

The characteristics of mothers and stunted children in Kricak, Tegalrejo, Yogyakarta

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Abstract

Stunting on children is pressing matters since it could prevent and, up to a point, impair the physical and mental development of children, the growth of the brain, intelligence, and metabolism. Furthermore, in the long term it is worried that it could lead to the decrease of the cognitive ability and learning achievement, as well as the immunity so that the children will be prone to high-risk degenerative illness, old age disability, uncompetitive work competence, and low rate of productivity in economy (Kementrian Kesehatan, 2016). The aim of the research is to comprehend the character of stunted mothers and children (24-59 months) in Kricak village. The research applies analytic-descriptive model as the research design and cross-sectional study as the approach. The population in the research is 76 mothers in Kricak village having stunted children aged between 24 and 59 months. The instruments of the research are checklists and KIA books. Based on the research, the number of stunted children aged from 24 to 59 months were 76 children consisting of 69 stunted children (90,8%) and 7 severely stunted children (9,8%) and, mostly, it was suffered by the children coming from low-income families, namely 44 families (54,3%).

Keywords: *stunting, children, nutrition*

INTRODUCTION

Stunting on children is a critical issue and calls for more attention since it could prevent the mental and physical development of the children (Kementrian Kesehatan, 2016). More than 37% of children under five years old experienced stunting in 2013, which is equal to 8,4 million all over Indonesia. Indeed, the number of stunting was also high in the prosperous family (BEPENAS & UNICEF Indonesia, 2016). The number of stunting for stunted and severely stunted children in Yogyakarta fluctuated. In 2011, the rate of stunted infant amounted to 10,93%. It then rose to 10,96% in 2012 and to 11,21% in 2013 before decreasing to 10,36% in 2014 and recovering to 12,9% in 2015. It hit the peak at 14,4% in 2016 (Ministry of health, 2016). The largest population of the figure was located in Yogyakarta city (17,57%) which was followed by Kulonprogo (14,87%) (Dinas Kesehatan DIY, 2016). Data from the Office of Public Health in Yogyakarta city illustrated that the number of stunting reach 14,24% in 2015 despite the decrease to 13,28% in 2016. Tegalrejo clinic was the government clinic with the highest rate with 24,71% in 2015 and 17,99% in 2016 (Dinas Kesehatan DIY, 2017). One of the government efforts to resolve stunting is by giving specific nutrition to



stunted children, especially to the first 1000 days born group, namely pregnant mothers, breastfeeding mothers, and children between zero and twenty-three months. The reason for this is the first 1000 day is the best time for overcoming the issue. One of the ways to dip the prevalence of underweight children to 15% and stunted children to 32% in 2014 was by improving the status of society nutrition and increasing the rate of people food security (Kementrian Kesehatan, 2016). A great deal of people has not yet understood regarding what stunting is and the way in which to prevent it with the first 1000 day movement (Kementrian Kesehatan, 2016). Normal duties owned by midwives include mothers and children health service and the service for mother health reproduction and planned family. The introductory research in Tegalrejo Clinic in 2016 showed that children suffered from stunting in Kricak were 82 while in Tegalrejo were 44. Therefore, considering the number, the location of the research is in Kricak.

RESEARCH METHODS

The research applies analytic-descriptive model as the research design and cross-sectional study as the approach. The entire variable is measured and collected at the same time. The subject of the research is 76 mothers having stunted babies aged from 24 months to 59 months in Kricak village.

RESULTS AND DISCUSSION

Table 1. The characteristics of the mothers with stunted children aged between 24 and 59 months

Mother Characteristics	Frequency	Percentage (%)
Age		
19-25	22	28,9
26-35	36	47,4
>35	18	23,7
Occupation		
Civil Servant	9	11,8
Entrepreneur	10	13,2
Private company worker	17	22,4
Housewife	40	52,6
Latest education		
Elementary School	5	6,6
Middle School	25	32,9
High school	28	36,8
Undergraduate	18	22,7
Upper-arm circumference (LILA)		
Having good nutrition if LILA \geq 23,5cm	52	68,4
Having malnutrition if LILA $<$ 23,5cm	24	31,6
Anemia status		
Not having anemia if Hb \geq 11 gr/dl	54	71,1
Having anemia if Hb $<$ 11 gr/dl	22	28,9
Height		
Stunted if $<$ 150 cm	25	32,9
Not stunted if \geq 150 cm	51	67,1
Economic level		
Low if $<$ 1.700.000	44	57,9
High if \geq 1.700.000	32	42,1

