

The Impact of Health Education About Stunting Towards Mothers' Self Efficacy and Toddler Development

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ABSTRACT

Background: Stunting is a chronic condition that shows the growth delay due to long-term mal-nutrition. Stunting relates to morbidity, mortality rate and mental and motoric growth obstruction. The delay of motoric development can cause the delay in children's motoric ability on their group age. Based on the basic health research data, stunting rate in Sleman Region is 11.9%. The importance of health education to community is expected to be continued from exclusive breastfeeding period to complementary food.

Objectives: The aim of this study was to understand the impact of health education about stunting towards mothers' self efficacy and toddler development.

Methods: Research subjects were determined toddler with stunting on weight and height. The number of the subjects were determined by hypothesis different test of two groups with 62 subject each to be measured their development using KPSP and given the health education to their parents and then to be observed. The sampling technique used simple randomized. This research was descriptive research. Anthropometry measurement were done twice a week by trained worker. Energy absorption measurement and eating frequency used food record method and food frequency questionnaire.

Results: The result showed the positive impact and statistically significant between health education to mothers with toddler with stunting who had been given companionship and toddler with development problem. The statistic showed $p=0,002$. The result also show the significant difference between self efficacy before and after health education was given with p value $<0,05$. Mother's self efficacy affects the toddler development. This research is expected can reduce the number of stunting and able to empower mothers to be more concern about toddlers' development and their nutrition needs.

Conclusions: No relationship massage perineum with rupture perineum.

Keywords: *Health Education, Stunting, Self Efficacy, Toddler development*

INTRODUCTION

Stunting is a condition that reflects stunted growth due to malnutrition. According to WHO (World Health Organization) Child Growth Standards, stunting is based on body length index based on age (PB / U) or body height compared to age (TB / U) with a limit (Z-score) of less than -2 SD (1).

Toddlers with stunting has risk of decreasing in intelligent, productivity, and increasing the risk of disease in the future (2). Toddlers with stunting are also more susceptible to infectious diseases, furthermore this impacts on their quality of learning in school (3).

One of the health indicators to achieve the Millennium Development Goals (MDGs) is the nutritional status of children under five. Based on data from the DIY Health Office in 2015, the prevalence of malnutrition in DIY in 2014 was already less than 1% in all districts / cities. The prevalence of malnutrition toddlers in 2014 in DIY is 8.45%. This figure has decreased compared to the prevalence in 2013 (10%) (4). While the prevalence of over nutrition in DIY in 2013 was 2.89%, which means higher expected. Yogyakarta City, Sleman and Bantul Regencies reach prevalence between 2.5 to 4.9% (4).

Based on the data from national basic health research, stunting still shows a high rate of around 37.2%. Special Region of Yogyakarta (DIY Province) is a priority area for children with stunting intervention. Whereas in Sleman regency is 11.9%. A number of stunting sufferers in five districts in Sleman namely, Minggir, Sayegan, Moyudan, Prambanan and Kalasan. This condition may become worse and gives bad impact to the toddlers' health condition in Sleman. The socialization is an effort to increase public understanding of early stunting prevention. By collaborating between sectors at the Sleman district level, both in the village sub-district level and subsequently increasing the involvement of health and non-health practitioners and development partners in reducing stunting. The purpose is to find problems early so it can be treated early to prevent other impact.

This study aims to analyze the impact of health education on maternal self-efficacy and the development of toddlers in Sleman.

MATERIALS AND METHODS

This research was conducted in the form of pre-experiment with one group pre-post test design. Measurements are taken before receiving the treatment. And then after receiving the treatment, a measurement is repeated to determine the effect of the treatment.

Research locations were conducted in 3 Puskesmas Areas, including Moyudan, Sayegan and Minggir Puskesmas in April 2019 with consecutive sampling techniques, where all respondents who met the criteria were invited and collected in one location until the required number of samples were met and used secondary data to match the data. The subjects in this study were toddlers who fit the inclusion and exclusion criteria so as many as 62 respondents were collected in the study.

The dependent variable in this study is toddler development and the independent variable is mothers' self efficacy. Data was collected through interviews with parents or caregivers using the Self Efficacy Scale. Measuring development used Denver and nutritional status used anthropometry with measurements of body length and weight. Researchers had previously been trained to avoid errors in measurement Data were analyzed univariately and bivariate by using paired t-test parametric analysis.

RESULTS AND DISCUSSION

The results of the study in Table 1 shows that the total respondents of toddlers were 62 people, which consists of 34 girls and 32 boys. Characteristics of the respondent's family the majority are mothers at the age of 20-35 years as many as 51 respondents (82,4%), not working mom as many as 26 respondents (16,1%), high school educated mom as many as 35 respondents (56.5%), income of Rp 1,600,000-2,000,000 as many as 32 respondents (51,6), children aged 25 months-5 year were 46 respondents (74,2%).

