belawan District. The sample was a number of children under five years old who were registered in KB Village, namely Environment VII, VIII, IX of Payah Pasir Village, Medan Marelan District and Environment V and IX Sicanang Village, Medan Belawan District. The number of samples in this study was 104. Respondents were mothers of children under five who were registered in KB Village, namely Environment VII, VIII, IX, Payah Pasir Sub-District, Medan Marelan District and Environment V and IX Sicanang Sub-District, Medan Belawan District. The sampling technique was carried out by proportionally with simple random sampling taken from the data of children under five years old who were registered in KB Village, namely Environment VII, VIII, IX, Payah Pasir Sub-District, Medan Marelan Sub-District and Environment V and IX, Sicanang Sub-District, Medan Belawan District. Data collection techniques were carried out interviews using a questionnaire that has been tested and tested for validity and reliability testing. Data analysis technique was done by using Univariate Analysis to present data on the frequency distribution of proportions from cases and controls and Bivariate Analysis performed a chi-square test to assess the degree of significance (p) and PR to determine the magnitude of the influence of the independent variable on the dependent variable.

3 RESEARCH RESULT

3.1 Univariate Analysis

Based on the research conducted in Medan KB Village, the distribution of the proportion of respondents found in the Table 1. It can be seen that the distribution of the proportion of respondents by age is highest in the age group of 20-35 years which is 72.1% (74 people) and the lowest in the age group> 35 years which is 27.9% (29 people). The distribution of proportions based on the highest education in high school graduates was 43.3% (45 people) and the lowest at the Diploma level was 3.8% (4 people). Based on the results of categorizing education, it was found that the proportion of respondents with high education was 52.8% (55 people) and the proportion of respondents with low education was 47.1% (49 people). Based on work the highest proportion of respondents in mothers

who did not work was 86.5% (90 people) and followed by entrepreneurial work 9.6% (10 people) then laborers were 3.8% (4 people).

Table 1: Distribution of proportion of respondents by sociodemography in KB Village in Medan City.

Characteristics	f	%
Age		
>35	29	27,9
20-25	74	72,1
Education		
Primary school	19	18,3
Junior high school	30	28,8
Senior high school	45	43,3
Diploma	4	3,8
Bachelor	6	5,8
Education Category		
Low (≤SMP)	49	47,1
High (>SMP)	55	52,8
Occupation		
Not Working	90	86,5
Working	4	3,8
Entrepreneur	10	9,6
Total	**104**	**100**

3.2 Bivariate Analysis

Based on the results of research conducted obtained factor analysis that affects the incidence of stunting in toddlers in the Medan City KB Village as stated on Table 2.

Based on Table 2, it can be seen that the proportion of mothers who have Stunting children in the> 35 years age group is 55.2% and the lowest in the 20-35 years age group is 49.3%. From the results of the statistical test analysis, the value of p = 0.752 was obtained, which means there was no influence between maternal age on the incidence of stunting in KB Kampung Medan City. This is in line with Agustiningrum's (2016) study which states that there is no relationship between maternal age and the incidence of stunting. The results of this study are also in line with research conducted by Astuti (2016) which states that there is no relationship between maternal age and the incidence of stunting. Based on the table above it can be concluded that the reason

why there is no relationship between maternal age and the incidence of stunting in the KB City Kampung Medan because the majority of respondents are mothers of reproductive age and no respondents under the age of 20 years. The risk of stunting is greater in women under the age of 20 years and above 35 years, this is because the age below 20 years is an adolescent age that is still immature in terms of reproductive health, mental, and economic while mothers aged over 35 years are nearing age menopause where the condition of the egg has decreased. Based on research by Irwansyah et al (2016) states that there is a relationship between maternal age under 20 years with the incidence of stunting with a risk of 2.62 times greater.

Based on Table 3, it can be seen that the proportion of mothers with high education has stunting children at 50.9% and mothers with low education have stunting children at 51%. From the results of the statistical test analysis, it was obtained that the value of p = 1, which means there is no influence between maternal education on the incidence of stunting in KB Kampung Medan City. This is in line with the results of Amin and Julia's research (2014) which states that there is no influence of maternal education on the incidence of Stunting with a value of p = 0.5. The same thing with the results of Candra's (2013) study stated that there was no effect of maternal education on the incidence of stunting with a p value = 0.27. However, the results of this study differ from the research of Lestari, et al. (2018) which states that there is a relationship between maternal education and the incidence of stunting. It can be concluded that a high level of education of the mother does not guarantee that the child will be protected from malnutrition because a high level of education does not mean that the mother has good knowledge about good nutrition. Thus education is not a risk factor for stunting in children under five in the Medan City KB Village.

