

The Influence of Health Education with Video Media on Stunting Prevention on Mothers' Knowledge

Rotua Sumihar Sitorus¹, Reni Aprinawaty Sirait², Megawati Sinambela³

^{1,2}*Institut Kesehatan Medistra Lubuk Pakam, Indonesia*

³*Institut Kesehatan Deli Husada Deli Tua, Indonesia*

*Correspondence: rotuasitorus29@gmail.com

ABSTRACT

Stunting is a chronic malnutrition condition experienced by a person since pregnancy and early childhood, failure to thrive in children (Stunting) is a challenge in the development of a quality Indonesian society. This study aims to determine the effect of health education with video media on preventing stunting. This study is a quantitative study with a quasi-experimental method. The study was conducted in the work area of the Laut Tador Health Center, Batu Bara Regency in January 2024. The population in this study were all stunted babies totaling 171 people, a sample of 47 respondents was obtained. The results of the study showed that out of 47 respondents, aged 25-30 years (61.3%) and 31-35 years (38.3%). Based on education with Senior High School education (53.2%), Elementary School education (6.4%), Junior High School education (8.5%), and Diploma/Bachelor education (31.9%), while based on occupation with jobs as IRT (Housewife) (53.2%), employees (25.5%), and teachers (21.3%). The results of the paired sample test obtained an average value before and after counseling of 13.085 with a standard deviation of 17.306 with a t value of -5.183. The significance value of the p-value is 0.000 (<0.05), so it can be concluded that there is an influence of providing video media on respondents' knowledge in preventing stunting before and after.

Keywords: knowledge, stunting, incident, children

INTRODUCTION

Stunting is a significant public health concern characterized by impaired growth and development in children due to chronic malnutrition, recurrent infections, and inadequate psychosocial stimulation. It is defined as a height-for-age measurement that is more than two standard deviations below the World Health Organization (WHO) Child Growth Standards median (Balehegn et al., 2021; Wake et al., 2023). This condition primarily affects children under five years of age and has profound implications for their physical and cognitive development, as well as their long-term health and productivity (Suhaerudin et al., 2023).

Around one in three children under five globally is stunted, wasted, or overweight, and in some cases, suffers from hidden hunger due to vitamin and essential nutrient deficiencies. Despite global declines, progress in reducing stunting in Africa has been slow. Between 2000 and 2018, the number of children affected rose by 1.4 million in Eastern and Southern Africa and 6.5 million in West and Central Africa, posing serious implications for Africa's human capital development (UNICEF, 2019). Globally, it is estimated that 22% of children under five years

old suffer from stunting, with the majority residing in developing countries (Suhaerudin et al., 2023).

Indonesian Toddler Nutritional Status Survey (SSGBI) by the Health Research and Development Agency of the Ministry of Health of the Republic of Indonesia in 2019, the highest proportion of stunting was in East Nusa Tenggara (43.8%), West Sulawesi (40.4%) and West Nusa Tenggara (37.8%). This result is almost the same as the 2018 Riskesdas, where the highest stunting propri was in East Nusa Tenggara, West Sulawesi, Aceh, while the lowest stunting propri was in the Bangka Belitung Islands (19.9%), Riau Islands (16.8%) and Bali (14.4%). The stunting propri in North Sumatra Province was 30.11% (Kementerian Kesehatan RI, 2020).

The cognitive development of stunted children is particularly concerning. Research indicates that stunting is linked to delays in cognitive skills such as language processing, motor skills, and overall brain development (Mulyanti et al., 2023). For example, a study found that stunted children exhibited significantly lower cognitive scores than their adequately nourished counterparts (Mustakim et al., 2022). Furthermore, the impact of stunting on cognitive abilities can be irreversible if not addressed in early childhood (Rakotomanana et al., 2023). This cognitive impairment is compounded by the fact that stunted children are more susceptible to illnesses, which can further hinder their development (Abou-Seri et al., 2022).

Video media as an educational tool has been shown to be particularly effective in conveying complex health information in an engaging and accessible manner. Studies indicate that video interventions can significantly increase knowledge and awareness among mothers regarding stunting prevention strategies, such as proper nutrition during pregnancy and the importance of breastfeeding and complementary feeding practices (Johariyah et al., 2024). For instance, the use of video media in health education has been associated with improved understanding of dietary needs and the critical periods for child development, which are essential for preventing stunting (Dearden et al., 2023). This aligns with findings that suggest multimedia approaches can enhance learning outcomes compared to traditional methods like pamphlets or lectures (McNab & Skapetis, 2019).

