



Education on the Importance of Food Consumed by Breastfeeding Mothers and Exclusive Breastfeeding Against Stunting Prevention Through Power Point Media

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ABSTRACTS

This study aims to describe education related to the importance of food consumed by breastfeeding mothers and how important exclusive breastfeeding is for children to prevent stunting. The experimental method by giving a pretest to the respondent who is then given action or education related to the research topic before the posttest is carried out is the method used in this study. Based on the data obtained, it can be seen that the average N-Gain value of 0.60335 indicates the method or education carried out is education using PowerPoint media about educational activities on food consumed by breastfeeding mothers and the importance of exclusive breastfeeding for stunting prevention is quite effective for respondents. This result increased because the public's understanding after education related to the research topic increased. The impact of this study is that the public can better understand the importance of food consumed by breastfeeding mothers and the importance of exclusive breastfeeding for stunting prevention.

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1. INTRODUCTION

Stunting becomes a problem topic that needs attention to be addressed immediately (Setyowati *et al.*, 2018; Leroy & Frongillo, 2019). Stunting is a problem related to chronic nutrition that can be caused by inadequate nutritional intake over a long period due to the impact of giving or consuming food that is not following the body's nutritional needs (Adistie *et al.*, 2018). We know nutritional problems are of course an urgent problem because they involve the growth and development of the next generation and have an impact on whether or not a nation is developed, especially for countries that are still developing.

Stunting also means being an indicator of the condition of nutritional problems in an area for a long time (Najahah, 2013). Stunting can occur due to many factors cause it. Several factors such as the condition when a baby is born, providing nutrition to children, complementary foods in addition to breast milk, non-exclusive breastfeeding, and even food consumed by mothers during pregnancy and breastfeeding can also provide the potential for stunting to their children (Budiastutik & Rahfiludin, 2019).

Based on the measurement of nutritional status in toddlers, stunting is one of 3 categories of toddlers with malnutrition, the other 2 are underweight (BB/U) and wasting (BB/TB). Therefore, the problem of stunting is a topic that needs to be prevented and addressed. It does not expand and has a bad impact on a group or even a nation. West Java Province has a stunting prevalence rate of 25.6% in 2015, this figure is quite high and needs to be addressed immediately. Even in 2018, as quoted by Huriyah *et al.* (2021), the problem of stunting affected 21.9% of children under 5 years of age internationally which is equal to 149 million children worldwide (Huriyah *et al.*, 2021). Therefore, the prevention of stunting is very important, especially as it needs to be prevented as early as possible because it can be a concrete solution to solving nutritional problems in Indonesia (Adistie *et al.*, 2018; Hapsari & Zenurianto, 2016). Education related to the importance of food should be consumed and not consumed for pregnant and lactating women or prospective mothers, as well as the urgency of exclusive breastfeeding, is considered important to prevent the spread of stunting, because as previously explained intake from pregnant and lactating women and the importance of exclusive breastfeeding included in the factors of stunting or not.

Several previous studies examined the title of stunting and the like, such as the research conducted by Sutarto *et al.* (2018) "Stunting, Risk Factors and Prevention" (Sutarto *et al.*, 2018), then there is Budiastutik and Rahfiludin who researched "Risk Factors for Stunting in Children in Developing Countries" (Budiastutik & Rahfiludin, 2019). There is also a study conducted by Mugianti *et al.* (2018) "Factors causing stunting in children aged 25-60 months in Sukorejo District, Blitar City" (Mugianti *et al.*, 2018). In summary, the previous research above discusses the causal factors and how to prevent stunting in general, not focusing too much on one topic of factors and their prevention.

Seeing the urgency of the topic of stunting, it is even very urgent to be detected as early as possible regarding stunting in children (Eksa *et al.*, 2021). Therefore, this study aims to describe and provide education regarding the importance of food intake consumed by breastfeeding mothers and the importance of exclusive breastfeeding to prevent stunting. Also looking at some of the previous studies that have been submitted previously, the previous research focuses more on discussing the factors that cause stunting and ways or things that can be done to prevent stunting in general. Therefore, this study tries to present several novelties, namely: (i) This study focuses on knowing the extent of respondents' understanding of stunting, (ii) Providing focused action or education related to food must be consumed by breastfeeding mothers to prevent stunting.

2. METHODS

The method used in this research was experimental, but before conducting experiments or actions as well as education to respondents, a pretest was given to determine the respondent's understanding of the topic of this research. Then, by giving the next action at the end, a posttest was given to see the difference in understanding before the action was given and after the action was given, whether there was a change or not. The experimental method itself was controlled for its accuracy by the researcher himself and with the accuracy of the logic patterns in it ([Setyanto, 2013](#)).

