

Research Article



## The Effect Of Health Education Using Video To Increase Community Knowledge And Attitude Regarding Hypertension Diseases In Terebino Village

Tasnim Tasnim<sup>1\*</sup>, Ratnasari<sup>2</sup>, Fandy Gatra<sup>3</sup>

<sup>1,2</sup>Public Health Department, Universitas Mandala Waluya

<sup>3</sup>Sanitation Department, Universitas Mandala Waluya

**Corresponding Author :**

Tasnim Tasnim

Universitas Mandala Waluya, Jl.Jenderal A.H. Nasution no. G-37 Kambu, Kendari,  
Indonesia, 93232

Email: [tasnim349@gmail.com](mailto:tasnim349@gmail.com)

### ABSTRACT

**Background:** Hypertension diseases in Terebino Village have the highest ranking of the 4 villages in the Ulunambo Health Center area, namely 431 cases. Meanwhile, in other villages, such as Padei Laut Village, there were only 362 cases, in Padala Village there were 329 cases, and in Kofalagadi Village there were only 282 cases. This research aims to analyze the effect of counseling on community knowledge and attitudes about hypertension in Terebino Village.

**Methods:** The type of research used is Pre-Experimental Study using the Pretest-Posttest Designs. The population in this study was 74 families, with a proportional random sampling technique, namely 63 respondents. The analysis method uses the T-Independent test.

**Results:** The statistical tests using the T-Independent test showed there is an influence of education through video media on people's knowledge and attitudes regarding hypertension in Terebino Village ( $p < 0.000$  of knowledge;  $p < 0.000$  of attitude).

**Conclusions:** Health education using video media is effective in increasing public knowledge and attitudes about preventing hypertension in Terebino Village. Thus, health promotion towards increasing awareness and knowledge about hypertension is really needed for the community in Terebino Village to control hypertension.

**Keywords :** *Hypertension, Video, knowledge, attitude*

## INTRODUCTION

Non-communicable diseases (NCDs) are the main cause of death globally. One of the non-communicable diseases that is becoming a very serious health problem today is hypertension. Hypertension is still a health problem because it is the silent killer disease because there are no signs or symptoms that can be seen from the outside.(1) The global prevalence of hypertension is 22% of the world's total population.(2) The highest prevalence of hypertension is in the African continent at 27% and the lowest is in the Americas at 18%, while in Southeast Asia it is in the 3rd highest position with a prevalence of hypertension of 25%.(2,3)

Likewise in Indonesia, the prevalence of hypertension increases every year. In 2021, the prevalence of hypertension in Indonesia will be 34.1%. This prevalence has increased compared to 2020 which was 25.8% and also compared to 2019 which was 19.3% (Indonesian Health Ministry, 2022). One of the provinces in Indonesia where the prevalence is high is Central Sulawesi. In 2019, there were 916,344 cases of people aged  $\geq 15$  years, or 34.1%. In 2020, 105,602 cases of hypertension were known. In 2021, the number of hypertension sufferers will decrease by 100,525 cases, while in 2022 the estimated number of hypertension sufferers will reach 136,363 cases.(4). One of the districts in Central Sulawesi with a high prevalence of hypertension is Morowali District. In 2020, it is estimated that there will be 27,787 cases.(4)

Based on data, the population of Morowali Regency is 30,306 people and the number of hypertension sufferers who receive hypertension health services is 12,412 people. Ulunambo sub-district is an area of Morowali district that has a high prevalence. In 202 there were 1519 cases in Ulunambo, Laantula 3048 cases, Fonuasingko 2166 cases, Bahomotefe 1970 cases, Bahodopi 1626 cases, Bungku 1501, Wosu 1288 cases, Kaleroang 1068 cases, Bahonsuai 1005 cases, Lafeu 828 cases and Tanjung Harapan 334 cases, The total is 16,363 cases. Data obtained from the Ulunambo Health Center for hypertension sufferers in the community in 2020 experienced an increase of 1431 cases, in 2021 there was a decrease of 1222 cases and in 2022 there was an increase of 1404 cases.(5) Hypertension patients in the Ulunambo Community Health Center area are known to have the highest ranking in Terebino Village with 431 cases, then in Padei Laut village 362 cases, in Padala Village 329 cases, while in Kofalagadi Village 282 cases.

