

## THE INFLUENCE OF POSTER MEDIA EDUCATION ON MOTHER'S KNOWLEDGE ABOUT STUNTING

Eka Hadrayani<sup>1\*</sup>, Nurul Fadhilah Gani<sup>1</sup>, Risnawati<sup>1</sup>, Muthahharah<sup>1</sup>

<sup>1</sup>Universitas Islam Negeri Alauddin Makassar 92118, Indonesia.

\*Email: eka.hadrayani@uin-alauddin.ac.id

---

### Abstract

*Stunting is a chronic malnutrition problem caused by a lack of nutritional intake in children over a long period which can result in growth disorders in children. Education can increase parents' knowledge and attitudes in providing children with nutrition so that it can become an alternative intervention to improve health behavior in dealing with stunting. In the research area, there are 71 stunted children. This research aims to determine the effect of education about stunting on mothers' knowledge in Pallantikang village, Jeneponto Regency. This research is quantitative research using a quasi-experimental method with a one-group pre-post test design approach and using the Wilcoxon test. In this research design, before the intervention is given, a pre-test is first given which aims to assess the mother's knowledge about stunting. After the intervention is given, a post-test will be given. The intervention that will be carried out in this research is education about stunting using lecture methods and poster media. The results of the research show the p-value = 0.000 and the median pre-test is 9.00 while the post-test value is 13.00. From the results of the research conducted, it can be concluded that there is an influence of education about stunting on the knowledge of mothers in Pallantikang Village, Jeneponto district, before and after being given education about stunting. Future research needs to examine further the behavior of mothers in providing nutrition for toddlers after receiving nutrition education. Providing health education through poster media can increase knowledge and can be a good health education technique for the community.*

**Keywords:** *Stunting, Education, Mother's Knowledge*

---

### Introduction

Indonesia continues to fight against malnutrition which harms human resource (HR) standards. The prevalence of stunting in children under five is still significantly high and is one of the main nutritional problems that must be addressed currently. Toddlers who are stunted, or shorter than the average age are said to be stunted. Length or height that deviates more than plus or minus two standard deviations from the median (-2SD) of the World Health Organization standard is used to measure this abnormality. (Indonesian Ministry of Health, 2018).

Stunting has short-term and long-term effects on toddlers in addition to inadequate height growth. Short-term effects, such as during childhood, include stunted growth, cognitive decline, and impaired immunological function. Children will also be more susceptible to disease than other children because their immune systems are still low and fragile at this age. Stunting children have long-term effects, such as how they think as adults and how likely they are to develop degenerative diseases including Diabetes Mellitus, coronary heart disease, hypertension, and obesity (Secanggang et al., 2022).

Stunting is a global problem that occurs in many countries. Based on reports from UNICEF (United Nations Children's Fund), WHO, according to the World Bank, in 2020 there were 149.2 million (or 22%) children experiencing stunting throughout the world. The survey also found that two out of every five children under the age of five in Africa (41%) and more than half of children in Asia (53%) experience stunting. Globally, there are 149.2 million children under five who experience stunting, compared to 203.6 million children in 2020 (Sukmalalana et al., 2022).

In Indonesia, the proportion of short toddlers is relatively increasing. The PSG (Nutrition Status Monitoring) survey is used to track and assess program and activity achievements. SSGI data in 2021 shows that 5.33 million Indonesian toddlers, or 24.4% of the under-five population in this country, experience stunting (Ministry of Health of the Republic of Indonesia, 2018). The WHO threshold of 20 percent for non-public health problems is still far from the prevalence of child stunting in Indonesia. According to the Indonesian Ministry of Health (2018), 30.8 percent of Indonesian children experience stunting nationally. Of the three provinces, South Sulawesi Province has the largest stunting frequency, namely 35.7%, higher than Central Sulawesi Province. The results of the Nutritional Status Monitoring (PSG) in South Sulawesi Province show that there are two districts with the highest incidence of stunting, namely Enrekang Regency and Jeneponto Regency. Meanwhile, overall there are 11 city districts in South Sulawesi, namely Enrekang, Bone, Pinrang, Gowa, Pankajene Islands (Pangkep), Tana Toraja, Sinjai, Jeneponto, North Toraja, Takalar and Selayar Islands (Thamrin et al., 2021).

