

## THE EFFECTIVENESS OF HEALTH PROMOTION IN STUNTING PREVENTION TO IMPROVE KNOWLEDGE AND ATTITUDES OF MOTHERS OF TODDLERS USING BERDAZI (SMART AND NUTRITIOUS BALLS) MEDIA IN SUNGAI BAUNG VILLAGE, SAROLANGUN REGENCY

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### ABSTRACT

**Background:** Stunting, a condition of growth failure in children due to chronic malnutrition, is a serious issue in Indonesia today with a prevalence rate of 21.6%. This figure indicates that around two in ten children in the country experience growth and developmental delays that can negatively impact their overall health status. One effort to reduce the prevalence of stunting is through health promotion using BERDAZI (Smart and Nutritious Balls). This study aims to determine the effectiveness of health promotion in stunting prevention to improve the knowledge and attitudes of mothers of toddlers using BERDAZI media (smart and nutritious balls) in Sungai Baung village, Sarolangun Regency.

**Method:** This type of research is quantitative research with a pre-experimental research design, with a one group pretest-posttest research design. Sampling in this study using purposive sampling technique with a total sample of 32 people. Data analysis using the Wilcoxon test.

**Results:** The average score of stunting prevention knowledge is pre-test (6.28), post-test (9.59). The average results of stunting prevention attitudes are pre-test (24.50), post-test (29.66).

**Conclusion:** There is a difference in increasing the score of knowledge and attitudes to prevent stunting in mothers of toddlers in Sungai Baung village, Sarolangun Regency who are given health promotion through BERDAZI (Smart and Nutritious Balls) with a p value of 0.000 ( $p < 0.05$ ). Health Promotion with BERDAZI (Smart and Nutritious Balls) is effective in increasing knowledge and attitudes to prevent stunting in mothers of toddlers in Sungai Baung village, Sarolangun Regency.

**Keywords:** Knowledge, attitude, stunting prevention, BERDAZI

### INTRODUCTION

Stunting, a condition of growth failure in children due to chronic malnutrition, is a serious issue in Indonesia today with a prevalence rate of 21.6%. This figure indicates that around two in ten children in the country experience growth and developmental delays that can have a negative impact on their overall health status. This stunting phenomenon has triggered deep concern from various circles, as it is not only an individual child health issue, but also has a long-term impact on the productivity and socio-economic development of the country (Jambi, 2022).

Based on data from the National Nutrition Status Survey (SSGI) in 2022, the

prevalence of stunting in Indonesia was 21.6%. While the average prevalence in 2005-2017 Indonesia is ranked 3rd in the Southeast Asia Region. Basic Health Research in 2018, states that the prevalence of stunting in toddlers in Indonesia is around 30.8%, this prevalence shows a decrease in the prevalence of stunting in the last 5 years, which was 37.2%. Although there has been a change, it has not yet reached the 2018 Riskesdas target of around 30.5% in toddlers and the RPJMN target in under-fives which is around 28% (Kemenkes RI, 2018).

Maternal knowledge about nutritional intake in children is an important factor in preventing stunting. Likewise, nutritional problems in pregnant women are very important because they affect the babies who

will be born later<sup>4</sup>. Based on the results of Angraini's research (2020), it is stated that there is a relationship between maternal knowledge of nutrition and stunting.

TNP2K (2017) states that interventions that can be carried out to reduce the prevalence of stunting need to be carried out since the first 1000 days of life (HPK) of children. Specific nutrition intervention efforts for children under five are focused on pregnant women, pregnant women and children 0-23 months, because countermeasures for short children are most effective since 1000 HPK.

Based on the results of research conducted by Raodah (2023) that there was an increase in knowledge and attitudes of mothers of toddlers after being given the media Booklet of maternal parenting in the prevention of stunting. Veni's research (2022) states that stunting health education using stunting smart card media has increased significantly. This study aims to see the effectiveness of health promotion in stunting prevention to improve the knowledge and attitudes of mothers of toddlers using BERDAZI media (smart and nutritious balls) in Sungai Baung village, Sarolangun Regency.