Hypertension is a condition where there is an increase in blood pressure which can lead to organ system disorders, such as brain stroke, coronary heart disease, heart blood vessel disorders and heart muscle disorders. Hypertension is a serious problem because one in three adults worldwide suffer from hypertension. Hypertension is the third cause of death in Indonesia at all ages and proportions. Hypertension is also one of the most dangerous health problems throughout the world because hypertension is the main risk factor that leads to cardiovascular

disease such as heart attack, heart failure, stroke and kidney disease.(6) The lack of public awareness and knowledge in controlling blood pressure is a result of increased blood pressure which does not show clear complaints. Hypertension is influenced by many factors, namely factors that can be controlled such as consumption of salt and fat, obesity, physical activity and smoking, as well as factors that cannot be controlled such as age, genetics and gender.(7)

Knowledge is one of the predisposing factors that can influence the incidence of hypertension. Knowledge is assessed as a factor that also influences a person's attitudes, actions and behavior in influencing the incidence of hypertension. Knowledge is assessed as a process that influences a person's attitudes, actions and behavior. Attitude is a person's closed response to a particular stimulus or object, which already involves the relevant opinion and emotional factors (happy-displeased, agree-disagree, good-bad, and so on). A person's attitude is a very important component in shaping health behavior, which is then assumed to have a direct relationship between a person's attitude and behavior. One effort to improve knowledge and attitudes is by providing health education. There are many media that can be used in health education, but not all of them can be applied to all age groups. One media that can be applied to all age groups is to use video media.(8)

Video is a set of tools that can project moving images which are a combination of images and sound to form the same character as the original object.(9) The advantage of video media is that it is more interesting and easier to understand, with video someone can learn on their own,

repeat it, can show it in detail, speed it up or slow it down.(10) Video also makes it possible to compare two different scenes playing at the same time, it can be used as a real display of a scene, a discussion situation, documentation, promotion of a product, interviews and showing an experiment in progress. This media is considered more interesting and more effective because it involves two senses, namely the senses of sight and hearing which can maximize the reception of information.(11)

Many hypertension sufferers are caused by errors in their diet, including consuming excess salt or sodium, foods high in fat such as foods processed using excess oil, ready-to-eat and fermented foods which can cause blood pressure to increase. Health education using audio-visual media was also identified as having an influence on hypertension care behavior in the elderly.(12) A history of disease was also stated to be related to the incidence of hypertension. Respondents who have offspring have a greater risk of hypertension than those who do not have offspring.(13). The aim of this research is to analyze the effect of health education through video media on community knowledge and attitudes regarding hypertension in Terebino Village.

## METHODS

### Research design

This type of research is quantitative research. This research method uses Pre-Experimental Study using Pretest-Posttest Designs. This research design provides a pretest before being treated, as well as a posttest after being treated in each group.



Pre-test	Intervention	Post-test
0 <sup>1</sup>	X	0 <sup>2</sup>

Notes

X : Intervention-health education with video about hypertension

0<sup>1</sup> : Pre-test knowledge and attitude scores (before intervention).

0<sup>2</sup> : Post-test knowledge and attitude scores (after being given intervention).

**Research setting**

This research was carried out from June to July 2023 in Terebino Village.

**Populasi dan Samples**

The population in this study is the number of families in Terebino Village as many as 74. Using the Slovin formula, the sample size in this study is 63 people. The sampling technique in this research used simple random sampling.(14) Sampling from population members is carried out randomly without paying attention to the strata in the population. The inclusion criteria for this research sample are age (above 17 years); Domiciled in Terebino Village, and willing to be a respondent. The exclusion criteria in this study are: Under the age of 17 years, having complications and not willing to be a respondent.

**Data collection and processing**

Data collection in this research was through primary and secondary data. Primary data, namely the data in this research, was collected by providing direct counseling and distributing questionnaires. Secondary data is data obtained from Ulunambo Health Center Medical Record data. Data processing goes through a series of processes with stages, namely Editing, Coding, Scoring,

Tabulating, Data entry (entering data using SPSS version 25.0.

**Data analysis**

There are two data analysis techniques used in this correlation research, namely: univariate and bivariate analysis. Univariate analysis was carried out to see the distribution, frequency and percentage of each respondent's characteristics, independent variables and dependent variables. These variables are people's knowledge and attitudes regarding hypertension. Bivariate analysis to see the influence of counseling through video media in increasing public knowledge and attitudes regarding hypertension in Terebino Village. Based on categories, use the T-Independent Test if the data is normally distributed and if the data is not normally distributed then use the Wilcoxon Sign Rank Test. From this test, the probability value (Pvalue) is then compared with the value  $\alpha = 0.05$  (95% confidence level). If the Pvalue is  $>0.05$  then there is no influence from video media on changes in knowledge and attitudes. On the other hand, if the Pvalue is  $<0.05$ , then there is an influence of video media on changes in knowledge and attitudes.

