64

Stunting prevention efforts through knowledge interventions of toddler mothers using booklets and video



Taamu¹, Dali², Nurjannah³, Dyah Noviawati Setya Arum⁴, Siti Khuzaiyah⁵

¹Nursing Department, Poltekkes Kesehatan Kendari, Kendari, Indonesia, taamu_kes@yahoo.com ²Nursing Department, Poltekkes Kesehatan Kendari, Kendari, Indonesia, dalimashar@gmail.com ³Nursing Department, Poltekkes Kesehatan Kendari, Kendari, Indonesia, nbasau.nurjannah@gmail.com ⁴Midwifery Department, Poltekkes Kesehatan Yogyakarta, Yogyakarta, Indonesia, aa_dyahnsarum@yahoo.com ⁵Midwifery Program, PAPRSB Institute Health Sciences, Universiti Brunei Darussalam, Brunei Darussalam, khuzaiyahpenulis@gmail.com

ARTICLE INFO

Article history:

Received: March 30th, 2022 Revised: Sept 16th, 2022 Accepted: Sept 20th, 2022

Keyword:

Booklet:

Mother's knowledge; Stunting prevention; Video.

ABSTRACT

One of the efforts to prevent stunting is to improve the quality of mothers' knowledge through structured education. This can be done with the help of booklets and videos. This study was quasiexperimental with a pre and post-test design with a control group. The population in the study were all toddlers in the Nambo Public Health Center (PHC) working area in Kendari City in 2020 (230 toddlers). The number of samples was determined using the binominal proportions formula so that a sample was 60 toddler mothers. The data were analyzed using the paired T-Test test and Independent T-Test test. The results showed that education through booklets and videos in each group had a significant impact in increasing the knowledge of mothers under five about stunting and its prevention, with p-value= 0.000≤0.05, t-count= 5.396 and pvalue= 0.000≤0.05, t-count= 10.441. While the follow-up test showed a significant difference in mothers' ability who were given booklet media and education through video media about stunting, its prevention was more effective in increasing the knowledge than education through booklets in the Nambo PHC working area, Kendari City, with p-value= 0.003≤0.05, t-count = 3.088. Booklet and video-based education were effective in increasing mothers' knowledge about stunting in toddlers and its prevention, but videobased teaching was more effective than booklet-based education.

This is an open-access article under the CC-BY-SA license.



Corresponding Author:

Taamu

Nursing Department, Poltekkes Kemenkes Kendari

Jendral A.H Nasution Street No.G-14 Anduonohu, Kambu, Kendari, Southeast Sulawesi, Indonesia 93231.

Telp: (0401) 3190492

Email: taamu_kes@yahoo.com

INTRODUCTION

Stunting in children reflects the condition of failure to thrive due to chronic malnutrition so children become too short for their age. Chronic malnutrition occurs from infancy in the womb until the age of two. Stunting mostly occurs in toddlers aged 24-36 months, the prevalence of stunting increases until the age of 5 years.(1) One of the efforts to prevent stunting is to improve the quality of mothers' knowledge through structured education. This can be done with the help of booklets and videos, which can be a medium for conveying information. Video is included in audio-visual, which can reveal objects and events like the





real situation. The use of video makes the message displayed more fully understood and simple because it provides a real picture of what is happening in everyday life or the environment.(2)

Based on the Nambo Public Health Center (PHC) Kendari City data in July 2020, 230 toddlers spread across the Nambo PHC working area in Kendari City. The working area of the Nambo PHC is one of the areas in Kendari City, which is in a maritime location with a high stunting rate. Prevention of stunting should be done early on. Parents play a vital role in carrying out full responsibility for childcare and paying attention to nutritional sensitivity issues to meet daily needs so that malnutrition and stunting in children do not occur. Children who experience a lack of nutritional intake will have a level of intelligence and immunity that is not optimal, thus making children unintelligent and more susceptible to disease at a later age to be at risk of decreasing productivity levels. In the end, the effects of stunting will hamper economic growth, increase poverty, and widen inequality in the nation's future.