## METHODS

This type of research is quantitative research with a pre-experimental research design, with a one group pretest-posttest research design. Sampling in this study used purposive sampling technique with a total sample of 32 people who met the inclusion criteria. Data analysis using the Wilcoxon test.

## RESULTS AND DISCUSSION

### RESULTS

Sei. Baung is the first health service located at Jl. Lintas Sumatra, Panti, Kec. Sarolangun, Sarolangun, Jambi. With zip code 37481. The sample in this study were 45

mothers of toddlers who were in the working area of the Sei. Baung, especially in Sungai Baung village. However, at the time of the research only 32 respondents were obtained.

**Table 1. Age Frequency Distribution of Respondents in Sungai Baung Village, Sarolangun District**

Age	Frequency	Percentage
24 years old	2	6.2
30 years old	1	3.1
32 years old	2	6.2
33 years old	1	3.1
34 years old	1	3.1
35 years old	4	12.5
36 years old	2	6.2
37 years old	1	3.1
38 years old	1	3.1
39 years old	3	9.4
40 years old	4	12.5
43 years old	3	9.4
44 years old	2	6.2
45 years old	3	9.4
46 years old	1	3.1
48 years old	1	3.1
<b>Total</b>	<b>32</b>	<b>100%</b>

Based on table 1, it is known that respondents are between 24 to 48 years old.

**Table 2. Frequency Distribution of Gender of Respondents in Sungai Baung village, Sarolangun District**

Gender	Frequency	Percentage
Female	32	100
<b>Total</b>	<b>32</b>	<b>100</b>

**Table 3. Results of Analysis of Respondents' Knowledge and Attitudes About Stunting Prevention Before (Pre-Test) and After (Post-Test) Given Health Promotion Using BERDAZI Media (n = 32)**

Variable	Treatment	Mean	Median	Std. Deviation
Stunting Prevention Knowledge	Pretest	6.28	6	1.085
	Posttest	9.59	10	.615
Stunting Prevention Attitude	Pretest	24.50	25	1.704
	Posttest	29.66	30	.602

Based on table 3, it can be seen that before being given health promotion using BERDAZI media about stunting prevention (Pre-Test) the mean value is 6.28 and after

being given health promotion using BERDAZI media about stunting prevention (Post-Test) the mean value increases to 9.59. It can be seen that after being given health promotion using BERDAZI media about stunting prevention, respondents' knowledge has increased by 3.31. This shows that health promotion using BERDAZI is effective in increasing knowledge of stunting prevention.

Based on table 3, it can be seen that before being given health promotion using BERDAZI media about stunting prevention (Pre-Test) the mean value is 24.50 and after being given health promotion using BERDAZI media about stunting prevention (Post-Test) the mean value increases to 29.66. It can be seen that after being given health promotion using BERDAZI media about stunting prevention, the respondents' attitudes have increased by 5.16. This shows that health promotion using BERDAZI is effective in increasing stunting prevention attitudes.

**Table 4. Effectiveness of Health Promotion in Stunting Prevention to Increase Knowledge of Mothers of Toddlers Using BERDAZI (Smart and Nutritious Balls) Media in Sungai Baung Village, Sarolangun Regency**

Ranks				
		N	Mean Rank	Sum of Ranks
posttest –	Negative Ranks	0 <sup>a</sup>	.00	.00
pretest	Positive Ranks	32 <sup>b</sup>	16.50	528.00
	Ties	0 <sup>c</sup>		
	Total	32		

a. posttest < pretest

b. posttest > pretest

c. posttest = pretest

- a. Negative Ranks or the difference (negative) between the results of the Effectiveness of Health Promotion in Stunting Prevention to Increase the Knowledge of Toddler Mothers Using BERDAZI Media (Smart and Nutritious Balls) in Sungai Baung Village, Sarolangun Regency for Pre-Test and Post-Test is 0, both in the N value,

Mean Rank, and Sum Rank. This 0 value indicates no decrease (reduction) in knowledge from the Pre-Test value to the Post-Test value.