Moreover, the effectiveness of video media in health education is supported by evidence that highlights its ability to foster better retention of information and motivate behavioral changes among mothers (McNab & Skapetis, 2019). Research has demonstrated that mothers who engage with video content on stunting prevention exhibit increased knowledge and more positive attitudes towards nutrition and health practices (Mustikawati et al., 2024; Suleman et al., 2021). This is particularly important as maternal knowledge directly correlates with the

nutritional practices adopted within the household, which in turn affects child growth and development (Wulandari & Harahap, 2023).

Furthermore, the integration of video media into community health programs has been shown to enhance participation and engagement among mothers, thereby facilitating a supportive environment for learning (Sitaresmi et al., 2023). For example, community-based interventions that utilize video content have reported significant improvements in mothers' knowledge and practices related to stunting prevention, demonstrating the potential of this medium to reach and educate diverse populations effectively (Dolifah et al., 2021; Suleman et al., 2021).

The methods and media used by each study have very different combinations. This is assessed from the comparison of pretest scores carried out by researchers on cadres, before and after education with various combinations of methods and media. Stunting prevention using videos combined with discussions only increased knowledge by 33% (Hanifah & Hartriyanti, 2023), while cadres who received training with power point media in delivering material, mentoring and evaluation only increased from 9% of the cadre's original knowledge. This figure is not comparable when looking at the increase in knowledge with teaching aids, lecture methods, demonstrations and practices as much as 70% increase in cadre knowledge (Ningrum et al., 2021).

Based on the results of a preliminary study conducted are 10 villages where the majority of their livelihoods are as farmers and laborers. In 2022, the prevalence of Stunting in Laut Tador reached 40%, the incidence of stunting in the Laut Tador health center working area reached 202 children with the highest village. Efforts that have been made by the Laut Tador health center include providing iron tablets, providing local additional food, and providing counseling on stunting. Health education delivered through video media is a powerful tool for improving mothers' knowledge about stunting prevention. By effectively communicating essential information and engaging mothers in the learning process, video interventions can lead to better nutritional practices and ultimately contribute to reducing the prevalence of stunting in children. The researcher is interested in conducting research with the aim of finding out the effect of health education using video media stunting prevention on maternal knowledge in the work area of Laut Tador Health Center, Laut Tador District, Batu Bara Regency.

METHOD

This research is quantitative research, using the type of quasi-experiment conducted, namely the influence of variables which aims to obtain information which is an estimate obtained from actual data. This study was conducted in the working area of the Laut Tador Health Center, Batu Bara Regency because they still do not know well about stunting prevention at the Laut Tador Health Center, Batu Bara Regency, period started in January 2024. The population in this study were all infants affected by stunting at the Laut Tador Health Center, totaling 171 people affected by stunting. The sampling technique can use the Lemeshow formula, so that a sample of 47 respondents was obtained.

The data analysis technique used univariate and bivariate analysis. Univariate analysis aims to explain or describe the characteristics of each variable studied in a simple way and the results are presented in the form of a frequency distribution table. Bivariate analysis is used to see the effect of video media on preventing Stunting. The Kolmogorov Smirnov Statistic test was used to first perform a normality test in order to assess this hypothesis. The paired and independent t-tests were employed since the data was found to be regularly distributed based on the data normality test.

RESULTS

The results of this research can be seen in the Table below:

Univariate Analysis

Table 1. Frequency Distribution of Respondent Characteristics

Characteristics	Frequency (f)	Percentage (%)
Age (Years)		
25-30	29	61.7
31-35	18	38.3
Education		
Elementary School	3	6.4
Junior High School	4	8.5
Senior High School	25	53.2
Diploma/Bachelor	15	31.9
Work		
Housewife	25	53.2
Employee	12	25.5
Teacher	10	21.3
Level of knowledge without video media		
Not enough	19	40.9
Enough	27	57.4
Good	1	2.1

Characteristics	Frequency (f)	Percentage (%)
Level of knowledge with video media		
Not enough	14	29.8
Enough	11	23.4
Good	22	46.8

Based on Table 1, it shows that out of 47 respondents, the majority of respondents aged 25-30 years were 29 people (61.3%) and the minority had 31-35 years were 18 people (38.3%) and based on education, the majority of respondents had high school education as many as 25 people (53.2%) and the minority had elementary school education as many as 3 people (6.4%). While based on occupation, the majority of respondents had jobs as IRT (Housewife) of 25 people (53.2%) and the minority had teachers of 10 people (21.3%).