The steps were making questions for the pretest and posttest and creating content for actions or education. All steps were carried out after the pretest. After the questions for the pre-test and post-test were completed, we distributed a questionnaire about the pretest to the respondents in Karyawangi, precisely in RW 11. This pretest served as a measurement before taking action related to the topic of the study ([Hastjarjo, 2019](#)). After completing the pretest, the respondents were given education related to the topic studied through explanations using PowerPoint media. Furthermore, respondents returned to fill out the posttest questionnaire after being given education.

Then we can see based on the results of the respondent's pretest and posttest whether there was a change in either increasing or decreasing understanding, or there is no change at all between before the education/action was given and after the education was given.

2.1 Research subject

The research subjects were residents of the village of Karyawangi, Parongpong, Indonesia. To be precise, 10 respondents were taken from the residents of RW 11 Karyawangi with aged 15 to 25 years.

2.2 Research design analysis

Research data collection by us was carried out by distributing questionnaires directly to respondents through several stages, namely: (1) distributing pretest questionnaires, (2) providing educational actions by directly using PowerPoint media, and (3) after being given action then tested again by giving a post-test questionnaire. Quantitative was the approach used in this research. We made as many as 20 questionnaire questions to be used as a pre-test and post-test questions. The questions made and the education provided focused on the research topic, which was not far from the importance of food consumed by breastfeeding mothers and the importance of exclusive breastfeeding for children to prevent stunting. The pretest and posttest questions that will be distributed to respondents are:

1. Do you know what stunting is?
 - a. Yes, know
 - b. Ever heard
 - c. Don't know
2. Do you think stunting can be prevented?
 - a. Capable
 - b. Possible
 - c. Not capable
3. Have you ever attended a seminar or education related to stunting?
 - a. Once

- b. Never
- 4. How often do you attend seminars or education related to stunting?
 - a. Often
 - b. Sometimes
 - c. Seldom
- 5. Do you think stunting education or seminar is important for children's growth and development?
 - a. Important
 - b. Possible
 - c. Not Important
- 6. What factors can cause children to experience stunting?
 - a. Parent
 - b. Nutritional Intake
 - c. Environment
- 7. Do you think that heredity/parents have an impact on children experiencing stunting?
 - a. Yes, Impact
 - b. Possible
 - c. Has no impact at all
- 8. Do you think there are similarities between stunting and malnutrition?
 - a. Yes, there is
 - b. Don't know
 - c. There isn't any
- 9. In your opinion, what is balanced nutrition for breastfeeding mothers?
 - a. Nutrients in the type and amount according to the body's needs
 - b. Eat a lot so that energy can recover
 - c. Do a lot of strenuous activities
- 10. Do you think the food consumed by a breastfeeding mother is important?
 - a. Important
 - b. Not too important
 - c. Not important at all
- 11. What kind of foods can breastfeeding mothers eat?
 - a. Fast food
 - b. Non-fried food
 - c. Nutritionally balanced food
- 12. In your opinion, are there foods that breastfeeding mothers must/must eat?
 - a. Yes, there is
 - b. Possible
 - c. None at all
- 13. What kind of food do you think a breastfeeding mother should eat?
 - a. Vegetables
 - b. Fruits
 - c. Nutritionally balanced food
- 14. Examples of what kind of food can be consumed by breastfeeding mothers?
 - a. Avocado, Fish, Burger
 - b. Dates, Avocado, Milk
 - c. Fish, Egg, Cow's Milk
- 15. Is exclusive breastfeeding important for children?
 - a. Important

- b. Possible
 - c. Not Important
16. Do you know how long a mother will exclusively breastfeed her child?
- a. Yes, Know
 - b. Not Too
 - c. Don't know at all
17. How long does it take for mothers to exclusively breastfeed their children?
- a. 2 Months
 - b. 6 Months
 - c. 2 Years
18. Is it permissible for a child or toddler not to get exclusive breastfeeding?
- a. Can
 - b. Possible
 - c. Should Not
19. Do you think that the food consumed by breastfeeding mothers has an impact on stunting?
- a. Yes, it will have an impact
 - b. Possible
 - c. Not Impact
20. In your opinion, does exclusive breastfeeding have an impact on stunting?
- a. Yes, it will have an impact
 - b. Possible
 - c. Not Impact

2.3 N-Gain nilai value analysis

Analysis of the normalized gain or N-Gain value was carried out to be able to find out whether there was an increase in the respondent's understanding of the topic before being given action and after being given action and knowing whether giving education using PowerPoint media was effective or not (Nismalasari *et al.*, 2016; Syaha & Harsono, 2020).