According to data from the South Sulawesi Provincial Health Service, the area with the highest frequency of stunting in South Sulawesi is Jeneponto Regency which was ranked first in 2015. With a prevalence of 45.8%, Enrekang Regency was ranked first in the incidence of stunting in 2017. Meanwhile, Jeneponto Regency fell from the first position to 14th out of 24 districts in South Sulawesi with a prevalence of 35.7%. Of all toddlers in Jeneponto Regency who experienced stunting, 373 children had a stunting rate of 3.73% in 2018 (Risksdas, 2018).

The prevalence of stunting is caused by several causes, including poor parenting, poor quality diet, and the presence of diseases that can inhibit fetal growth in the womb. A mother's understanding of caring for a stunted child is one of the stunting episodes that greatly influences the child's growth and development. Low knowledge and poor parenting patterns in caring for children with stunting are two factors that cause the high incidence of stunting, in essence, the increase in the incidence of stunting requires handlers to increase the knowledge and abilities of mothers in caring for children (Zainal, 2022).

The condition of stunting is caused by inadequate nutritional intake for children, even when they are still in the womb. WHO claims that malnutrition problems due to poverty, politics, and culture are the main causes of stunting. There are two elements, namely hereditary factors and environmental influences that have an impact on stunting. Although hereditary factors only contribute 10% of stunting, environmental factors contribute 90%. Factors that determine that children essentially have the same growth capacity, however, the environment greatly influences a child's ability to grow in height. Public knowledge of the importance of providing proper nutrition in the first 1000 days of a child's life is one of the most influential environmental factors. Stunting in children can most likely be avoided if sufficient nutritional intake is consumed at that time. Apart from insufficient nutritional intake, stunting can also be caused by recurrent infectious diseases in children (Siti Nur Ramdaniati, 2019).

According to UNICEF 1990, modified for Indonesian conditions, the problem of stunting is not only caused by eating less than needed or by the occurrence of recurrent infectious diseases, or how these two factors interact, but is also influenced by indirect factors. causal factors such as the availability of food at home, the quality of the local health service system, and the mother's parenting style. Providing breast milk and complementary foods, providing complementary foods, psychosocial care, as well as cleanliness and hygiene are examples of maternal parenting patterns in this situation. A home can produce toddlers with good nutritional status if it has good maternal parenting, healthy consumption patterns, and access to environmental and health services.

Notoatmodjo emphasized that a mother's attitude and knowledge have an impact on the way she raises her children. Mothers' knowledge can be obtained from trusted sources such as newspapers, television, the internet, and education. The daily care of mothers of toddlers will be influenced by their skill level. Positive mood and good behavior can result from a solid understanding of nutrition. According to Septamarini's research findings published in the Journal of Nutrition College in 2019, mothers with little understanding were 10.2 times more likely to inhibit their children than mothers with sufficient information. Knowledge arises from "knowing," and "knowing" only occurs after one perceives a particular object. The human body's five senses of sight, hearing, smell, taste, and touch are used for sensing. Most human information is learned through sight and hearing. The nutritional knowledge that mothers have is information about food and nutrition. Mothers' attitudes and behavior when making food choices for their children are influenced by various things, including their level of nutritional education and how that knowledge can influence their nutritional status. A mother's lack of nutritional knowledge can be one of the factors that influence a child's nutritional status because it can influence the mother's attitude or behavior when choosing the food her child will eat, as well as her eating habits and how

this relates to the amount, variety and frequency of eating which will influence how much food she eats. children will eat (Ramdhani et al., 2020).

Education has the potential to improve parents' attitudes and understanding in meeting children's nutritional needs, opening new avenues for improving healthy behavior related to stunting (Naulia et al., 2021). This is in line with research results which explain that educational interventions for mothers with stunting children can influence the quality of the mother's attitudes and behavior in caring for them (Munir and Audya, 2022). Based on the working area of the Bangkala health center, 10 villages have stunted children, namely Mallasoro Village has 9 Stunting children, Punagayya 43, Bontorannu 40, Pantai Bahari 25, Pallengu 17, Tombo-tombolo 16, Kalimporo 15, Benteng 23, Pallantikang 71 and Bonto Manai. 40 Stunted children.

