Jurnal Kesehatan Masyarakat Dan Lingkungan Hidup **Vol. 7 No. 2, 2022**
ISSN: 2528-4002 (Media Online)
ISSN: 2355-892x (Print)
Online: http://e-journal.sari-mutiara.ac.id/index.php/KesehatanMasyarakat
DOI: https://doi.org/10.51544/jkmlh.v7i2.3451

AUDIO VISUAL AND POSTER AS A MEDIA TO IMPROVE MOTHERS' KNOWLEDGE ABOUT STUNTING DURING COVID-19 PANDEMIC

Levio Suwu[1], Langelo Wahyuni[1], Laurensi Meity Sasube[1*]
[1]Universitas Katolik De La Salle Manado, Nursing Faculty
*Corresponding author, email msasube@unikadelasalle.ac.id

ABSTRACT

The incidence of stunting is a chronic nutritional problem experienced by more than half of children suffering from stunting in the world originating from Asia (55 percent) while more than one-third (39 percent) live in Africa. Children who suffer from stunting will be more susceptible to disease and as adults are at risk for degenerative diseases. The impact of stunting is not only in terms of health but also affects the level of intelligence of children. Stunting remains a serious National problem in Indonesia, even during the Covid-19 pandemic there was an increase in the stunting rate of 31.8% in 2020, this figure is still far above the World Health Organization (WHO) standard of 20%. Although the stunting prevalence rate in North Sulawesi is still below the national figure (31.8%) which is 25.5%, there are still areas with a fairly high prevalence of stunting, including North Minahasa Regency at 35%, and Kulu Village including those with a high prevalence of stunting. During the Covid-19 pandemic, where we have to implement social distancing, one way to increase public knowledge about stunting is through audio-visual and posters. This study aims to determine the effect of providing education through audio visuals and posters on mothers' knowledge about stunting during the Covid-19 pandemic in Kulu Village, North Minahasa Regency, Province of North Sulawesi, Indonesia. This is a quantitative research with a quasi-experiment two group pretest-posttest design. Group A was given an intervention using audio-visual and posters, while group B as a control was only given poster media. The population in this study were mothers in Kulu Village who had children under 5 years old (balita), with a sample of 40 mothers who were taken by purposive sampling method. The control and intervention groups were 20 mothers each. The results showed that there was a significant increase in knowledge about stunting in the intervention group, namely mothers using audio-visual and posters (100%), compared to the control group who only used posters (60%). Therefore, audio visuals and posters is highly recommended to be used as educational media during the Covid-19 pandemic.

Keywords*: stunting, mothers, knowledge, education, poster, audio visual*

ISSN: 2528-4002 (Media Online)
ISSN: 2355-892x (Print)
Online: http://e-journal.sari-mutiara.ac.id/index.php/KesehatanMasyarakat
DOI: https://doi.org/10.51544/jkmlh.v7i2.3451

INTRODUCTION

Stunting is a condition where the child's height is shorter than children of the same age, with the Z-score of height for age (TB/U) based on growth standards reaching less than -2 standard deviations (SD). Child stunting is a global health concern and leads to several consequences on child survival, growth, and development, including the decline of children's intelligence.

More than half of worlds' stunted children come from Asia (55 percent) while more than one-third (39 percent) live in Africa (Kemenkes, 2018).

In Indonesia stunting remains a serious National problem, in fact Indonesia has the 5th highest stunting in the world. This is even worse during the Covid-19 pandemic where there was an increasing number of stunting of 31.8% in 2020, this figure is still far above the World Health Organization (WHO) standard of 20%.

Although the stunting prevalence rate in North Sulawesi is still below the national figure (31.8%) which is 25.5%, there are still areas with a fairly high prevalence of stunting, including North Minahasa Regency at 35%, and Kulu Village including those with a high prevalence of stunting (Riskesdas, 2018).

Many factors are associated with stunting, including poor maternal nutrition during pregnancy, poor parenting, especially in the behavior and practice of feeding children, however according to UNICEF, overburdened health facilities, disrupted food supply chains and income loss due to Covid-19 could lead to a sharp rise in the number of malnourished and stunting children in Indonesia.

Mother's knowledge about nutrition and stunting greatly affects the health condition of the mother and fetus in the womb as well as the condition of the child after birth.

During the Covid-19 pandemic, where we have to implement social distancing, one way to increase public knowledge about stunting is through audio-visual and posters.