According to the first table, the result demonstrates that the majority of the respondents are aged from 26 to 35 years, namely 36 mothers (47,4%). Next, the most

popular works are as housewives, which reach 40 mothers (52,6%), and the most preferable level to finish the school is in high school, which is 28 mothers (36,85). Mostly, respondents are in the good nutrition with their LILA $\geq 23,5$ cm, namely 52 mothers (68,4%) and not having anemia, which comprises 54 mothers (71,1%).

With respect to the age of the mothers, the majority of the respondent are in the reproductive age, which is 26 to 35 years. In that age, women have been ready to get pregnant and deliver children. According to Cunningham (2005), in Padila (2014), the age of the mothers is one of the risk factors related to the quality of the labor or the readiness of the mom for reproducing. For women under-20 years will tend to have complication problem in the delivery since the reproductive organs are not ready yet while over 35 years will be prone to cell regression. Considering the occupation of the mothers, mostly, they are housewives which ideally should prepare a nutrition-balanced menu for the children. However, it becomes an obstacle since the majority of the mothers' only high school graduates and is in the low-income family. It is then similar to the research of Abuya B.A, Ciera J and Kimani-Murage (2012) which said: The prevalence of stunting among children aged up to 42 months in two slums of Nairobi was close to 40 %. We found that mother's education is an important predictor for child stunting. Compared to other studies, we found that the effect of mother's education on child stunting is only minimally attenuated by factors at child, maternal, household and community level. Therefore, we find a persisting significance of mother's education on child's stunting in this context.

The education of the mothers correlates positively with the knowledge of the mother in preparing food nutrition which in the end is strongly essential to prepare nutrition-balanced food for themselves and the member of the family. Indeed, the research conducted in Ghana by Shaaka (2014) shows that the lack of knowledge on the method to nurture their children well for mothers is one of the vital factor causing the high rate of malnutrition in Ghana. Thereby, the use of effective knowledge and skill inspired by health and nutrition education hopefully could improve statutes of children health and nutrition, especially through the improvement of knowledge and practice of nursing. In addition, from the perspective of Poevarawati (2009), the income of the family is also a deciding factor to consider the level of the quality and the quantity of the food being daily prepared. The low-income family has impacts on the consideration of picking food consumed so as to reduce the variation and increase the risk of malnutrition as one of the most factors of stunting.

For comparison, those findings are supported by the research carried out in Nigeria which shows that children with low-level income families also tend to have a higher risk to suffer from stunting. And clearly, the inverse does happen for children coming from high-level income family. That is to say, since they cannot meet the basic nutrition in their daily menu, children coming from families with lower income are prone to get growth failure, high-risk infection, as well as, up to a point, limited basic health access (Akombi, et al, 2017).

However, it is striking to state that not all the healthy mothers and not having anemia will have babies with normal height. Mothers with good nutrition still could have potential and risk for having stunted children. The result shows that the height of the mothers who have stunted children is categorized as normal, which is ≥ 150 cm and stand at 67,1%. Interestingly, it does not accord with the research conducted by Zottarelli (2007) in Egypt observed that mothers with height < 150 , will be prone to have

stunted children as opposed to mother with height >150 cm and the research carried out by Naik R. & R. Smith (2015) saying stunted mothers have more probability to deliver stunted children and it is called the life cycle of malnutrition. It is caused by other factors, such as mother's education and economic status.

Table 2. The characteristics of stunted children aged between 24 and 59 months

Characteristics	Frequency (f)	Percentage (%)
Stunting variable		
Severely stunted if TB/U <-3 SD	7	9,2
Stunted if TB/U -3 SD to <-2 SD	69	90,8
Birth weight		
BBLR if <2500 gr	20	26,3
Not having BBLR if weight ≥2500 gr	56	73,7
Birth height		
Stunted if <48 cm	27	35,5
Normal if pb 48-52cm	49	64,5
Chronic infectious diseases record		
Have	33	43,4
Have not	43	56,6
Exclusive breastfeeding record		
Breastfeeding	61	80,3
Non-breastfeeding	15	19,7
Time-spent for MP-ASI		
Less appropriate if <6 months and >6 months	21	27,6
Appropriate if it is given in 6 months	55	72,4