- b. Positive Ranks or the difference (positive) between the results of the Effectiveness of Health Promotion in Stunting Prevention to Increase the Knowledge of Toddler Mothers Using BERDAZI (Smart and Nutritious Balls) Media in Sungai Baung Village, Sarolangun Regency for Pre-Test and Post-Test. Here there are 32 positive data (N), which means that 32 mothers of toddlers experienced an increase in the results of health promotion with BERDAZI to increase knowledge about stunting prevention in mothers of toddlers in Sungai Baung village, Sarolangun district from the Pre-Test value to the Post-Test value. Mean Rank or the average increase is 16.50 for knowledge, while the number of positive ranks or Sum of Ranks is 528.00 for knowledge.
- c. Ties is the similarity of Pre-Test and Post-Test values, here the Ties value is 0, so it can be said that there are no equal values between Pre-Test and Post-Test.

**Table 5. Effectiveness of Health Promotion in Stunting Prevention to Increase Attitudes of Mothers of Toddlers Using BERDAZI (Smart and Nutritious Balls) Media in Sungai Baung Village, Sarolangun Regency**

Ranks				
		N	Mean Rank	Sum of Ranks
posttest –	Negative Ranks	0 <sup>a</sup>	.00	.00
pretest	Positive Ranks	32 <sup>b</sup>	16.50	528.00
	Ties	0 <sup>c</sup>		
	Total	32		

a. posttest < pretest

b. posttest > pretest

c. posttest = pretest

- a. Negative Ranks or the difference (negative) between the results of the Effectiveness of Health Promotion in Stunting Prevention to

Improve the Attitude of Toddler Mothers Using BERDAZI Media (Smart and Nutritious Balls) in Sungai Baung Village, Sarolangun Regency for Pre-Test and Post-Test is 0, both in the N value, Mean Rank, and Sum Rank. This 0 value indicates no decrease (reduction) in attitude from the Pre-Test value to the Post-Test value.

- b. Positive Ranks or the difference (positive) between the results of the Effectiveness of Health Promotion in Stunting Prevention to Improve the Attitude of Toddler Mothers Using BERDAZI Media (Smart and Nutritious Balls) in Sungai Baung Village, Sarolangun Regency for Pre-Test and Post-Test. Here there are 32 positive data (N) which means that the 32 mothers experienced an increase in the results of Health Promotion in Stunting Prevention to Improve the Attitude of Toddler Mothers Using BERDAZI Media (Smart and Nutritious Balls) in Sungai Baung Village, Sarolangun Regency from the Pre-Test value to the Post-Test value. The Mean Rank or average increase is 16.50 for attitude, while the number of positive ranks or Sum of Ranks is 528.00 for attitude.
- c. Ties is the similarity of Pre-Test and Post-Test values, here the Ties value is 0, so it can be said that there are no equal values between Pre-Test and Post-Test.

## DISCUSSION

### 3.2.1. Effectiveness of Health Promotion in Stunting Prevention to Increase Knowledge of Mothers of Toddlers Using BERDAZI (Smart and Nutritious Balls) Media in Sungai Baung Village, Sarolangun Regency

Based on the results of statistical tests using the Wilcoxon test, a significant value of  $p$  value = 0.000 < 0.05 was obtained and it was known that the amount of increase between the pre-test and post-test on the respondents was 3.31. Based on these results it can be seen that with BERDAZI (Smart and Nutritious Balls)

there is a significant increase in knowledge. In line with Syarifudin's research (2023) the results of statistical tests using the Wilcoxon test obtained  $p$  value = 0.000 < 0.05 which means that there is an effect of health education through modified quartet card game media on the level of knowledge about clean and healthy living behavior in students at SDN 1 Sukaraja Kuningan Regency.