Furthermore, in determining the effectiveness or not in the acquisition of the N - Gain value, we can refer to the categories in the acquisition of the N - Gain value, we can refer to the categories contained in **Table 1**, namely (Novita *et al.*, 2019).

Table 1. N-Gain score category.

N-Gain Value	Category
$g > 0.70$	Tall
$0.30 < g < 0.70$	Currently
$g < 0.30$	Lace

Based on **Table 1**, we were able to evaluate data. When the Gain value was greater than 0.70, it was included in the high category. If the Gain value was smaller than 0.70 and greater than 0.30, it was included in the medium category. If the Gain value was smaller than 0.30, it was included in the low category.

Furthermore, we can also obtained at the percentage level of N – Gain to see the effectiveness of the actions taken. Categories can be used regarding the percentage of N – Gain values can be referred to in **Table 2**, namely (Prisuna, 2021).

Table 2. N-Gain percentage category.

N-Gain Percentage (%)	Category
< 40	Ineffective
40 - 55	Less effective
56 - 75	Effective enough
> 76	Effective

3. RESULTS AND DISCUSSION

Table 3 shows the value of the N - Gain value for each respondent starting from the Pre - Test, and Post - Test values, up to the percentage of the N - Gain value.

Table 3. Analysis of Pre-Test and Post-Test Gain Values.

No	Pretest Score	Posttest Score	Posttest – Pretest	Maximum score – Pretest	Value N – Gain	Percentage N – Gain (%)	Category
1	55	85	30	45	0.67	67	Currently
2	70	85	15	30	0.50	50	Currently
3	60	75	15	40	0.38	38	Currently
4	65	85	20	35	0.57	57	Currently
5	80	90	10	20	0.50	50	Currently
6	55	80	25	45	0.56	56	Currently
7	55	85	30	45	0.67	67	Currently
8	50	85	35	50	0.70	70	Currently
9	60	90	30	40	0.75	75	Tall
10	60	90	30	40	0.75	75	Tall

Table 3 shows the analysis of the results of the Pre-test and Post-test of each respondent. Based on the data contained in **Table 3**, it can be seen all respondents' results have increased from Pre-Test questions to Post-test questions. Briefly, education using PowerPoint media can be used to explain material on research topics. Then if we look at the N - Gain value of each respondent, on average all of them are in the quite effective category, we even see the last 2 respondents have a very effective N - Gain value.

Figure 1 shows a comparison of the shape of the curve obtained from the pretest value and also the post-test value. The results in **Figure 1** are similar to **Table 3**. The post-test value has increased compared to the pretest value. There are significant effects related to providing education on important foods that must be consumed by breastfeeding mothers and the importance of exclusive breastfeeding to prevent stunting using PowerPoint media.

Table 4 shows the percentage level of Gain value from each respondent. In **Table 4**, we can obtain the average percentage value of N – Gain, which is 60.35%. Its effectiveness is in the quite effective category. Then if we look at the percentage of the effectiveness of the N - Gain value for each respondent, we can see the ineffective level is only in the first 1 respondent with the rest of the respondents being at more than 40%, which means they are in the quite effective category.

From the data obtained the results of giving questionnaires to respondents increased. This is because when giving the Pre-test, the majority of respondents still do not understand stunting and the importance of food consumed by mothers and exclusive breastfeeding for children, both in terms of understanding, prevention and dangers. After the Pre-test is given, then education is carried out with explanations related to research topics which are proven by the Post-test results which increase quite effectively. Good education with PowerPoint

media or other media has proven to be effective, even for the method of presentation with lectures and discussions with respondents the level of effectiveness can reach 70% (Vinci *et al.*, 2022). Similarly, the results obtained from Paskalia Tri Kurniati's research with the lecture method and PowerPoint media can provide a good understanding of the urgency of fulfilling nutrition for women of childbearing age. Stunting problems can be prevented from an early age (Kurniati, 2021).