The research conducts in Kricak shows that those babies experiencing stunting reach 76 babies. Of those 76 babies, those who are categorized in stunted children amount to 69 (90,8%) while severely stunted children are 7 (9,8%). Stunting in very young children are measured by using the classification of the status of nutrition based on height and age standard from WHO (2005). The division between stunted and severely stunted is founded upon WHO international reference. Stunting here is defined with WHO version; namely stunting is children with their Z score ≤-2SD (deviated standard) and ≤-3SD (*severely stunted*) (Kementrian Kesehatan, 2016).

According to the Directory of Nutrition Guide (2011), the normal height for children aged 24 to 59 months for male and female are different. For the female children, the standard height is between 85,7 cm to 108,9 cm while for male babies is from 87,1 to 109,4 cm. Many factors contribute in causing stunting, one of them is the status of mothers' nutrition during pregnancy, mothers' anemia record, infant birth-weight, birth-height, infectious diseases, exclusive breastfeeding record, economic level, time spent for exclusive breastfeeding, nurturing pattern of the parent, parents height, and environment. According to the Dinas Kesehatan DIY (2014), stunting should not only be considered as uninteresting, but also prone to suffer from chronic diseases, motoric disorder, and intellectual problems.

Furthermore, the result also says that mostly stunted children aged from 24 to 59 months have normal birth-weight, which is 56 children (73,7%), and only 20 children categorized in BBLR (26,3%). It shows that the proportion of children with normal-birth-weight has more stunting in their nutrition's statues and babies experiencing stunting are not always having BBLR record. Therefore, conversely, babies with normal-birth-weight are tending to be stunted. It is in harmony with the research conducted by Winowatan (2017). However, different from the former, Welasinh (2012)

says that, although there are some exceptional cases, in the majority of cases, stunted children are suffered by the children being BBLR and grow in the low-income family so that children with those categories could be say have more probability in getting stunting.

Another important characteristic regarding stunting in Tegalrejo village is that stunting for babies aged 24 to 59 months mainly happen to normal birth-weight, which is 49 children (64,5%) and shorter birth-weight only 27 children. It is suitable with the research conducted by Shwatama (2016) which observed that if children having normal birth-weight could probably suffer from stunting since they did not get the appropriate amount of nutrition inducing them to acquired growth faltering.

Infectious diseases also could be one of the direct causes of the status of children' neutrino apart from food consumed. This research demonstrates a significant result regarding that consideration that stunted children aged between 24 and 59 months who have no infectious diseases record stand at 43 children (56,65) while those who have infectious diseases record is 33 children (43,4%). Infectious diseases which often infect children in Kricak is ISPA, Diarrhea, Dysentery, persistent disorder, vomiting, worm disease. According to WHO (2013), causes of stunting could be split into two, namely direct and indirect causes, and infectious diseases are categorized as the direct cause. Research conducted by Sundari (2016) acknowledged that infectious diseases have a direct relation with stunting.

Moreover, the research demonstrates that stunting could happen to children since there are 61 babies which have exclusive breastfeeding record. It clearly surprising because this research contradict the research conducted by Akombi in Nigeria which finds that

Children who were breastfed for more than 12 months were more prone to being stunted than children who were breastfed for less than 12 months. Babies that were breastfed for more than 12 months were more susceptible to severe stunting than children that were breastfed for less than 12 months (Akombi, et al, 2017).

In other words, it could be said that stunting might be caused by other important factors, such as the consumption of energy, protein, and other macro nutrition as well as infectious diseases owned by the children.

Finally, the appropriate amount of MP-ASI also does not affect the number of stunting. It is demonstrated that in Kricak village stunted children aged 24 to 50 months have appropriated MP-ASI record, namely 55 children (72,4%). The department of health claims that there are many factors influence those possibilities, some of them are: giving MP-ASI which is too early, MP-ASI which does not have an adequate amount of nutrition, or improper pattern of giving MP-ASI based on age. However, it could be said that children acquiring exclusive breastfeeding and proper MP-ASI consistent with their need will drop the risk of stunting.

CONCLUSION

The research shows that stunting is caused by the economic level so that the children coming from low-level income are prone to growth faltering out of the lack of appropriate nutrition.

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