Before health education was conducted using video media, the majority of respondents' knowledge was in enough category, as many as 27 people (57.4%) and good for 1 people (2.1%), but after health education was conducted using video media, the majority had good knowledge, as many as 22 people (46.8%), and knowledge was enough for 11 people (23.4%).

Bivariate Analysis

Table 2. The Influence of Health Education with Video Media on Stunting Prevention on Mothers' Knowledge

		Mean	Std. Deviation	t	df	Sig. (2-tailed)
Pair 1	Pre test – Post Test	-13,085	17,306	-5,183	46	0,000

Based on Table 2 above, the results of the paired sample test show that the average value before and after health education was 13.085 with a standard deviation of 17.306 with a t value of -5.183 from 46 respondents, a significance value of p-value of 0.000 (<0.05) was obtained, so it can be concluded that there is an influence of providing video media on respondents' knowledge in preventing stunting before and after health education.

DISCUSSION

Respondent Characteristics

Based on the results of the study, it shows that the majority of respondents aged 25-30 years, Senior High School education, jobs as IRT (Housewife). Demographic factors such as age, education level, and gender have been shown to correlate with survey response quality. For instance, younger and less educated respondents are more likely to fail attention checks in surveys, which can lead to biased results (Alvarez et al., 2019). This demographic bias is critical

to consider, as it can significantly influence the outcomes of research, particularly in studies addressing sensitive topics or requiring nuanced understanding (Krumpal & Voss, 2020).

Personality traits also play a significant role in shaping how respondents engage with surveys. Research indicates that traits such as agreeableness can influence the likelihood of providing socially desirable responses, which may not accurately reflect true attitudes (Van der Schyff et al., 2022). Moreover, specific personality dimensions, such as extraversion, have been linked to different decision-making styles and consumer behaviors, suggesting that personality can affect how individuals respond to survey questions (Ngcamu et al., 2023).

This study is in line with Olsa et al., (2018) study that almost all (78.4%) of respondents work as housewives. Compared to moms who do not work, working women are more likely to have children who are stunted, demonstrating that working mothers are more likely to have stunted children.

Level of Mother's Knowledge about Stunting Prevention Before Health Education with Video Media

The results of the study showed that before health education was carried out using video media, the majority of respondents' knowledge was enough, where mothers did not know the impact of stunting, mothers did not know foods that could prevent stunting, knew children's food needs according to their age and development. Maternal knowledge about stunting is often found to be inadequate prior to educational interventions.

For instance, a study by Nasution et al. reported that approximately 50.7% of mothers had low knowledge levels about stunting, which correlates with negative attitudes towards prevention measures (Nasution et al., 2019). Similarly, Arnita et al. highlighted that a significant portion of mothers lacked sufficient knowledge about the nutritional needs of their children, which is essential for preventing stunting (Arnita et al., 2020). These findings underscore the necessity for targeted educational programs to enhance maternal knowledge.

Health education interventions, particularly those utilizing multimedia resources such as video media, have been shown to effectively improve maternal knowledge about stunting prevention. Furthermore, Hany's research demonstrated that educational booklets significantly improved mothers' knowledge regarding stunting, suggesting that structured educational materials can be beneficial (Hany et al., 2024). The use of video media in health education has also been supported by studies indicating that visual aids can enhance understanding and retention of information (Putri & Lestari, 2021).

This study is in line with the research of Angraini et al. (2020) there was an increase in the average knowledge and after being given education about stunting, meaning that education has a positive effect on knowledge. Knowledge is the result of knowing and occurs after someone senses a particular object. Sensing occurs through the five human senses, namely sight, hearing, smell, taste and touch.

Level of Mother's Knowledge about Stunting Prevention After Health Education with Video Media

The results of the study showed that after counseling using video media had good knowledge, where mothers already understood and knew the meaning and impact of stunting, mothers already knew foods that could prevent stunting, mothers already knew children's food needs according to their age and development.

According to the research results of Adilah et al. (2023) it is proven that there is a relationship between education level and stunting incidents, where the lower the level of education of the mother of the toddler, the greater the risk of the toddler becoming stunted. Individuals who have low income and the income is uncertain in the amount earned per day can potentially have low ability to meet children's nutritional needs, if left unchecked it will risk having an impact on stunting in infants and toddlers (Merawati et al., 2023).