Based on the toddler's age, stunting mainly occurs in toddlers aged 24-36 months. The stunting condition only appears after the baby is two years old. During this age of rapid growth, the prevalence of stunting continues to increase, especially at the age of 3, which is higher than in the first year of birth. The prevalence of stunting increased from 6 months of age (22.4%), one year of age (27.3%), two years of age (36.1%), three years of age (40.9%) during the journey to 5 years of age, so nutritional disorders occurred—stunting increases.(1) The process of child growth and development is influenced by several factors: nutritional status. Nutritional status is an expression of a state of balance of nutrients with their utilization in the body. Nutritional status consists of good, more, less, and poor nutritional status. Good nutritional status is a state of balance between intake and nutritional needs. Inadequate and poor nutritional status can be caused by infection and lack of nutrient consumption.(3)

In 2017, 22% of toddlers in the world experienced stunting, or the equivalent of 150,800,000 toddlers. According to data on the prevalence of stunting under five from the World Health Organization (WHO), Indonesia ranks third in the Southeast Asia region, with an average prevalence of stunting under five in 2005 - 2017 of 36.4%. Based on Nutrition Status Monitoring Data for 2015 – 2017 in Indonesia, stunting has the highest prevalence compared to other nutritional problems such as malnutrition, underweight, and obesity.(4)

According to the 2018 Basic Health Research (Riskesdas), the prevalence of short and very short toddlers is 30.8%. This figure also includes Southeast Sulawesi Province itself experiencing stunting, as revealed by the Head of the Southeast Sulawesi Provincial Health Office, which stated that as many as 36% of children under five in Southeast Sulawesi were born stunted or born with a low body length or stunted.(5) Furthermore, the data from the Southeast Sulawesi Provincial Health Office in 2019 showed that the stunting rate for toddlers aged 0–59 months exceeded 2.920 children.

The high incidence of stunting in Southeast Sulawesi needs serious attention from all elements to formulate the right solution to deal with the stunting problem. The results showed that stunting was influenced by family income, knowledge of maternal nutrition, maternal parenting, history of infectious diseases, history of immunization, protein intake, and maternal intake. Maternal intake, especially during pregnancy, is one factor that plays an important role. Fetal nutrition depends entirely on the mother, so the nutritional adequacy of the mother greatly affects the condition of the fetus she contains. Pregnant women who are malnourished due to lack of food intake cause stunted growth of the fetus in the womb so they give birth to stunting babies.(6)

One of the efforts that can be made to improve the quality of parents' knowledge of stunting prevention is to conduct structured education. This can be done with the help of

audio-visual media, which can transmit information from the educator to the participants. The use of print/visual media produced through mechanical and photographic processes only stimulates the senses of the eye (sight). In contrast, audio-visual media is produced through mechanical and electronic processes by conveying messages or information in an audio and visual manner providing a stimulus to the eyes (sight) and ears (hearing).

Booklet and video media are information carriers with audio (sound) and visual (image) characteristics. This media has a better ability because it includes these two characteristics. The existence of booklets and video media has the advantage of being used to develop participants' creativity. These advantages include that this media can present impressions following the original state to be very interesting. Toddler Mothers also get the opportunity to observe repeatedly the objects displayed so that they can understand an object quickly and in detail. This advantage can also develop creativity for students to explore information obtained through other sources. Through booklets and videos, students can increase their creativity, utilize imagination or self-expression, and satisfy the demands and needs of motoric development, language, cognitive, emotional, social, values, and life attitudes to improve the quality of their knowledge.

