FAMILY'S ROLE ON STUNTING AMONG CHILDREN IN BOJONG JAYA VILLAGE, TANGERANG, BANTEN

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ABSTRACT

Background: In 2015, the prevalence of stunting among children under five years old in Indonesia was 36.4%. It means that more than a third or around 8.8 million children under five years old height is below the standard for their age. This stunting is above the threshold set by WHO of 20%. The prevalence of stunting for Indonesian under five is the second largest in the Southeast Asia region after Laos, which reached 43.8%. This study aimed to determine the effect of family role on stunting among children under five years old.
Subjects and Method: A cross-sectional was enrolled by 242 of 615 families with children under five years old in Bojong Jaya Village, Karawaci, Tangerang, Banten. The dependent variable was stunting. The independent variables were knowledge, family income, basic sanitation, exclusive breastfeeding, immunization status, and parenting style. The data collection was carried out by measuring height, in-depth interview, and questionnaire. The data were analyzed using Chi-square test.
Results: The percentage of the stunting incidence was 20.2%. Family income (OR= 2.31; 95% CI= 1.19 to 4.47; p= 0.012) and parenting style (OR= 2.68; 95% CI= 1.36 to 5.31; p= 0.004) were associated with stunting incidence and they were statistically significant. There was a significant relationship between knowledge on the incidence of stunting (OR= 2.80; 95% CI 1.41 to 5.53; p= 0.002), and it was statistically significant.
Conclusion: There is a relationship between family income, parenting style, and knowledge on the incidence of stunting among children under five years old. There needs to be a comprehensive program in building family resilience and multisector empowerment to increase family income, maternal education and knowledge of maternal nutrition to reduce the incidence of stunting.

Keywords: empowerment, family, stunting

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BACKGROUND

Based on Indonesia's Health Profile in 2017, the percentage of very short and short children aged 0 - 59 months in Indonesia in 2017 were 9.8% and 19.8%. This condition increased from the previous year, namely the percentage of very short children under five was 8.57% and short children under five was 18.97% (Ministry of Health, 2017).

The problem of malnutrition in children is closely related to the family, for example the level of family income. Families with low-income levels generally have problems with access to foodstuffs related to low purchasing power. Apart from income, food insecurity at the household level is also heavily influenced by food price inflation.

Another important factor that influences the problem of malnutrition in children under five is poor parenting, especially exclusive breastfeeding due to the low level of parental knowledge, poor environmental conditions such as access to sanitation and clean water, and low access to health services (TNP2K, 2017).

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SUBJECTS AND METHOD

1. Study Design

This study was a cross-sectional study enrolled in Bojong Jaya Village, Karawaci, Tangerang, Banten.

2. Population and sample

The population of this study were all children under five in Bojong Jaya Village, Karawaci, Tangerang, Banten. The total sample of the study was 242 toddlers consisting of 68 toddlers from RW 01, 50 toddlers from RW 03, 57 toddlers from RW 04, and 67 toddlers from RW 05. The sampling technique used was simple random sampling.

3. Study Variables

The independent variables were knowledge, family income, basic sanitation, exclusive breastfeeding, immunization status, and parenting style. The dependent variable was stunting.

4. Operational Definition of the Study Variables

Stunting was defined as if a toddler's height exceeds minus two standard deviations from the WHO's median standard of child growth.

Family income was defined as the family income earned every month based on the Banten Province minimum wage (PMW).

Parenting style was defined as the practice of feeding provided by caregivers to infants and toddlers.

Knowledge was defined as a mother's knowledge of nutrition and how to feed infants and toddlers.

Basic sanitation was defined as family ownership of basic sanitation and is not used jointly.

Exclusive breastfeeding was defined as breastfeeding without assistance with any food and drinks until the age of 6 months.

Immunization status was defined as the provision of complete basic immunization.

5. Study Instrument

Data were obtained by examining height of toddlers who come to Integrated Health Posts and by distributing questionnaires to parents. The results of height measurement were processed to obtain stunting results using the 2010 WHO standard concerning anthropometric standards for assessing children's nutritional status.