Based on the background above, the high incidence of stunting in Jeneponto is thought to be due to a lack of maternal knowledge, so further analysis needs to be carried out regarding the influence of education about stunting on maternal knowledge in Palantikang Village, Jeneponto Regency.

## Method

This research is quantitative research using a quasi-experiment method with a one-group pre-post test design approach. This research was conducted in Pallantikang village, Jeneponto district in August. The population numbered 71 and the sample was 35 mothers who had stunted children. This research has received a research ethical feasibility test with No. C.009/KEPK/FKIK/I/2023 at the ethics commission of FKIK UIN Alauddin Makassar. The educational media in this research is posters. The procedure, Pre-test: providing education is carried out in three sessions, namely giving a questionnaire sheet to find out knowledge before being given education, second, intervention: giving education about stunting using lecture methods and poster media, then third post-test: filling out a questionnaire sheet to find out the mother's knowledge after given education. Data processing and analysis used the SPSS program with the Wilcoxon test.

## Results

Table 1.1 Frequency Distribution of Respondent Characteristics in Pallantikang Village, Jeneponto Regency, 2023

No.	Characteristics	Frequency	Percentage (%)
1.	Gender		
	Man	16	45.7
	Woman	19	54.3
2.	Child Age		
	Toddlers (1-3 years)	25	71.4
	Preschool (4-6 years)	10	28.6
3.	Mother's Age		
	Late teenagers (17-25 years)	11	31.4
	Early Adulthood (26-35 years)	19	54.3
	Late Adulthood (36-45 years)	5	14.3
4.	Mothers Education		
	Elementary school	10	28.6
	Junior High School	8	22.9
	Senior Highschool	17	48.6
5.	Mothers Job		
	Work	1	2.9
	Doesn't work	34	97.1
6.	Nutritional status		
	Malnutrition	5	14.3
	Less Nutrition	29	82.9
	Good Nutrition	1	2.9
	Total	35	100

Based on table 1.1 above, shows the characteristics of the respondents who contributed to this research, in terms of maternal age, namely 11 (31.4%) respondents in late teens, 19 (54.3%) early adults, and 5 (14.3%) late adults. Characteristics of respondents with elementary education level were 10 (28.6%) respondents, 8 (22.9%) respondents with junior high school education and there were 16 respondents with high school/vocational education (48.6%). Characteristics of mothers who have a job are 1 (2.9%) respondent and mothers who don't work are 34 (97.1%) respondents, almost all respondents have work taking care of the household. Characteristics of respondents who have children based on gender were 16 (45.7%) male and 19 (54.3%) female respondents. Based on the age of the children, there were 25 (71.4%) toddlers and 10 (28.6%) preschool-age children. Based on the results of research on nutritional status, there were 5 (14.3%) children with poor nutrition 29 (82.9%) children with malnutrition, and 1 (2.9) child with good nutritional status.

Table 1.2 The Effect of Education Before and After Being Provided with Education About Stunting on Mothers' Knowledge in Pallantikang Village

<i>Variable</i>	<i>N</i>	<i>Median</i>	<i>(Min-Max)</i>	<i>p-value</i>
Before	35	9.00	5-18	0.000
After	35	13.00	12-25	

Based on table 1.2, shows that  $p\text{-value} = 0.000 \leq 0.05$ , the median value before 9.00 and the median value after 13.00, using a confidence level of 95%, which means there is an increase in maternal knowledge before and after the educational intervention about stunting using poster media on maternal knowledge, which This means that there is an influence of education using poster media on mothers' knowledge about stunting in Pallantikang village, Jeneponto Regency.

The results of this study indicate that the increase in maternal knowledge after being given intervention was influenced by the method of providing education using poster media. Education using poster media is one of the appropriate techniques to use in providing health education to the community. Posters as educational media in this research can change individual attitudes because the information obtained through appropriate visual communication can provide a better attitude than the previous attitude. This change in attitude is caused because the persuasive message follows changes that have meaning in the target behavior. Persuasive communication is usually applied in conveying information by emphasizing the stimulation of a person's thought process through communication patterns that are capable of inviting, influencing, or changing the understanding or attitudes of other people (Yulius Y, 2016).