METHOD

This research was conducted from September to November 2021 in the working area of the Nambo PHC, Kendari City. The research type was quasi-experimental using a pretest-post-test group design. This study compared the two intervention groups, namely the group that was given media booklet-based education and the group that was given video-based education. This study uses two measurements, namely before and after the intervention. Measurements made before the intervention (O1) are called pretests, and measures taken after the intervention (O2) are called post-tests. The form of the research design is as follows:

Table 1. Research design

Group	Pree-Test	T	Post-Test
Treatment 1	O_1	T ₁	O_3
Treatment 2	O_2	T_2	O_4

Description

- T₁ = Treatment by giving media booklets about stunting prevention
- T_2 = Treatment by providing video media about stunting prevention
- O_1 = Knowledge of mothers in treatment group 1 before being given education using booklet media about stunting prevention
- ${\it O}_2=$ Knowledge of mothers in treatment group 2 before being given education using video media about stunting prevention
- O₃ = Knowledge of mothers in treatment group 1 after being given education using booklet media about stunting prevention
- O_4 = knowledge of mothers in treatment group 2 after being given education using video media about stunting prevention

The population in this study were all mothers of children under five who live in the stunted toddler area with a high number of 230 people in the Nambo PHC working area, Kendari City. The number of samples was determined using the binominal proportions formula so that a sample was 60 people, then divided into two groups, namely treatment group 1, which amounted to 30 people, and treatment group 2, which amounted to 30 people. The sampling technique used is simple random sampling, which is simple random

Jurnal Kesehatan Ibu dan Anak Vol.16, No.1, July 2022, pp. 64~74 ISSN: 2599-3224 (Online), ISSN: 2302-6014 (Print)

sampling by writing down all the names of mothers who have toddlers, including stunted toddlers, and then drawing lots to determine the sample in this study for the two treatment groups.

The statistical test used in the bivariate analysis is a comparative analysis test (difference test) which will be described as follows: (a) The difference test of two paired sample means (dependent test). This test was used to test the difference in the mean of the research variables before and after treatment.(7) The variables to be assessed using a two-mean difference test are the level of knowledge before and after the intervention of giving booklets and videos using the paired t-test; (b) The difference test of two unpaired (independent) sample means. This test is used to test the significance of the mean difference between the research variables between the two groups.(7) The variable assessed using the two-mean unpaired difference test was the level of knowledge between treatment group 1 and treatment group 2. The test used was the independent t-test. After the different test was carried out, further tests were carried out to determine the effectiveness of the treatment given using the paired-sample t-test; (c) Multivariate analysis using multiple linear regression analysis was carried out to test the presence or absence of confounding variables, namely education level, type of work, and parity on mother's underfives knowledge about stunting and its prevention measures.

RESULT

Description of Knowledge of Mother Toddler

After collecting preliminary data (pretest), which describes the knowledge of mothers of children under five about stunting and prevention in the working area of the Nambo PHC, Kendari City, it is presented in the following table.

Table 2. Description of mother under five's knowledge about stunting and its prevention

Group	Mothe	r Toddle	r Know	ledge Pr	e-Test S	Score	Mother Toddler Knowledge Post-Test Score						
	Not en	Not enough Enough		jh	Good		Not enough		Enough		Good		
	Total	%	Total	%	Total	%	Total	%	Total	Total	%	Total	
Media Booklet	15	50.00	14	46.67	1	3.33	6	20.00	17	56.67	7	23.33	
Media Video	18	60.00	12	40.00	0	0	0	0.00	13	43.33	17	56.67	

Table 2 indicates the data on the initial knowledge of mothers under five about stunting and its prevention before being given treatment in each group. The majority were in the less category, namely 30 toddler mothers were respondents in the media booklet group, and there were 15 people (50.00%) mothers of children under five who knew the less category. Likewise, most respondents in the video media group had less knowledge about stunting and its prevention, namely 30 toddler mothers were respondents in the video media group, and 18 (60.00%) mothers of children under five knew the poor category. The post-test was carried out after a series of research processes. After collecting data on the knowledge of mothers under five about stunting prevention after treatment (post-test) with booklets and video media in the working area of the Nambo PHC, Kendari City, it is presented in Table 2. In terms of the media booklet group, most mothers of children under five had sufficient knowledge about stunting and its prevention. There were 17 people (56.67%) mothers who had good knowledge. Likewise, most respondents in the video media group had good knowledge about stunting and its prevention. In the data of 30 mothers in the video group, there were 17 (56.67%) mothers of children under five who knew the good category.