6. Data Analysis The data

analysis used was univariate analysis to obtain an overview of the frequency distribution of the variables studied. Bivariate analysis was carried out to see the relationship between the independent variable and the dependent variable, whether the variable had an effect or only had an effect by chance. This study used a Chi-square analysis with a 95% confidence interval and a limit of alpha significance (5%).

RESULTS

Data were analyzed using Chi-square test with 2 x 2 table. From 242 data analyzed the results were presented in Table 1.

Table 1. The result of Chi-square test

Variable	Stunting		95% CI	OR	p
	Yes	No			
Family income					
<PMW	33	91	1.19 to 4.47	2.31	0.012
≥ PMW	16	102			
parenting					
Less	35	93	1.36 to 5.31	2.68	0.004
Good	14	100			
Knowledge					
Less	35	91	1.41 to 5.53	2.80	0.002
Good	14	102			
Basic sanitation					
No	6	25	0.36 to 2.42	0.93	0.895
Yes	43	168			

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Exclusive Breastfeeding					
No	13	66	0.34 to 1.40	0.09	0.307
Yes	36	127			
Immunization Status					
Incomplete	5	9	0.74 to 7.27	2.32	0.138
Complete	44	184			

There is a significant relationship between family income, parenting styles, maternal knowledge and the incidence of stunting in children aged 06-60 months in the Bojong Jaya Village work area. Exclusive breastfeeding, complete basic immunization, and basic sanitation did not show a significant relationship with the incidence of stunting in children aged 06 - 60 months in the work area of Bojong Jaya Village.

DISCUSSION

1. The Relationship between family income and stunting

From the results of the analysis, 33 respondents with a family income less than the PMW who experienced stunting were 33 respondents (26.6%) who were not as many as 91 respondents (73.4%), while respondents with family income were more PMW who stunted were 16 respondents (13.6%) and 102 respondents (86.4%) were not stunted.

Chi-Square test showed that there was a significant relationship between family income and stunting and families with low income have a 2,312 times greater chance of experiencing stunting (OR = 2.31; 95% CI = 1.19 to 4.47; p = 0.012).

This is in line with previous study conducted by Rizki, the results of the study showed that there was a significant relationship between family income and stunting with a p=0.008 (Rizki, 2017).

Family income is one factor that has a significant relationship with the incidence of stunting. If the family has an income less than the PMW, it is considered to have a dominant influence on the incidence of wasting and stunting in children. Parents with an income of more than the PMW will have the ability to provide all the primary and secondary needs of the child.

Families with good economic status also have better access to health services. Children in families with low economic status tend to consume food in terms of less quantity, quality and variety. High economic status makes a person choose and buy nutritious and varied foods.

2. Relationship between parenting styles and stunting

From the results of the analysis, 35 respondents with poor parenting who experienced stunting were not as many as 93 respondents (72.7%), while 14 respondents with good parenting styles were stunted (12.3%), and 100 respondents (87.7%) were not stunted.

Chi-Square test showed that there was a significant relationship between parenting and stunting and families who did poor parenting had a 2,688 times greater chance of experiencing stunting (OR = 2.68; 95% CI = 1.36 to 5.31; p = 0.004).

This is in line with previous study conducted by Febriani et al. (2019) the results of the study showed that there was a significant relationship between parenting styles and the incidence of stunting with a value of p = 0.001 (Febriani et al., 2019; Rahmanyana et al., 2014).

Stunting was also influenced by behavioral aspects, especially in poor parenting practices in feeding practice for infants and toddlers. To prevent an increase in the prevalence of stunting, it is hoped that parents, especially mothers or caregivers, are more intensive in caring for children where parenting shows a relationship significant with the incidence of stunting in children aged 06-60 months. Efforts to improve feeding practices, psychosocial stimulation, hygiene practices, environmental sanitation and utilization of health services have a major role in children's height growth.