Health education methods, particularly those utilizing video media, have been shown to effectively increase mothers' knowledge about stunting. For example, Burah's study demonstrates that nutrition education delivered through video media significantly improved the knowledge and attitudes of mothers regarding stunting prevention (Burah et al., 2024). This finding is supported by Suleman et al., who also report that health education can significantly enhance mothers' knowledge in preventing stunting (Suleman et al., 2021). The effectiveness of multimedia approaches, including videos, is further corroborated by research indicating that such methods can lead to substantial improvements in knowledge levels among mothers (Suhaerudin et al., 2023).

Moreover, the relationship between maternal knowledge and stunting prevention is further elucidated by several studies that explore the impact of educational interventions. For instance, Wardani et al. found that mothers' perceptions of susceptibility and severity regarding stunting are closely linked to their preventive behaviors (Wardani et al., 2022). This suggests that not only is knowledge important, but the way that knowledge is framed and perceived can also influence maternal behavior in stunting prevention. Additionally, Aprianti's research indicates

that understanding proper feeding patterns and parenting practices is essential for preventing stunting, highlighting the multifaceted nature of maternal knowledge (Aprianti, 2023).

The Influence of Health Education with Video Media on Stunting Prevention on Mothers' Knowledge

Based on the paired sample test, it was found that the average value before and after the counseling can be concluded that there is an influence of maternal knowledge about stunting prevention before and after health education using videos. Social media is a popular medium of communication and a source of regular information for internet users, including being useful in providing health information. The results of the study are supported by research Hamimah and Azinar (2020) showing that there is a difference in mothers' knowledge about stunting before and after health counseling through Sparkol videoscribe-based explainer video media.

Research indicates that health education delivered through audiovisual media significantly enhances mothers' knowledge about stunting prevention. For instance, a study by Nurhayati highlights that effective health education through audiovisual media can substantially increase knowledge levels among pre-marriage couples regarding stunting prevention (Nurhayati et al., 2023). Which demonstrates that nutrition education using video media positively impacts the knowledge and attitudes of mothers with toddlers, thereby fostering better nutritional practices (Burah et al., 2024). That health campaigns employing audiovisual methods can effectively raise awareness and knowledge among mothers about essential parenting and nutrition practices to combat stunting (Marlinawati et al., 2023).

Research indicates that audiovisual media, including videos, significantly enhances the effectiveness of health education programs aimed at mothers. The audiovisual education specifically targeting pregnant women has a positive impact on their knowledge regarding nutrition, which is crucial for stunting prevention (Marni et al., 2022). This aligns with findings from Taqwin et al., who demonstrated that educational interventions using audiovisual media notably improved pregnant women's knowledge and attitudes towards stunting (Taqwin et al., 2022).

The importance of maternal knowledge in stunting prevention is further underscored by Atamou et al., who found a significant correlation between maternal knowledge and the risk of stunting in children under five years old. They argue that a lack of knowledge can adversely affect maternal attitudes and skills necessary for proper child care during the critical 1000 days of life (Atamou et al., 2023). This is echoed by the findings of Hany, which assert that mothers'

understanding of stunting is crucial for addressing and preventing related health issues (Hany et al., 2024).

CONCLUSION

The majority of respondents aged 25-30 years (61.3%), the majority of respondents had a high school education (53.2%), the majority of respondents were housewives (IRT) (53.2%). The mother's knowledge about stunting prevention before health education with video media was carried out, the majority of mothers' knowledge was enough category. The mother's knowledge about stunting prevention after health education with video media was carried out, the majority of mothers' knowledge was good (46.8%). The effect of mother's knowledge about stunting prevention before and after health education with video media was carried out. Based on the paired sample test, the average value before and after counseling that there is an influence of maternal knowledge about stunting prevention before and after health education using videos. The integration of video media in health education initiatives significantly enhances mothers' knowledge about stunting prevention. This improvement in knowledge is critical, as it translates into better nutritional practices and child care behaviors, ultimately contributing to the reduction of stunting rates. The evidence strongly supports the notion that audiovisual health education is a valuable strategy in empowering mothers to combat stunting effectively.

LIMITATION

The role of health centers is highly expected in inviting the community, especially mothers, in implementing health education to increase mothers' knowledge about Stunting using more effective media. The research's small sample size limits its scope, but it is hoped future researchers will expand it and actively participate in preventing and increasing knowledge about stunting through socialization and health education, thereby contributing to the prevention efforts.

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