Jurnal Kesehatan Ibu dan Anak Vol.16, No.1, July 2022, pp. 64~74 ISSN: 2599-3224 (Online), ISSN: 2302-6014 (Print)

Increased Knowledge of Mothers of Toddlers

After measuring and analyzing the research data using the paired sample t-test, so inferentially, it can be seen that the increase in knowledge of mothers of toddlers in the booklet media group and the video media group is as presented in Table 3.

Table 3. Increased knowledge of mothers under five about stunting and its prevention

Group	Knowled	ige Improv	ement	
	t-count	p-value	Alfa	Description
Media Booklet	5.396	0.000	0.05	increase
Media Video	10.441	0.000	0.05	increase

Based on Table 3 in the treatment group with booklet media, the p-value= $0.000 \le 0.05$ with the t-count= 5.396 was obtained. There was a significant increase in mothers' knowledge after being treated with booklet media. Similarly, in the video media group, it was obtained information that p-value= $0.000 \le 0.05$ with a t-count value = 10.441. It indicates that the mother's knowledge was better after receiving video media treatment.

Table 4. Distribution of mothers under five's knowledge about stunting and its prevention

Group	Mother Toddler Knowledge Pre-Test					re-Test Score Mother Toddler Knowledge Pos Test Score							
	Not	enough	igh Enough			Good		Not enough		Enough		Good	
	Total	%	Total	%	Total	%	Total	%	Total	%	Total	%	
Education Level	23	38.33	26	43.33	11	18.33	15	25.00	27	45.00	18	30.00	
Employment Status	24	40.00	28	46.67	8	13.33	18	30.00	30	50.00	12	20.00	
Parity	33	55.00	26	43.33	1	1.67	6	10.00	30	50.00	24	40.00	

Based on Table 4, descriptively the knowledge of mothers under five based on education level and employment status in the pretest is in the sufficient category, namely 43.33% and 46.67% of respondents as well as in the posttest, the knowledge of mothers under five based on education level and employment status, the majority are in the sufficient category, namely by 45.00% and 50.00%. This value appears to have increased compared to the pretest, but the increase is not significant considering there are other factors that might encourage an increase in the mother's knowledge about stunting. On the other hand, most of the mothers' knowledge based on parity in the pretest was in the insufficient category, namely 55.00%, while in the posttest, the majority of mothers' knowledge based on parity was in the sufficient category, namely 50.00% of respondents. This increase is significant because there is a decrease in the frequency of mothers under five who have insufficient knowledge.

Differences in Mother's Knowledge Of Stunting

The difference in knowledge of mothers under five about stunting and its prevention between the treatment group with booklet media and the treatment group with video media both before being given treatment (pretest) and after being given treatment (post-test) is presented in Table 5.

Jurnal Kesehatan Ibu dan Anak Vol.16, No.1, July 2022, pp. 64~74 ISSN: 2599-3224 (Online), ISSN: 2302-6014 (Print)

Table 5. Differences in the knowledge of mothers under five who were given treatment with booklets and video media

Group	Children's	Knowledge Diffe		
	t-count	p-value	Alfa	Description
Media Booklet	5.073	0.000	0.05	There is a difference in knowledge
Media Video	9.911	0.000	0.05	There is a difference in knowledge
Pre-Test	1.356	0.180	0.05	There is no difference in knowledge
Post-Test	3.088	0.003	0.05	There is a difference in knowledge

Based on Table 5, it is obtained information that in the booklet media group the p-value= $0.000 \ge 0.05$ with the t-count = 5.073. This means that there was a significant difference in mothers' knowledge of toddlers before and after being given booklet-based education. Similarly, the Video media group obtained a p-value = $0.000 \ge 0.05$ with a t-count = 9.911. This means that there was a significant difference in the knowledge of mothers of toddlers before and after being given video-based education.