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3. The Relationship between Parents' Knowledge and Stunting

From the results of the analysis, 35 respondents with poor knowledge who experienced stunting were 35 respondents (27.8%) who were not as many as 91 respondents (72.2%), while the respondents with good parenting who stunted were 14 respondents (12.1%) and 102 respondents (87.9%) were not stunted.

Chi-Square test showed that there was a significant relationship between parental knowledge and stunting and families with poor knowledge had a 2,802 times greater chance of experiencing stunting (OR = 2.8; 95% CI = 1.41 to 5.53; p = 0.002).

This was not in line with previous study, in the study conducted by Setiawan et al. (2018), it showed that knowledge was not related to stunting. Provision of appropriate ingredients and diet for toddlers in an effort to improve nutrition will be realized if a mother has good nutritional knowledge. Ignorance of information about nutrition will cause a lack of nutritional quality of family food, especially food consumed by toddlers.

4. The Relationship between Basic Sanitation and Stunting

From the results of the analysis, 6 respondents who did not have basic sanitation and experienced stunting were 6 respondents (19.4%), not 25 respondents (80.6%), while respondents with good parenting who stunted were 43 respondents (20.4%) and 168 respondents (79.6%) were not stunted.

Chi-Square test showed that there was no significant relationship between basic sanitation and stunting and families without basic sanitation had a 0.93 times greater chance of experiencing stunting (OR = 0.93; 95% CI = 0.36 to 2.42; p = 0.895). This is in line with previous study which states that basic sanitation does not show a significant relationship with the incidence of stunting (Wiyogowati, 2012).

According to WHO, good sanitation is very important, especially in reducing the risk of disease incidence and especially in reducing the risk of disease and death, especially in children. Good sanitation can be fulfilled if sanitation facilities are safe, adequate and close to living quarters.

5. Relationship between stunting and exclusive breastfeeding

From the results of the analysis, 13 respondents who were not exclusively breastfed and experienced stunting were 13 respondents (16.5%), not as many as 66 respondents (83.5%), while respondents with good parenting who experienced stunting were 36 respondents (22.1%) and 127 respondents (77.9%) were not stunted.

Chi-Square test showed that there was no significant relationship between exclusive breastfeeding and stunting and families who did not provide exclusive breastfeeding were 0.307 times more likely to experience stunting (OR = 0.09; 95% CI = 0.34 to 1.40; p = 0.307).

The status of exclusive breastfeeding had no significant relationship with the incidence of stunting. This is in line with previous study which showed that exclusive breastfeeding had no significant relationship with the incidence of stunting (Setiawan et al., 2018), where the status exclusive breastfeeding is not a risk factor for stunting in children aged 1-3 years.

This is due to the fact that stunting is not only determined by the status of exclusive breastfeeding, but also by other factors such as: quality of complementary foods (complementary breastfeeding), adequacy of Nutritional intake given to children every day, as well as health status at that time

6. The relationship between immunization and stunting

From the analysis results obtained for respondents with incomplete immunization and stunting were 5 respondents (35.7%) which were not as many as 9 respondents (64.3%), while respondents with complete immunization who stunted were 44 respondents (19.3%) and 184 respondents (80.7%) were not stunted.

Chi-Square test showed that there was no significant relationship between immunization and stunting and children with incomplete immunization status had a 2,312 times greater chance of experiencing stunting (OR = 2.32; 95% CI = 0.74 to 7.27; p =

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0.138). This was in line with previous study which states that immunization does not show a significant relationship with the incidence of stunting (Setiawan et al., 2018).

Children who were not given complete basic immunization do not necessarily suffer from infectious diseases. The immunity of children is influenced by other factors such as nutritional status and the presence of pathogens. There is a term "herd immunity" or "community immunity" in immunization, where individuals who do not receive an immunization program become protected because most of the other individuals in the group are immune to disease after exposure to a disease.

The conclusion is that there is a relationship between family income, parenting and knowledge of the incidence of stunting in children under five. There needs to be a comprehensive program in building family resilience and multisectoral empowerment to increase family income, maternal education and knowledge of maternal nutrition to reduce the incidence of stunting.

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