Research (Naulia et al., 2021) shows that nutrition education can increase knowledge and attitudes toward fulfilling nutrition so that nutrition can be an alternative intervention to improve health behavior in preventing stunting. This shows that education about stunting can increase maternal knowledge and change maternal attitudes and behavior. This research is further strengthened by the findings (Waliulu et al., 2018) which found differences in the average knowledge of respondents before and after the intervention. This shows that education influences knowledge and efforts to prevent stunting.

Knowing is the result of feeling something. We can feel using the five senses of the human body: sight, hearing, smell, taste, and touch. Individuals can obtain knowledge from other people through direct observation, direct hearing, and other forms of communication such as radio, television, etc. (Notoatmodjo, 2012). One of the risk factors for the prevalence of stunting in children is the mother's lack of understanding about it. Low-skilled mothers are said to be less aware of how important it is to follow a healthy lifestyle and provide their children with adequate nutrition. The emergence of the risk of stunting in children will have an impact on this.

Septamarini's research, published in the Journal of Nutrition College in 2019, mothers with little understanding were 10.2 times more likely to inhibit their children than mothers with sufficient information. This research is in line with research by Angraini, et al (2020) that there was an increase in the average knowledge score before and after being given education, this shows that education has a positive influence on knowledge. (Angraini, W. Pratiwi, B. A. Amin, M. Yuniarti, R. Febriawati, H. & Shaleh, 2020)

The incidence of stunting is closely related to the mother's knowledge because the mother's knowledge about high nutrition can influence the toddler's eating patterns which in turn can influence the toddler's nutritional status. For this reason, it is necessary to provide education in a systematic, structured, and sustainable manner so that it is easy for respondents to increase their knowledge. Based on observations, researchers assume that in providing education to

respondents several things must be considered when providing education, such as the research location, the situation when providing education, an inadequate environment, and respondents who lack knowledge about stunting so that they have difficulty understanding the material.

Other research that also supports the results of this research is research (Agustina et al., 2020) which states that nutrition education has an impact on mothers' behavior in preparing balanced meals, especially in increasing mothers' knowledge, attitudes, and behavior in toddlers so that it cannot be separated from supporting factors. positive things such as spirituality, enthusiasm, and information. Attitudes and behavior will improve so that the stunting rate in children will decrease.

Research is in line with (Nurhayati R, Utami RB, 2020) which states that toddlers who experience stunting can benefit from education because education can increase mothers' knowledge and help change their parenting style to provide nutrition that encourages healthy growth and weight development.. ( Munir & Audyna, 2022) also said that based on the results of a review of 15 journals regarding the influence of education on the knowledge and attitudes of mothers who have stunted children, the results showed that educational interventions for mothers with stunted children could influence the quality of mothers' attitudes and behavior in caring for stunted children.

Mothers who have children with stunting may be more compassionate and have a positive outlook if they have more knowledge about caring for these children. It has been proven by a researcher in Indonesia that health education interventions are very effective in increasing maternal knowledge, which can help change maternal parenting behavior in terms of providing nutrition, which has a positive impact on growth and weight development in stunted toddlers. Increasing awareness of mothers who have stunted children in this setting can have an impact on mothers' attitudes toward caring for children with stunting to reduce additional risk factors and improve the quality of children's growth and development.

This research also shows significant differences in knowledge before and after being given education. So the influence of poster media education intervention on maternal knowledge on the incidence of stunting was identified. This difference in influence can occur because the process of conveying information about stunting is conveyed directly to respondents so that respondents can immediately ask questions when there is something they don't understand. Apart from that, providing education in three sessions is effective in increasing mother's knowledge. This research is supported by research (Agritubella & Delvira, 2020) which states that an intervention was carried out in the experimental group who received the intervention three times, which included health education and posters to take home. Day III was filled with giving another questionnaire (post-test) to ensure the mother's understanding after being given health education. Increasing pregnant women's awareness of the 1000 HPK Diet Pattern through visual aids such as posters is one successful way to prevent stunting.

Regarding this matter, education needs to be provided in a systematic, structured, and sustainable manner to improve mothers' knowledge. Based on the research that has been conducted, researchers assume that poster media can influence mothers' knowledge because posters are a media that is commonly used, this media makes it easier to convey and receive information and aims to influence individuals or groups to be interested in a material object being informed.