DISCUSSION

Mother's Knowledge of Stunting

The mother is an important factor that determines the direction of a child's development. Maternal education is associated with decreased odds of stunting due to improvements in child health and care, and enhanced uptake and benefits from health interventions.(8) This descriptive study showed that the knowledge of mothers of children under five before being given treatment in the two treatment groups measured in the pretest was poor. The distribution of mothers' knowledge under five in the two groups is true. This condition means that almost every toddler mother in this study does not know in-depth about the incidence of stunting in children under five, including prevention efforts that can be done is still a new thing for them. However, some mothers of toddlers have sufficient knowledge in the category, namely 46.67% in the booklet media group and 40.00% in the video media group.

The study results also provide an overview of the mother's initial knowledge about stunting and its prevention which is in the less category. On the other hand, respondents have not received accurate information through formal or informal programs relevant to stunting in children under five. This condition allows mothers to have high enthusiasm to involve themselves in this research program to obtain information as additional knowledge for them about stunting and its prevention. This enthusiasm has a positive impact on the development of mothers' knowledge about stunting, as shown in Table 2. The condition of the respondents' prior knowledge in the two majority groups was in the less category. In comparison, in the post-test of the two groups, frequency in the good category and the good category increased. This condition illustrates that the provision of the booklet and videobased education can increase the knowledge of mothers under five about stunting and its prevention. Although there was an increase in the knowledge category in both groups, the frequency of growing understanding in the video media group was higher than in the booklet media group. This is indicated by the frequency of mothers' knowledge under five in the good category for the video media group by 56.67%, while the booklet media group is only 23.33%.

The increase in knowledge of respondents was also confirmed inferentially, as shown in Table 3. It showed that in the media booklet group, the p-value= $0.000 \le 0.05$ with a $t_{-count} = 5.396$. This means that there was a significant increase in mothers' knowledge under five about stunting and its prevention. Likewise, in the video media group, p-value= $0.000 \le 0.05$ was obtained with t-count= 10.441. This means that there was a significant increase in the knowledge of respondents. This result is in line with the results of research

by Hasanah and Permadi, which concluded that there was an increase in student knowledge after being given a media booklet, as evidenced by the post-test results.(9) This was also confirmed by the study results which concluded that the provision of structured education using booklet media significantly affected patient knowledge about DM Type 2.(10) Similarly, the results of research concluded that there is an effect of providing counseling with video media and booklets on the level of health knowledge.(11)

Knowledge and Confounding Variables

Knowledge is not a static variable that is only affected by a single intervention. Each individual can obtain knowledge independently through a formal educational process and structured experience.(12) Knowledge acquisition involves complex cognitive processes such as perception, communication, and reasoning. The element of contact referred to in Cavell's opinion indicates that there are other elements involved in forming one's knowledge. This can be in the form of individual objects or non-individual objects in the form of certain variables directly or indirectly related to daily activities. Differences in education levels should be an essential parameter in measuring a person's level of knowledge. Referring to the study results, most mothers of children under five who became respondents had an education level at the high school level in the Video media group and junior high school level in the booklet media group.

On the other hand, the results of measuring mothers' knowledge under five about stunting and their prevention measures in the two majority groups were in the less category. This assumingly shows that mothers of children under five in the working area of the Nambo PHC do not yet have adequate knowledge about stunting and its prevention. Referring to Bloom's opinion about human cognitive processes, at the junior and senior high school education level, students should be able to relate information to form a complete concept about an object. Still, the conditions that occur in this study do not reflect this.

The abnormal condition of the potential formation of knowledge concepts based on the education level of mothers of children under five shows that knowledge about stunting is special. Stunting has not become general knowledge for the community in the working area of the Nambo PHC. Information about stunting is still a new thing as shown in Table 4 there are still many mothers with toddlers who have a low level of knowledge about stunting, so the symptoms of stunting in children under five cannot be detected early, so the handling is also not optimal. This is also in line with the development of information on stunting nationally, which has only emerged in the last decade.

Apart from education level, the mother's employment status and parity did not contribute significantly to the mother's knowledge about stunting and its prevention. As the results of the multivariate analysis with education level, the F_{count} value is 0.734 with a significant value (p-value) of 0.170 \geq 0.05. This means that the level of education, employment status, and maternal parity simultaneously have no effect on the knowledge of mothers under five about stunting in the working area of the Nambo PHC, Kendari City. The contribution of these three variables to the knowledge of mothers under five without any treatment is also very low at 8.5%. In other words, 91.5% is influenced by other variables.