Table 1. Characteristic of the respondents characteristic frequency

Characteristic	Frequency (f)	Percentage (%)
Mother's age		
<20 years old	0	0
20-35 years old	51	82,3
>35 years old	11	17,7
Mother's work		

Employee	36	58,1
Unemployee	26	16,1
Mother's level of education		
Junior HS	16	25,8
Senior HS	35	56,5
College	11	17,7
Income (Rupiah)		
<Rp. 1.500.000	7	11,3
Rp. 1.600.000-2.000.000	32	51,6
Rp. 2.100.000-2.500.000	18	29,0
>Rp. 2.600.000	5	8,1
Number of Children		
1	14	22,6
2	37	59,7
3	11	17,7
Children's age		
1-12 months	2	3,2
13-24 months	14	22,6
25 months – 5 year	46	74,2
Weaning		
Yes	28	35,7
No	34	64,3
Total	62	100

(Source: Analysed data, 2019)

Table 2. Mothers' self efficacy before the treatment of health education about stunting

Classification	Frequence	Percentage (%)
Low Self Efficacy	16	25,8
Average Self Efficacy	37	59,7
Good Self Efficacy	9	14,5
Total	62	100

Table 2 shows that self-efficacy of nursing mothers before being given the treatment shows that most categories are sufficient as many as 37 respondents (59.7%).

Table 3. Mothers' self efficacy after the treatment of health education about stunting

Classification	Frequence	Percentage (%)
Low Self Efficacy	13	21,0
Average Self Efficacy	34	54,8
Good Self Efficacy	15	24,2
Total	62	100

Table 3 shows that self-efficacy of nursing mothers after being given treatment shows that most categories are sufficient as many as 34 respondents (54.8%).

Bivariate Analysis

Differences in Self Efficacy Before and After Providing Health Education About Stunting

Table 4. T test analysis of self efficacy before and after obtained health education about stunting

Groups	Self Efficacy			
	Mean	Min	Max	SD
Pretest	46,62	38	56	5,118
Posttest	58,14	48	68	5,225
Paired t-test ($\alpha=0,05$) $p= 0,000$				

Table 4 shows the average value of self efficacy in the pretest group 46.62 ± 5.118 and in the posttest group 58.14 ± 5.225 so there is a difference between before and after health education. The results of the analysis test using paired t-test sig: 0,000 means <0.05 so that H_0 is accepted so there is a difference between before and after health education is given.

Table 5. Relation between stunting and toddler development

Variable	Development measurement				p	RP (95% CI)
	Good		Poor			
	n	%	n	%		
Stunting without treatment	28	71,8	11	28,2	0,002	11
Stunting with treatment	21	91,3	2	8,7		(1,47-82,03)

The results analysis in Table 5 shows that the development of children who are stunted without being given more treatment is less (28.2%) when compared to children who are stunted are treated with health education to their mothers (8.7%). In addition, the proportion of children who developed well was 19.5% higher in stunting children given treatment. The statistical test results obtained p value = 0.002, then it can be concluded that there is a significant relationship between stunting with toddler motor development.

The value of self efficacy is measured using the Self Efficacy Scale (SES) with a maximum score of 56 and a minimum of 38 out of 14 statement items that have a range of 1-5 scores for each question item. Score 1 is not confident at all, score 2 is not very

confident, score 3 is sometimes confident, score 4 is confident, and score 5 is very confident. The minimum value of the BSES shows that the mother is not confident while the maximum value means the mother is very confident. If categorization is made, 16 respondents (25.8%) have less confidence (in the range of grades 38-42) before treatment, 37 respondents (59.7%) have sufficient self-confidence (in the range of values of 44-50), and 9 respondents (14.5%) were confident (in the range of values 51-56).

Respondents who have enough confidence as many as 37 respondents (59.7%) seen from the characteristics of the most high school educated. The higher the level of one's education, the higher the desires and expectations (5). High school education can be assumed to be classified as a fairly easy level of education in understanding and increasing knowledge. Knowledge can determine or influence the confidence of mothers in breastfeeding in accordance with the results of research by (6) showing there are differences in the value of breastfeeding self efficacy in mothers who have different knowledge. Mothers who have higher education and knowledge will be more confident in breastfeeding than mothers who have lower knowledge. Parental education is one of the important factors in children's growth and development. Good education allows parents to receive all information from outside, especially about how to take good care of children, maintain children's health, education, and so on (7).

The number of children can be related to the mother's experience. The number of children and breastfeeding experience are the dominant factors towards maternal self-efficacy (8). Of respondents with sufficient confidence, as many as 9 respondents had at most 2 children. The experience of success and achievement has an important influence on self-efficacy because it is based on the experience of the individual in carrying out an action or habit. The experience of success can increase self-confidence, confidence, and strong desires in individuals during the process so that it can reduce the risk of failure (9). Mothers who already have 2 children already have experience in dealing with problems related to the child's growth and development process so that it is easier to solve existing problems (10).