This research is in line with research (Agritubella & Delvira, 2020) which states that the average level of knowledge of mothers in the control group has increased. This shows a real difference and proves that putting up posters will effectively increase awareness of stunting prevention. Research (Pande Luh Made et al., 2022) also confirms this, showing that respondents' knowledge increased after health education was carried out through posters and videos sent via the researchers' WhatsApp group. Several factors influence the growth of knowledge, one of which is the information collected. Mothers can find out more about stunting by watching videos and posters about stunting sent via WA messages.

Receiving information or educational resources is also made easier with the visual elements of graphic posters (Notoatmodjo, 2003). Mothers' knowledge about stunting is influenced by counseling using simulation methods with snakes and ladders games and props in the form of posters (Kisman et al., 2020). According to Noviani's research findings, after providing nutrition education through posters, the number of respondents with good category knowledge increased (Noviani, 2018). Jumilah et al.'s research findings. also shows an increase in understanding following counseling through poster media. (Jumilah et al., 2017).

An increase in knowledge also occurs due to the suitability of the material messages conveyed. In this research, the health education material is related to the meaning of stunting, short-term and long-term impacts of stunting, causes of stunting, food intake or diet, if a child is affected by stunting, what should be done, and the benefits of Moringa leaves. In providing education, we can use various media because they can be more proactive and also effective in increasing mothers' knowledge.

## Conclusion

From the results of the research conducted, it can be concluded that there is an influence of education about stunting on mothers' knowledge in Pallantikang Village, Jenepono district, before and after being given education about stunting. Future research needs to examine further the behavior of mothers in providing nutrition for toddlers after receiving nutrition education.

## References

- Affiza, S. M. B. P. (2022). The influence of nutrition education on maternal knowledge in fulfilling nutritional intake in stunted toddlers. *Journal of Education*.
- Agritubella, S. M., & Delvira, W. (2020). *The Effectiveness of the First 1000 Days of Life (HPK) Diit Pattern Poster on Pregnant Women's Knowledge about Nutrition in Stunting Prevention at the Rambah Health Center, Rokan Hulu Regency*. 5(1), 168–179.
- Ministry of Health of the Republic of Indonesia. (2018). *Pocket Book of Nutritional Status Monitoring in 2017*. Jakarta: Directorate of Community Nutrition.
- Manggala, A. K., Kenwa, K. W., Kenwa, M. M., Sakti, A. A., & Sawitri, A. A. (2018). Risk factors of stunting in children aged 24-59 months. *Paediatrica Indonesiana*, 5 (58)(i:10.14238/pi58.5.2018.205-12), 12–205.
- Student, B., & Society, K. (2018). Study Guide - Stunting and *Prevention Efforts Study Guide - Stunting and Efforts*.
- Mulyaningrum, F. M., Susanti, M. M., & Nuur, U. A. (2021). *Factors That Affect Stunting In The World*. 74–84.
- Munir, Z., & Audyna, L. (2022). The influence of education about stunting on the knowledge and attitudes of mothers who have stunted children. *Journal of Professional Nursing*, 10(2), 29–54. <https://doi.org/10.33650/jkp.v10i2.4221>
- Naulia, R. P., Hendrawati, H., & Saudi, L. (2021). The Influence of Nutrition Education on Mothers' Knowledge and Attitudes in Fulfilling the Nutrition of Stunting Toddlers. *Journal of Public Health Sciences*, 10(02), 95–101. <https://doi.org/10.33221/jikm.v10i02.903>
- Nurhayati R, Utami RB, I. A. (2020). Health Education about Stunting Nutrition in Mothers to Weight Stunting Children Aged 2-5 Years. *J Qual Public Hea*, 4(1), 38–43.
- Pande Luh Made et, A. (2022). ( *The Effect Of Health Education Using Poster And Video Via*. 11(1), 39–46.
- Waliulu, S. H., Ibrahim, D., & Umasugi, M. T. (2018). The influence of education on the level of knowledge and efforts to prevent stunting in children under five years old. *Forikes Journal of Sound Health Research*, 9(4), 269–272.
- Yuningsih. (2022). The Relationship of Nutritional Status and Stunting in Toddlers. *Journal of Midwifery Imah*, 9(2), 102–109