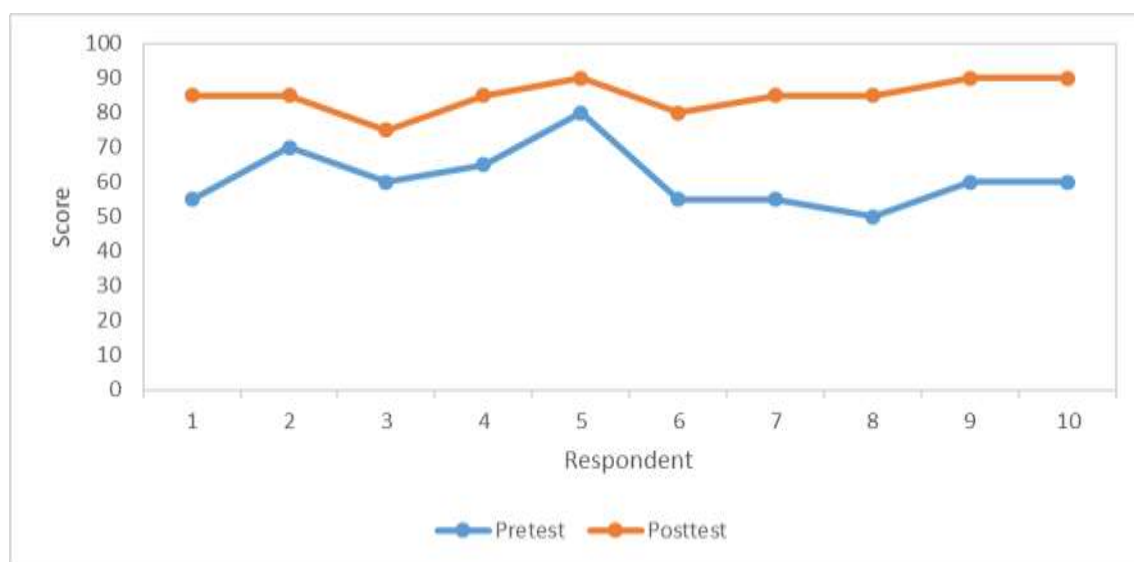


Figure 1. Pre-test and post-test results curves.

Table 4. Percentage of N Gain for each respondent.

	Frequency	Percent	Valid Percent	Cumulative Percent	Frequency
Valid	38	1	10.0	10.0	10.0
	50	2	20.0	20.0	30.0
	56	1	10.0	10.0	40.0
	57	1	10.0	10.0	50.0
	67	2	20.0	20.0	70.0
	70	1	10.0	10.0	80.0
	75	2	20.0	20.0	100.0
	Total	10	100.0	100.0	

This education is certainly important to be able to prevent stunting not only for prospective mothers but also for every class of society. The rate of stunting can be suppressed. Especially in the first 1000 days of life for babies, prospective mothers need to pay attention to nutrition and exclusive breastfeeding, because in the first 1000 days they are also very prone to many diseases infecting children (Muhdar *et al.*, 2019), as well as monitoring and education from health workers are also very important, every behavior and community group can together prevent stunting (Anggraeni & Murni, 2021).

From every data analysis that has been carried out, it can be seen education on the food consumed by breastfeeding mothers and the importance of exclusive breastfeeding to prevent stunting by using power point media has a positive impact on increasing public understanding, especially in the Karyawangi, RW 11, Parongpong, Indonesia. Moreover, one of the health indicators considered to be a success in achieving the SDGs (Sustainable

Development Goals) is the nutritional status of children under five (Priharwanti, 2022), with the positive impact obtained from education on the food consumed by breastfeeding mothers and the importance of exclusive breastfeeding to prevent stunting using PowerPoint media, the success of SDGs (Sustainable Development Goals) is expected to be achieved optimally.

4. CONCLUSION

This study was conducted to be able to describe how effective education is regarding the importance of food consumed by breastfeeding mothers and how important exclusive breastfeeding is for children to be able to prevent stunting using lecture methods and PowerPoint media. This research was conducted through several stages, such as giving a pretest which was then carried out by providing education related to the topic and finally giving a posttest to measure how effective and how far the respondents' understanding was increased before being given education and after being given education. Based on the data method or education carried out by using PowerPoint media in educational activities on food consumed by breastfeeding mothers and the importance of exclusive breastfeeding for stunting prevention is quite effective for respondents. Then also look at the average percentage of the N - Gain value, which is 60.35%. It means that its effectiveness is in the quite effective category. With the results obtained, it is hoped the community can better understand the importance of food consumed by breastfeeding mothers and the importance of exclusive breastfeeding for the prevention of stunting.

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6. AUTHORS' NOTE

There is no conflict of interest regarding the publication of this article. The authors confirm that this article is free from plagiarism.

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