METHOD

This is a quantitative research with a quasi-experiment two group pretest-posttest design. Group A was given an intervention using audio-visual and posters, while group B as a control was only given poster media. The population in this study were mothers who had children under 5 years old at Kulu Village North Minahasa, while the sample was taken using purposive sampling method and obtained 40 mothers. This research was conducted from February to August 2022 As the dependent variable of this study is the mother's knowledge which is measured using a questionnaire that has been tested for validity and reliability using Cronbach's alpha with α result of 0.965. Health education about stunting is provided through audio visuals and posters for 15 minutes. Research analysis technique with the Wilcoxon Signed Rank Test.

ISSN: 2528-4002 (Media Online)
ISSN: 2355-892x (Print)
Online: http://e-journal.sari-mutiara.ac.id/index.php/KesehatanMasyarakat
DOI: https://doi.org/10.51544/jkmlh.v7i2.3451

RESULTS

Characteristics of Respondent

Table 1. Responden's Characteristics at Kulu Village (n=40)

Responden's Characteristics	Intervention		Control	
	Frequency	Percentage (%)	Frequency	Percentage (%)
Age				
17-25	7	35.0	5	25.0
26-35	6	30.0	7	35.0
36-45	4	20.0	6	30.0
46-55	3	15.0	2	10.0
Education				
Elementary	5	25.0	5	25.0
Junior	5	25.0	5	25.0
High School	10	50.0	8	40.0
Diploma	0	0	0	0
Bachelor			2	10.0
Occupation				
House Wives	19	95.0	18	90.0
Civil Servant	0	0	0	0
Private	1	5.0	2	10.0
Children's Number				
1	8	40.0	7	35.0
2	8	40.0	9	45.0
3	3	15.0	2	10.0
4	1	5.0	1	5.0
5	0		0	
6			1	5.0
Total	20	100.0	20	100.0

Characteristics of respondents in Kulu Village consist of age, educational background, occupation and amount of children. The nutrition education research was conducted in 2 groups, namely the intervention group which consisted of audio-visual media and posters and the control group which only consisted of poster media.

Based on the table of respondents' characteristics in Kulu Village, it can be seen that the respondents in the intervention group were mostly aged 17-25 by 35.0%, with high school education by 50%, occupation dominated by housewives at 95%; and mothers who have 2 and 1 children by 40%.

While the characteristics of respondents in the control group are mostly mothers aged 26-35 years by 34%, with a high school education background of 40%, and 90% of respondents are housewives who have 2 children by 45%.

ISSN: 2528-4002 (Media Online)
ISSN: 2355-892x (Print)
Online: http://e-journal.sari-mutiara.ac.id/index.php/KesehatanMasyarakat
DOI: https://doi.org/10.51544/jkmlh.v7i2.3451

Tabel 2 **Frequency Distribution of Mother's Knowledge Before and After Intervention** (N=20)

Mother's Knowledge	*Pre-test*		*Post-test*	
	Frequency	Percentage (%)	Frequency	Percentage (%)
Good	8	40,0	20	100,0
Enough	12	60,0	0	
Less	0	0	0	0
Total	20	100,0	20	100,0

Table 2 shows the level of knowledge of mothers before the intervention was given by 40%, however after the intervention was given in the form of health education about stunting using audio-visual and posters there was an increase in knowledge about stunting by 100%.

Tabel 3 Frequency Distribution of Mother's Knowledge Before and After in the Control Group

(N=20)

Mother's Knowledge	*Pre-test*		*Post-test*	
	Frequency	Percentage (%)	Frequency	Percentage (%)
Good	7	35,0	12	60,0
Enough	13	65,0	8	40,0
Less	0	0	0	0
Total	20	100,0	20	100,0

Based on the data in the frequency distribution table of mothers' knowledge before and after nutrition education with poster media in the control group, it can be seen that the level of knowledge of mothers in the control group is only 60%.

Tabel 4 The Effectiveness of Providing Education with Audio Visual Media and Posters on Mother's Knowledge in Preventing Stunting During the Covid-19 Pandemic in the Intervention Group and Control Group in Kulu Village(N=40)

Mothers' Knowledge		N	Mean Rank	Sum of Ranks	p-value
Intervention	Pre Test		0.00	2.00	
	Post Test	20	10.50	210.00	.000
Control	Pre Test		8.75	17.50	
	Post Test	20	10.69	192.50	.001
Total		40			

Jurnal Kesehatan Masyarakat Dan Lingkungan Hidup **Vol. 7 No. 2, 2022**
ISSN: 2528-4002 (Media Online)
ISSN: 2355-892x (Print)
Online: http://e-journal.sari-mutiara.ac.id/index.php/KesehatanMasyarakat
DOI: https://doi.org/10.51544/jkmlh.v7i2.3451

Based on the Table of Effectiveness of providing audio-visual media education and posters on mother's knowledge in preventing stunting during the covid-19 pandemic in Kulu Village in the intervention group, the results of the SPSS 16 statistical test using the Wilcoxon Rank Sum test, it can be seen that health education about stunting using Audio Visual and Posters is more effective with a *p* value of 0.000 (*p* value< 0.05), compared to the control group which only uses posters with a *p* value of 0.001.