Child's growth and development is influenced by the frequency and intensity of children's interactions with their environment. Quality and effective interactions will have a good impact. The attitude of parents is crucial to the child's growth and development. Parents who are willing to accept

the child's condition, provide support, and create an environment that is conducive to growth and development, will optimize the child's growth and development. Conversely, parents who are frustrated, stressed, feel guilty or reject children, can hinder children's growth and development (7).

Self Efficacy of Breastfeeding Mothers After Being Given Health Education About Stunting

The self efficacy value measured using the Self Efficacy Scale has a maximum value of 68 and a minimum of 48. The minimum value indicates that the mother is not confident while the maximum value means that the mother is very confident. If categorization is made, then after health education treatment is obtained 13 respondents (21%) have less confidence (in the range of values 48-54), 34 respondents (54.8%) have sufficient self-confidence (in the range of grades 55-61), and 15 respondents (24.2%) were confident (in the range of 62-68). Respondents who have enough self confidence as many as 34 respondents (54.8%) viewed from the characteristics of the most high school educated. Mothers with formal high school education have better knowledge of breastfeeding and more easily receive information about breastfeeding from various sources. At this time information about the growth and development of infants can be easily accessed from various media both print and electronic. Most of the mothers with sufficient self-confidence have a family income of 1.6-2 million, namely 32 respondents (51.6%). Family income is related to the fulfillment of nutrition in nursing mothers. Nutritional intake in nursing mothers is directly related to nutritional status during lactation, which influences the success of breastfeeding. Malnourished mothers at risk of unsuccessful breastfeeding 2.26-2.56 times greater than mothers with good nutrition (11). Most respondents aged in the range of 20-35 years were 51 respondents (82.3%). The age range at that age, where in theory has entered the age with physical and psychological maturity so that they have more confidence in caring for toddlers.

Self Efficacy Before and After Providing Health Education About Stunting

Table 4 shows the average value of self efficacy in the pretest group 46.62 ± 5.118 and in the posttest group 58.14 ± 5.225 so there is a difference between before and after health education. Analysis test results using paired t-test sig: 0,000 means <0.05 so that H_0 is accepted so there is a difference between before and after health education. Health

education about stunting provided shows that the average value of self efficacy is higher than before health education was given. Research by (12) which concluded that there were significant differences in the group of mothers who were given training or education on maternal self-efficacy. Health education provided is carried out for 15 minutes in the form of lectures and questions and answers. Health education provided in this study was also accompanied by the provision of leaflets containing the material provided. Respondents are allowed to bring home Leaflets so they can be read again when the respondent forgets the material that has been submitted. Booklets and leaflets are equally effective in increasing changes in respondent attitudes but booklets are more effective in increasing respondent knowledge (13).

The level of maternal self-efficacy is a matter that influences the habits performed (14). There was an increase in self-efficacy in the good category, namely before treatment there were 9 respondents (14.5%) in the good category, and after health education it increased to 15 respondents (24.2%). This is due to the fact that mothers who have a high level of comfort and confidence that they can care for make their condition more relaxed when doing activities. Feeling relaxed will naturally have an impact on more toddler monitoring so that toddler needs are met. Unlike conditions with mothers who have low self-efficacy, they may already understand the importance of monitoring the growth and development of infants. However, because of their level of confidence and comfort, finally when they encounter difficulties when monitoring, they tend to ignore it.

Relationship between stunting and child development

Based on the results of measurements of child development by the Denver II method, data on cognitive development, language, adaptive / fine motoric and social personal are obtained. The analysis showed that there was a significant relationship between stunting and toddler development ($p = 0.002$). The results of this study are in line with research in Banda Aceh in 2011 which showed there was a significant relationship between stunting and gross motor development in children aged 3-5 years (15). In addition, other studies in Pakistan also show that there is a relationship between fetal growth and stunting at birth with gross motor development in infants (16). The results of this study are consistent with the opinion that stunting children experience slow and short order growth. This condition is the

result of a long period due to unmet food needs that increase morbidity, and is usually found in countries with poor economic conditions (17). Nutrition plays an important role in the first two years of life. Growth and development of brain cells requires adequate nutrition. Adequacy of nutrients at this time will affect the process of growth and development of children in the next period. The quality of a child's future is determined by the child's optimal development and growth, so the detection, stimulation, and intervention of various growth or development deviations must be done early. Motor development is often ignored by doctors and parents as a very influential factor in the future. Good motor intelligence can improve one's quality of life in the future (18).

CONCLUSION AND RECOMMENDATION

There is a difference in self-efficacy between before and after the treatment of health education from the results of the analysis test using paired t-test sig: 0,000 meaning <0.05 so that H_0 is accepted. Families should pay attention to food intake from pregnancy until the baby is 5 years old to prevent malnutrition and infectious diseases that have an impact on stunting. To anticipate the disruption of growth and development in infants, puskesmas staff assisted by posyandu cadres should be more active in providing counseling and consultation on the importance of monitoring the growth and development of infants. In addition, it is necessary to carry out monitoring of growth and development of infants, so that it can be known of growth and development problems as early as possible. Furthermore, the need for good care from the family such as providing stimulation and support for children in achieving optimal growth and development.

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