Given that the knowledge of mothers under five about stunting has increased significantly after being given education based on video media and booklet media, this shows that education based on video and booklet media makes a significant contribution to the development of knowledge of mothers under five. This can be observed in the knowledge distribution diagram of mothers of children under five before and after being given education based on video media and booklet media based on education level, employment status, and parity of mothers of children under five.

Table 2 provides interesting information related to changes in the knowledge of mothers under five about stunting after being given education based on video media and booklets. Mothers of toddlers who had less initial knowledge at all levels of schooling always experience changes in knowledge for the better, meaning that the frequency of mothers of toddlers who knew the category of less has decreased at all levels of education. For example, nine people had less knowledge of mothers with elementary education levels before receiving treatment. After being given treatment, the number decreased to 2 people. It means that seven mothers of children under five with elementary education levels positively impacted the treatment received by increasing knowledge about stunting and its prevention.

The work status of mothers under five in this study tends to converge to work as housewives, so the distribution of changes in knowledge based on employment status was more common in mothers who work as housewives. This also occurs in the group of mothers under five based on employment status and maternal parity. Working as a housewife also has a significant positive impact on the development of knowledge of mothers under five from the treatment received, namely from 36 mothers who work as housewives with less knowledge before being given treatment to only six people after being given treatment. This means that 26 mothers of children under five experienced an increase in knowledge after being given education based on video media and booklets. Likewise, the frequency of mothers under five in the type of work for civil servants and others also experienced an increase in knowledge after being given an education.

Viewed from the aspect of maternal parity, this study based on graph one also tends to experience an increase in knowledge after being given treatment at all parity levels. There is even a tendency for mothers with higher parity to have better growth in knowledge than mothers with lower parity. For example, in mothers with parity 1 in the lack of knowledge category, as much as 40% experienced an increase in knowledge. In comparison, mothers with a parity of 5 in the same category as 100% had an increased knowledge.

When confronted with the results of data analysis before being given treatment based on education level, employment status, and maternal parity, it did not significantly affect maternal knowledge about stunting and its prevention, and its contribution was very low. Meanwhile, after being given treatment, the mother's knowledge increased according to her level of education, employment status, and mother parity. This illustrates that the confounding variable in this study will contribute if there is intervention given to the research sample in the form of treatment, in this case, video-based education and booklet media.

Effectiveness of Media Booklet

The results showed a significant difference in mothers' knowledge of children under five before and after being given booklet-based education as shown in Table 5, which was marked by a p-value= $0.000 \le 0.05$ with a t-count = 5.073. This result shows that booklet-based education effectively increases the knowledge of mothers under five about stunting and its prevention in the working area of the Nambo PHC, Kendari City. The results of this study were in line with the results of research which concludes that the use of booklet media is effective in increasing the knowledge of mothers of toddlers in Semanggi Village, Pasar Kliwon District, Surakarta City.(13) Similarly, the research concluded that there was an increase in mothers' knowledge after being given health education with booklet media, so information on booklets was very important and effective for increasing the knowledge of mothers.(14)(15)

The booklet used in this study can be one of the alternative media that is easy to implement and apply in the public education process. Health extension workers can use this booklet to convey material to the public with more attractive visuals and make it easier

to understand the material presented. In addition, health extension workers can also apply and become a reference for learning media that can be applied in the community. The advantages of using booklets are that they can help mothers of toddlers know independently or with guidance. They are added with educational pictures about stunting and prevention efforts.