Tabel 5 Analysis of the Effectiveness of Providing Audio Visual and Poster Media Education on Mother's Knowledge in Preventing Stunting During the Covid-19 Pandemic In Kulu Village in the Post Intervention and Post Control Groups (N=40)

Mothers' Knowledge	N	Mean Rank	Sum of Ranks	*p*-value
Posttest Eksperimen		8.00	120.0	.001
*Posttest*Kontrol		0.00	0.00	
Total	40			

Based on the table of analysis of the effectiveness of providing audio-visual media education and posters on mother's knowledge in preventing stunting during the Covid-19 pandemic in Kulu Village in the post-intervention and post-control groups using the Wilcoxon Rank Sum test, the significant results obtained were 0.001 (*p*-value < 0.05) then there is a difference that the post-intervention group is more effective than the control group.

DISCUSSION

Mothers' knowledge is very influential on the prevention of stunting in children. Children are the future of a nation and the quality of human resources are determined from the fulfillment of child nutrition from an early age even while still in the womb known as the first 1000 days of life (Sasube, L and Luntungan A, 2018). Good knowledge of mothers about nutrition and stunting can help improve the nutritional status of children to achieve good growth and development. Poor knowledge of mothers can affect the growth and development of children in the future therefore children can experience malnutrition and they have the potential to experience stunting.

Knowledge is the result of human sensing or the results that are seen and heard by someone by themselves. Therefore, in increasing knowledge, a learning method that is easy to understand can be carried out. Conveying information through images and sound can foster interest in respondents absorbing information easily so as to speed up the understanding process.

Based on the results of research obtained from mothers in Kulu Village, it turns out that the level of knowledge of

ISSN: 2528-4002 (Media Online)
ISSN: 2355-892x (Print)
Online: http://e-journal.sari-mutiara.ac.id/index.php/KesehatanMasyarakat
DOI: https://doi.org/10.51544/jkmlh.v7i2.3451

mothers about stunting before the audio visual and poster educational intervention was only 40%. However, after being given an educational intervention using audio-visual and posters, the level of good knowledge increased significantly by 100%.

These results indicate that the provision of health education using audio-visual and posters is very effective in increasing mothers' knowledge about stunting.

Delivery of education during the Covid-19 pandemic can be done using the audiovisual method and poster to avoid the spread of the virus. Audiovisual and poster have a significant difference (p-value 0.000) compared to using poster media only (p-value 0.001).

The same study was conducted by Merdhika conclude that audiovisual media was more effective in increasing knowledge and attitudes about balanced nutrition for children under five compared to counseling. Another study conducted by Hakim with the results of his research showed significant results on the knowledge of fishermen about premarital sex before and after the provision of audiovisual media with a p-value of 0.001.

Audiovisual method contains elements of sound and images that can be seen through audio videos, movies, and more. The audiovisual method can be a supporting medium for conduct counseling because the information provided is concise, clear and interesting and easy for mothers to understand and also it can increase one's knowledge.

The advantage of the audiovisual method over other methods is that it is easy and effective. The use of Audiovisual media has various types such as short films, videos, advertisements, videos animation, and video graphics. This large number of media choices can make it easier for participants and make the participants not bored with the usual counseling carried out using lecture method using posters and flipcharts. Various kinds of media available in the audiovisual method is able to provide interesting and brief information about nutrition, diet, carbohydrate adequacy, good nutrition and protein and the cleanliness of the environment that must be clean that must be done by the mother.

The audiovisual method can stimulate two senses, namely the eyes and ears simultaneously, therefore the mother is more focused on the material given. Delivery through words alone is very less effective or at least in intensity. Audiovisual method is an example of the principles of the educational process method. Audiovisuals are very helpful in delivering information about children and toddlers' balanced nutrition to mothers, therefore information can be conveyed more clearly and precisely.

While posters have a higher advantage and appeal because they highlight the power of the message, visuals and color. Posters can be images that have attractive colors so that they can catch people's attention by instilling a certain meaning that the poster maker wants to convey, in accordance with the purpose of the poster. The use of poster media can improve students' ability to use foreign languages such as writing, reading, listening and asking questions (Megawati, 2017).