Table 2. Effects of maternal age on stunting events in KB Village Medan City.

Age	Toddler Status						RP(95%Cl)	p
	Stunting		Normal		Total			
	f	%	f	%	f	%		
>35	16	55,2	13	44,8	29	100	1,118 (0,749-1,669)	0,752
20-35	37	49,3	38	50,7	75	100		

Table 3. Effects of mother's education on the stunting incident in KB Village Medan City.

Education	Toddler Status						PR(95% CI)	p
	Stunting		Normal		Total			
	f	%	f	%	f	%		
Low	25	51	24	49	49	100	1,002 (0,687-1,462)	1
High	28	50,9	27	49,1	55	100		

Table 4. Effect of Mother's work on stunting occurrence in KB Village Medan City.

Occupation	Toddler status						PR (95% CI)	P
	Stunting		Normal		Total			
	f	%	f	%	f	%		
Working	10	71,4	4	28,6	14	100	1,495 (1,007-2,220)	0,174
Not Working	43	47,8	47	52,2	90	100		

Table 5. Effects of mother's knowledge on stunting events in KB Village Medan City.

Knowledge	Toddler status						PR (95% CI)	P
	Stunting		Normal		Total			
	f	%	f	%	f	%		
Low	35	68,6	16	31,4	51	100	2,021 (1,329-3,072)	0,001
Hign	18	34	35	66	53	100		

Based on Table 4 it can be seen that mothers who work have a proportion of stunting children by 71.4% and mothers who do not work have 47.8% stunting children. Based on the results of the statistical test analysis, the value of p = 0.174 is obtained, which means there is no influence of the work of the mother on the stunting incident in the KB Kampung Medan. This is in line with research by Rukmana et al (2016) which states that there is no relationship between maternal work and the incidence of stunting (p = 0.89). Similar results from research conducted by Halik et al. (2018) found that there was no relationship between maternal work and the incidence of Stunting (p = 0.181). From the results of the study of Aridiyah et al. (2015) who conducted research on the factors influencing the incidence of stunting in rural and urban areas it was found that there was no significant relationship to the incidence of Stunting in children under five between in villages and cities. But the results of this study contradict Wahdah's research (2015) which states that there is a relationship between maternal work and the incidence of stunting (p = 0.032).

In this study the majority of respondents were mothers who did not work, so mothers who did not work generally had more time to pay attention to their children's health. However, mothers who have lots of time but do not provide good parenting to their children, the risk of stunting will tend to occur in infants. It can be concluded that mother's work is not the only factor in the occurrence of stunting in Kampung KB Medan City.

Based on Table 5 above it can be seen that mothers with low knowledge tend to have a proportion of stunting children at 68.6% and respondents who have high knowledge have a proportion of stunting children at 34%. Based on the results of the statistical test analysis, it was found that the value of p = 0.001, which means there is a significant influence between the mother's knowledge of the stunting incident in the Medan KB Village. In addition, a PR value of 2,021 (95% CI: 1,329-3,072) shows that mothers with low knowledge have a risk of having Stunting 2 times greater than mothers with high knowledge. This is in line with the results of Ni'mah and Nadhiroh's research. (2015) states that there is a relationship between maternal knowledge and the incidence of stunting in infants with p = 0.015 and OR = 3.877 (95% CI: 1,410-10,658).

Based on this it can be concluded that the mother's knowledge about good nutrition in preventing stunting in the KB City Kampung Medan is still lacking. This has an impact on children's parenting in providing food with nutrients that fit the child's needs. Mother's knowledge in feeding children is a factor that determines a mother to behave to provide appropriate food for her child. Based on research Rahmayana (2014) states that there is a relationship between child parenting (feeding practices, psychosocial stimulation,

hygiene/ hygiene practices, environmental sanitation and health service utilization) with stunting events.

4 CONCLUSION

1. There is no relationship between age, education, mother's occupation with the occurrence of stunting in KB Kampung Medan City
2. There is a significant influence between the mother's knowledge of the stunting incident in the Medan City KB Village

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