This educational card media can help stimulate the sense of the eye (vision) during the educational process. This media has the advantage of being able to convey information in a more concrete way, rather than being conveyed without any tools in conveying information to children. The use of educational media is very helpful in the learning process. In addition to increasing motivation, educational media can also help improve students' understanding of the material presented (Khairuna et al., 2012)

Information provided with a simple approach through a game method with BERDAZI (Smart and Nutritious Balls) media also has an effect on respondents' knowledge in stunting prevention. The information sources delivered are packaged concisely and precisely. So that respondents can have broader knowledge based on the information conveyed.

Learning using the card emphasizes the mother's critical and creative thinking in solving questions according to what is on the BERDAZI card. BERDAZI (Smart and Nutritious Balls) media provides high capture power to respondents where cards stimulate the mother's sense of touch, sight and hearing because BERDAZI media is played with cards that can be held, read, heard and observed properly in understanding the concept of stunting prevention. Each mother was very focused in analyzing the card and her focus was always on the card she was holding.

### **3.2.2. Effectiveness of Health Promotion in Stunting Prevention to Increase Attitude of Mothers of Toddlers Using BERDAZI (Smart and Nutritious Balls) Media in Sungai Baung Village, Sarolangun Regency**

Based on the results of statistical tests using the Wilcoxon test, a significant value of  $p$  value =  $0.000 < 0.05$  was obtained and it was known that the amount of increase between the pre-test and post-test on the respondents was 5.16. Based on these results it can be seen that with interactive quiz media BERDAZI (Smart and Nutritious Balls) there is a significant increase in behavior. In line with Avisa's research (2023) the results of statistical tests using the Wilcoxon test obtained  $p$  value =  $0.000 < 0.05$  which means that there is an effectiveness of using Index Card Match media to increase the knowledge of fourth grade students about diarrhea at SDN 25 Koto Padang.

Attitude is a closed reaction from a person to a stimulus or object. Attitude is just a tendency to take action against an object in some way. So attitude is a person's views, opinions, responses or judgments and also feelings towards a stimulus or object accompanied by a tendency to act (Notoatmodjo, 2010).

The formation or factors that influence attitudes are personal experience, the influence of other people who are considered important, cultural influences, mass media, educational institutions, religion, and emotional factors. Attitude is a closed response in a person to a stimulus or object, and involves the opinion and emotional factors concerned (Azwar, 2012).

One of the factors that influence a person's attitude is knowledge. The knowledge that respondents have is the basis for determining attitudes. If the respondent's knowledge is good, the respondent's attitude will be positive, and vice versa, if the respondent's knowledge is poor, the

respondent's attitude can also be negative (Nabillah, 2022).

After being given health education with healthy card media, almost all students experienced an increase in the average attitude score from before to after. This is because the use of healthy card media as educational media has an attractive design for the target age, namely at the age of growth and development where children are very active in moving and playing, cards are designed with attractive colors and images and by using simple language and games that do not take a long time so that children will not be bored.

## **CONCLUSION**

The average score of stunting prevention knowledge is pre-test (6.28), post-test (9.59). The average results of stunting prevention attitudes are pre-test (24.50), post-test (29.66). There is a difference in the increase in knowledge scores and attitudes to prevent stunting in mothers of toddlers in Sungai Baung Village, Sarolangun Regency who are given health promotion through BERDAZI (Smart and Nutritious Balls) with a  $p$  value of  $0.000$  ( $p < 0.05$ ). Health Promotion with BERDAZI (Smart and Nutritious Balls) is effective in increasing knowledge and attitudes to prevent stunting in mothers of toddlers in Sungai Baung village.

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## **CONFLICT OF INTEREST**

The authors declare no conflicts of interest.

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