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SANITATION EDUCATION TOWARDS FAMILIES AT RISK OF STUNTING

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Abstract Stunting is a condition where the body is very short, seen from the standard WHO-MGRS (Multicentre Growth Reference Study) standards, where the impact can cause disruption of brain development, intelligence, physical growth disorders, metabolic disorders in the body, as well as a decrease in the body's immunity so that it is susceptible to complications in the future. One of the factors that causes stunting is the lack of adequate sanitation in households. This study aims to analyze the knowledge of families at risk of stunting about sanitation as a factor causing stunting. The method used in this research was a pre-experimental one group pretest posttest design with the respondent being a mother from a family at risk of stunting carried out in Ekang Anculai Village, Bintan Regency. The research results showed that there was an increase in respondents' knowledge after sanitation education (p= 0.000 <0.05). The use of sanitation has a significant influence on the incidence of stunting in toddlers related to clean water facilities, family latrines, liquid and solid waste management facilities causing suboptimal child growth. Mothers' knowledge about appropriate sanitation can be increased through the education provided in this research so that it can change the behavior of making good household sanitation. This education can be an effort to improve the level of public health to prevent stunting in the future.

Keywords: Education; Sanitation; Family; Stunting

INTRODUCTION

Stunting has become one of the health issues that has been handled seriously by the Government of the Republic of Indonesia since 2018. Based on data from Survey Nutrition Status in Indonesia in 2022 (SNSI, 2022) (Supariasa & Purwaningsih, 2019), the prevalence of stunting in Indonesia is 21.6%. The prevalence number has decreased from the previous year of 2.8%, but this figure is still far from the National Medium Term Development Plan (NMTDP) for 2024 of 14%. Data obtained from SSGI 2022 (Kemenkes RI, 2022).

The Riau Island province, which is part of Indonesia, is also experiencing the problem of stunting. The prevalence of stunted toddlers in the Riau Islands Province is 15.4%. The Riau Islands have seven districts/cities with the highest prevalence of stunting, namely in Lingga Regency 18.9%, Natuna Regency 18.0%, and Bintan Regency 17.8%. Bintan Regency has 10 sub-districts with the highest prevalence of stunting in 2022 in Teluk Bintan District at 6.29%, Seri Kuala Lobam District 5.10%, Bintan Pesisir District 4.77% and Teluk Sebong District 4.62%, If we look at the prevalence of stunting in villages in Bintan Regency, it is found that the highest incidence of stunting is in Ekang Anculai Village at 16.07% and Sri Bintan Village at 11.04%.

Stunting is caused by multi-dimensional factors. The most decisive intervention at 1,000 DFL (1000 Day of First in Life). One of the causes of stunting is lack of access to clean water and sanitation (Kepmenkes, 2017). Poor sanitation and unsafe drinking water cause diarrheal diseases and environmental enteropathy. This inhibits nutrient absorption in the small intestine, which can cause malnutrition and stunting (Fischer Walker et al., 2012). The results of research (Ademas et al., 2021), show inadequate sources of drinking water,

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poor sanitation, poor hygiene practices, experiencing diarrhea in the previous 2 weeks before the holiday. Research results (Crookston et al., 2011), show that access to better sanitation is more often associated with a reduced risk of stunting. Access to better toilets has quite broad and significant predictive power in reducing the risk of stunting.

Research on knowledge of stunting has been widely carried out, however, in this study, the difference in knowledge about sanitation between pre and post education in families at risk of stunting in Ekang Anculai Village, Teluk Sebong District, Bintan Regency in particular and in general in the Riau Islands has become novel because of poor sanitation and poor drinking water. unsafe causing diarrheal disease and environmental enteropathy. This inhibits the absorption of nutrients in the small intestine, which can cause malnutrition which ultimately leads to stunting. This research aims to see the difference in knowledge of mothers of families at risk of stunting before and after education about sanitation.

METHOD

This research is a pre-experimental research with a one group pretest-posttest design. The research was carried out in Ekang Anculai Village, Teluk Sebong District, Bintan Regency. This research was conducted from 26 September to 21 October 2023. The sample in this study was mothers from families at risk of stunting who had teenage daughters/catins, pregnant women, children aged 0-23 months from poor families. Determination of the research sample was carried out using minimum sampling, the calculation results obtained a sample of 15 families. The sampling technique used in this research is probability sampling with simple random sampling technique. This research instrument was developed by researchers based on indicators for each research variable theory in the form of a questionnaire with a Guttman scale. The research procedure begins with preparing media and materials, conducting a pre-test, then providing education (treatment) and then conducting a post-test. The statistical test was carried out by a paired t test.