Many factors cause stunting in toddlers, but because they are very dependent on the mother/family, the family and environmental conditions that affect the family will impact their nutritional status. The reduction in nutritional status occurs due to inadequate dietary intake and frequent infections. So environmental factors, circumstances, and family behavior that facilitate infection affect the nutritional quality of toddlers. The adequacy of energy and protein per day per capita of Indonesian children looks very less when compared to the recommended nutritional adequacy ratio (NAR) for both normal and short children. This is very interesting, and it turns out that the intake of energy and protein does not differ significantly between children classified as short or normal. In general, the consumption obtained for all children (short or normal) is the same, less than the NAR. If this goes on for years, then chronic problems occur.(16)

Video Media Effectiveness

In addition to booklets, video media is also a learning medium that can facilitate the learning process for mothers of toddlers. Video is seen as a media that is easy to use in various conditions for mothers of toddlers to increase their knowledge about stunting and its prevention. The ability to understand a concept is a basic ability that everyone must possess, including parents of toddlers, to protect toddlers from potential health problems that may occur. In the context of health education, what may be a problem from several studies is the ability of various people to understand the concept. One of the studies based on this problem has succeeded in proving that video media can be used as a solution to overcome the low ability of students to understand a concept. The reliable advantage of presenting videos is that videos can be repeated according to the needs of students to make it easier for them to understand the content of the video. Besides that, presenting structured material also makes it easier for educational objects to understand the material, especially concepts.(17)

These advantages indicate that video is an effective media used to improve the community's ability, in this case, parents of toddlers, to understand the concept of stunting and its prevention, As stated by Almuslamani et al, educational videos which were selected either by the researcher or by the students have a direct and positive effect on increasing the students' participation in the classroom.(18) This is also confirmed in this study based on the results of statistical tests which show that the p-value= 0.000 ≤ 0.05 with a t-value= 9.911. This means that the provision of video-based education effectively increases the knowledge of mothers under five about stunting and its prevention in the working area of the Nambo PHC, Kendari City. The results of this study are in line with the results of Kurniati's research (19), which concludes that the use of video media effectively increases knowledge. Similarly, Adisty's study results (20) concluded that health education with video media effectively increased knowledge with a p-value= 0.000 and effectively improved the attitude of postpartum mothers.

The effectiveness of video media in Improving the knowledge of mothers under five in accelerating understanding of stunting and its prevention efforts. Through video media, a person can understand learning messages more meaningfully so that the information conveyed through the media is fully understood.(16) Information will automatically be stored in long-term memory. Several factors can increase learning motivation for a person, including the models, methods, and learning media chosen by the supervisor, the influence

of the surrounding environment related to the hot topic being discussed in the contemporary language referred to as a viral topic, and support from family members.(1)(2)(3) These three factors are external factors that can spur enthusiasm for mothers under five to realize a good level of health for their children. Several studies concluded that video media could increase learning motivation for students because the video is a fun medium for everyone through an attractive appearance so that it can arouse curiosity and enthusiasm for learning, video has sound in the form of explanatory illustrations, as well as sound taken from actual conditions so that the video has its charm for students, videos can explain something abstract to seem real.(1)(2)(3) Therefore, videos are very effectively used for students with varying levels of information absorption.

CONCLUSION

Based on the study and discussion results, the researchers concluded a significant increase in knowledge for mothers of toddlers after being given media booklet-based education. Similarly, mothers of children under five who were given video-based education experienced increased knowledge about stunting and its prevention. It was further found that booklet and video-based education were effective in increasing mothers' knowledge about stunting in toddlers and its prevention, but video-based teaching was more effective than booklet-based education.

ACKNOWLEDGEMENTS

The author would like to thank the facilities and support from the Nambo PHC in Kendari City so that the research process can proceed according to plan. The author appreciates the community's contribution, especially to mothers of toddlers in the working area of the Nambo PHC. The author also acknowledges the support from the Nambo PHC in mapping research respondents according to the focus of the study. This research was supported by the Poltekkes Kemenkes Kendari's Grant in 2021.