The level of mother's knowledge about nutrition is one of the factors that can affect occurrence of stunting in toddlers. Increased knowledge occurs because mother's willingness to follow and know stunting prevention efforts. Mother's knowledge is an indirect cause of stunting because it affects what food is given to

ISSN: 2528-4002 (Media Online)
ISSN: 2355-892x (Print)
Online: http://e-journal.sari-mutiara.ac.id/index.php/KesehatanMasyarakat
DOI: https://doi.org/10.51544/jkmlh.v7i2.3451

children and also one of the factors influencing food intake in understanding food, health and nutrition.

The formation of knowledge is influenced by several factors such as age, education, occupation, and information received. In this study, respondents are dominated by the age of 17-25 years, categorized as young adults, means that they will be more active in finding information through social media, audio-visual, internet and posters. While the educational background of the largest respondent is high school which shows that the respondent is able to understand the information conveyed. Meanwhile, 95% of the respondents are housewives, indicating that they are responsible for the nutritional intake of children and families at home.

During the Covid-19 pandemic, face-to-face health education activities were hindered because we had to practice social distancing. Audio visuals and posters can be a very effective way of conveying information without having to deal with people directly.

The effectiveness of the audiovisual and poster has been proven to increase mothers' knowledge regarding stunting and nutrition.

CONCLUSION

Audio visual and poster have more significant impact compared to poster only as a media to improve mothers' knowledge about stunting.

The audio visual and poster are more effective in providing education to women in Kulu Village as an effort to prevent stunting during Covid-19 pandemic.

REFERENCES

Antonias, W(2021). *The Effectiveness of Audio-Visual Media in the Classof Pregnant Women on Mother's Knowledge and Attitudes in Preventing Pregnancy and Childbirth Complications*. J. Health. Metro Sai Wawai.

Aridiyah, (2015). *Faktor-faktor yang Mempengaruhi Kejadian Stunting pada Anak Balita di Wilayah Pedesaan dan Perkotaan*. e-Jurnal Pustaka Kesehatan, vol. 3 (no. 1) Januari 2015. Fakultas Kesehatan Masyarakat, Universitas Jember

Hakim, (2019). *Spirituality and knowledge level of HIV/AIDS with fisherman's premarital sexual behavior in Yogyakarta*. JHes (Journal Heal. Stud. 3, 88–95).

Henlen, A(2020). *The Effect of Health Education with Audio Visual on Knowledge and Motivation of Exclusively Breastfeeding Mothers at Gambirsari Public Health Center Surakarta.* J. Obstetrics and Health Sciences. (Journal of Midwifery Sci. Health.

https://kesmas.kemkes.go.id/assets/upload/dir_519d41d8cd98f00/files/Hasil-riskesdas-2018_1274.pdf

Laurensi M. Sasube and Aldian H. Luntungan. *Nutrition Intake of Golden Period of Time*. Jurnal Ilmu dan Teknologi Pangan 5 (2), 1-5

Megawati, M. (2017). *Pengaruh Media Poster terhadap Hasil Belajar Kosakata Bahasa Inggris (Eksperimen di Sdit Amal Mulia Tapos Kota Depok).* Getsempena English Education Journal, 4(2), 217637

Merdhika, W. A. R., Mardji and Devi, M. (2014). *The Effect of Exclusive*

ISSN: 2528-4002 (Media Online)
ISSN: 2355-892x (Print)
Online: http://e-journal.sari-mutiara.ac.id/index.php/KesehatanMasyarakat
DOI: https://doi.org/10.51544/jkmlh.v7i2.3451

Breastfeeding Counseling on Mother's Knowledge of Exclusive Breastfeeding and Attitudes of Breastfeeding Mothers in Kanigoro District, Blitar Regency. Technology and Vocational, 37(1), pp. 65–72

Ministry of Health Republic Indonesia, (2021). *Decreasing Stunting Prevalence in 2021 as Capital Towards Indonesia's Golden Generation 2045*. Accessed bylink https://sehatnegeriku.kemkes.go.id/baca/umum/20211227/4339063/penurunan-prevalensi-stunting-tahun-2021-sebagai-modal-menuju-generasi-emas-indonesia-2045/

Sutarto, Diana Mayasari, R.I., (2018). *Stunting, Risk Factors and Prevention*. 540. https://doi.org/10.1201/9781439810590-c34

UNICEF, (2018). *Levels and Trends in Child Malnutrition, UNICEF / WHO / World Bank Group Joint Child Malnutrition Estimates.* Midwifery 12, 154–155.

World Health Organization, (2018). *Reducing Stunting*. Accessed bylink https://www.who.int/nutrition/publications/severemalnutrition/reducing-stunting-children-equity/en/ accessed on 5 September 2022.

World Health Organization, (2019). Length-for-age BOYS. World Health Organization