RESULTS AND DISCUSSION

Result

The research in Ekang Anculai Village from 26 September to 21 October 2023 was experimental research with a pre-experimental design, one group pre-test post-test on 15 respondents from mothers at risk of stunting. Bivariate analysis begins by carrying out a normality test using Shapiro Wilk with the results of the data being normally distributed. Next, a paired t test statistical test was carried out, the results were as follows:

Table 1. Average Frequency Distribution of Mothers Knowledge of Families at Risk of Stunting Based on Pre and Post Knowledge of Smart Methods in Ekang Anculai Village

Variable	Mean Pre	Mean Post	Information
Sanitation	13.733	16.666	Increase

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Table 1 shows the results of descriptive statistics obtained from the results of the sanitation variable. It appears that there is a difference in the mean value of pre-education and the mean of post-education. This difference shows an increase.

Table 2. Correlation of Data Before and After Being Given Education

Variable	N	Corelation	Sig
Santiation	15	0.552	.033

Table1. shows that the sanitation variables tested have a correlation between before and after being given education with a significance value of <0.05, meaning there is a significant correlation between before being given education and after being given education.

Table 3. Differences in Increased Knowledge Pre and Post CERDAS Method Education

Variable	Paired Differences							Sig. (2-tailed)
	Mean	Std. D	Std. Eror Mean	95% Confidence Interval of the Difference		t	Df	
				Lower	Upper			
Sanitation	-2.933	1.624	.419	-3.832	-2.033	-6.995	14	.000

Table 2. Shows the significant (2-tailed) value of the sanitation variable <0.05, meaning that there is a significant influence on the difference in the results of the pre-test and post-test given to respondents. Furthermore, the t-test results obtained for the sanitation variable were -6.995 < from the t table (-2.145), so H0 was rejected. So the decision is that there is a difference in the knowledge of mothers of families at risk of stunting before and after being given the CERDAS method education.

DISCUSSION

Indonesia is one of the countries with a fairly high stunting rate with a prevalence of stunted toddlers of 21.6% according to the results of the from Survey Nutrition Status in Indonesia in 2022 (SNSI, 2022). Handling stunting in villages. Villages are the focus of the Indonesian Government in its efforts to reduce stunting rates. A healthy and intelligent generation in the village is the support for Indonesia's future golden generation.

Determinants of stunting, reducing open defecation rates, improving sanitation infrastructure, and increasing access to maternal health services are important keys, including optimal antenatal and delivery services in health facilities or with skilled birth attendants, all of which can increase growth. children substantially, although the magnitude of variation may differ substantially between countries. Direct causes, changes in several characteristics in the mother can predict a reduction in stunting, including parity, distance between pregnancies, and maternal height (Vaivada et al., 2020). The risk of stunting is higher in children who live in communities without access to water, sanitation and hygiene (Mulyaningsih et al., 2021).

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Based on the results of the article review study, it shows that water factors (unsuitable drinking water sources, drinking water treatment), sanitation factors (use of toilet facilities, open defecation behavior, inappropriate disposal of toddler feces in toilets) are related to the incidence of stunting in toddlers in Indonesia (Hartati & Zulminiati, 2020). In addition, stunting is influenced by poor access to health services, including access to sanitation and drinking water (Rachmah et al., 2020). In line with research by (Rodriguez et al., (2012), it was found that if the percentage of houses with access to inadequate toilets could increase cases of stunting.

Sanitation and stunting are closely related because poor water quality and sanitation can trigger the emergence of diseases, especially acute infections, which cause suboptimal child growth. The use of sanitation has a significant relationship to the incidence of stunting in toddlers, namely clean water facilities, family latrines, liquid and solid waste management facilities (Astuti, 2022). Apart from that, other research also explains that children under the age of five are vulnerable to stunting in the southern region of Punjab, Pakistan. Contamination of hand pumps and tank water resources was found to be a major factor contributing to stunting (Batool et al., 2023).

It is hoped that changes in the behavior of families at risk specifically in cases of stunting can reduce the incidence of stunting in Indonesia, especially in Ekang Anculai Village, Telok Sebong District, Bintan Regency, Riau Islands. Through education about stunting, mothers with toddlers are expected to know and understand and be willing and able to do what is recommended so that they can care for and care for children who are stunted. Apart from that, mothers who already have toddlers who experience stunting can prevent it from happening to their next child. In order to reduce the incidence of stunting, the public needs to understand what factors cause stunting. Apart from that, mothers' level of knowledge needs to be increased regarding stunting prevention (Rano K. Sinuraya et al., 2019)

CONCLUSION

This research concluded that there was a difference in increasing knowledge after being given education about sanitation to families who were at risk of stunting. The determinants of stunting, reducing open defecation rates, improving sanitation infrastructure, and increasing access to maternal health services are important keys to reducing the incidence of stunting. Thus, efforts that can be recommended are maximizing education with CERDAS Method that using in the research or others method by medical personnel and academics, as well as providing proper sanitation by the local government as one of the programs to accelerate stunting reduction.

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