REFERENCES

- 1. Trihono, Atmarita, Tjandrarini DH, Irawati A, Utami NH, Tejayanti T, et al. Pendek (Stunting) di Indonesia, Masalah dan Solusinya. Lembaga Penerbit Balitbangkes. 2015.
- 2. Rehusisma LA, Indriwati SE, Suarsini E. Pengembangan Media Pembelajaran Booklet Dan Video Sebagai Penguatan. J Pendidik Teori Penelit Dan Pengemb. 2017;2(9):1238–43.
- 3. Adriani M, Wirjatmadi B. Pengantar Gizi Masyarakat. Prenadamedia. 2016.
- 4. Kemenkes RI. (2018). Buletin Stunting 2018. In *Kementerian Kesehatan RI* (Vol. 301, Issue 5)
- 5. Nidia Zuraya. https://news.republika.co.id/berita/p7lcz9383/dinkes-36-persen-balita-di-sultra-lahir-stunting. 2018
- 6. Picauly I, Toy SM. Analisis Determinan Dan Pengaruh Stunting Terhadap Prestasi Belajar Anak Sekolah Di Kupang Dan Sumba Timur, NTT. J Gizi Dan Pangan. 2013;
- 7. Hastono SP. Analisis data pada bidang kesehatan. Depok: PT. Rajagrafindo Persada. In: Kesehatan, Penelitian Analisis data. 2019.
- 8. Vaivada, T., Akseer, N., Akseer, S., Somaskandan, A., Stefopulos, M., & Bhutta, Z. A. (2020). Stunting in childhood: An overview of global burden, trends, determinants, and drivers of decline. In *American Journal of Clinical Nutrition* (Vol. 112). https://doi.org/10.1093/ajcn/nqaa159
- 9. Hasanah U, Permadi MR. Pengaruh Media Booklet Terhadap Pengetahuan Remaja Putri Mengenai Stunting Di Kabupaten Probolinggo. HARENA J Gizi. 2020;(June 2020).

- 10. Patandung VP, Sepang MYL, Rembet IY. Pengaruh Edukasi Terstruktur Terhadap Pengetahuan Pasien Diabetes Melitus Tipe 2. J Ilm Perawat Manado Juiperdo. 2020;8(01).
- 11. Prabandari A. Pemberian Pendidika Kesehatan Tentang Kesehatan Reproduksi kepada RemajaPutri Melalui Vidio di SMA N 8. Skripsi poltekes Yogyakarta. 2018.
- 12. Cavell TA, Hymel S, Malcolm KT, Seay A, Grusec JE, Hastings PD. Socialization and Interventions for Antisocial Youth. In: Handbook of socialization: Theory and research. 2007.
- 13. Pratiwi YF, Puspitasari DI. Efektivitas Penggunaan Media Booklet terhadap Pengetahuan Gizi Seimbang pada Ibu Balita Gizi Kurang di Kelurahan Semanggi Kecamatan Pasar Kliwon Kota Surakarta. J Kesehat. 2017;10(1).
- 14. ARYA P, RATHORE R. paper on development and standardization of electronic booklet on indigenous knowledge about home practices. ASIAN J HOME Sci. 2017;12(2).
- 15. Fernandes P, Paul S, Savitha B. Effectiveness of an information booklet on knowledge among staff nurses regarding prevention and management of perineal tear during normal delivery. J Health Allied Sci NU. 2013;03(01).
- 16. Sudiarta IGP, Sadra IW. Pengaruh model blended learning berbantuan video animasi terhadap kemampuan pemecahan masalah dan pemahaman konsep siswa. J Pendidik Dan Pengajaran. 2016;49(2).
- 17. Kurniati G, Widiatutik O, dan Suwarni L. Efektivitas Media Video Terhadap Peningkatan Pengetahuan dan Sikap Tentang Bahaya Merokok Pada Anak Sekolah Menengah Pertama. J Endur Kaji Ilm Probl Kesehat. 2020;5(2).
- 18. Almuslamani, H. A. I., Nassar, I. A., & Mahdi, O. R. (2020). The effect of educational videos on increasing student classroom participation: Action research. *International Journal of Higher Education*, *9*(3). https://doi.org/10.5430/IJHE.V9N3P323
- 19. Adisty KD. Efektifitas Media Video Terhadap Peningkatan Pengetahuan dan Sikap Ibu Nifas dalam Konsumsi Tablet Fe. J Kebidanan. 2018;
- 20. Riyana C. Pedoman pengembangan media video. Jkt P3ai Upi. 2007;