**Research Ethics**

In conducting research, researchers apply for permission from the village head to obtain approval. Ethical issues include: Informed Consent; Anonymity and Confidentiality.

**RESULTS**

*Respondent Characteristics*

Of the 63 respondents, there were 15 people (23.8%) men and 48 people (76.2%) women. Respondents in the age group 20-35 years are 25 respondents (39.7%), 36-51 years are 24 respondents (38.1%), 52-67 years are 9 respondents (14.3%) and age >67 years namely 5 respondents (7.9%). From the educational aspect, there were 2 respondents (3.2%), 18 respondents (28.6%), 18 respondents (28.6%), 17

respondents (27.0%), 21 respondents (33.3%), 3 respondents (4, 3 Vocational Schools). 8% and academic 2 respondents (3.2%). Types of work of respondents include fishermen 8 respondents (12.7%), farmers 13 respondents (20.6%), domestic workers 34 respondents (54.0), entrepreneurs 6 respondents (9.5%), traders 1 respondent (1.6 %) and labor 1 respondent (1.6%).

**The influence of health education through video media on public knowledge about hypertension in Terebino Village**

**Table.1 The influence of health education through video media on public knowledge about hypertension in Terebino Village**

No	Health education with video	Knowledge						Total		Statistics test
		Good		Mediu		Less		n	%	
		n	%	n	%	N	%			
1	Pre-test	1	1.6	9	14.3	53	84.1	63	100	p-value < 0,000
2	Post-test	37	58.7	13	20.6	13	20.6	63	100	
<b>Total</b>		<b>38</b>	<b>60.3</b>	<b>22</b>	<b>34.9</b>	<b>66</b>	<b>104.</b>	<b>63</b>	<b>100</b>	

Note: Independent T Test

The results of statistical tests using the T-Independent test showed a significant value of  $\alpha = <0.05$  with a p-value of 0.000, which means that there is an influence of counseling through video media on people's knowledge and attitudes regarding hypertension in Terebino Village.

**The influence of health education through video media on public attitude about hypertension in Terebino Village**

**Table 2. The influence of health education through video media on public attitude about hypertension in Terebino Village**

No	Health education with video	Attitudes				Total		Statistics test
		Good		Less		n	%	
		n	%	n	%			
1	Pre-test	3	4.8	60	95.2	63	100	p-value < 0,000
2	Post-test	40	63.5	23	36.5	63	100	
<b>Total</b>		<b>43</b>	<b>68,3</b>	<b>83</b>	<b>131,7</b>	<b>63</b>	<b>100</b>	

Note: Independent T Test, CI 5%



The results of statistical tests using the T-Independent test showed a significant value of  $\alpha = <0.05$  with a p-value of 0.000. It can be concluded that there is an influence of counseling through video media on people's knowledge and attitudes regarding hypertension in Terebino Village.

## DISCUSSION

### **The Effect of Health Education Through Video Media on Community Knowledge Regarding Hypertension in Terebino Village**

This research shows that the average knowledge score before counseling is a mean value of 35.32 with Std. Deviation 17,549. This is because some respondents do not know what hypertension is, factors that can cause hypertension, how to prevent hypertension, normal blood pressure values, consuming salt which can cause hypertension or high blood pressure, consuming excessive flavor enhancers which can trigger hypertension, time checking blood pressure, how to control blood pressure, not knowing how to take medication properly and correctly, factors that cannot be changed and negative daily habits. Apart from that, the results of the respondents' answers showed wrong values. The public's lack of knowledge regarding the language of hypertension, especially among the elderly, all they know is high blood pressure. This is due to the lack of information they receive and also due to a lack of understanding about the hypertension they experience.

Then after counseling the average knowledge score was 73.49 with Std. Deviation 17,612. This is due to the knowledge of respondents after counseling, respondents began to know what hypertension is, factors that can cause hypertension, how to prevent hypertension,

normal blood pressure values, consuming salt which can cause hypertension or high blood pressure, consuming excessive taste enhancers which can triggering hypertension, when to check blood pressure, how to control blood pressure, not knowing how to take medication properly and correctly, factors that cannot be changed and negative daily habits. In addition, the information obtained by respondents after being given health education regarding hypertension aims to provide information and increase the knowledge possessed by respondents so that they can improve behavior effectively and efficiently..

This research is in line with previous research regarding health education using video media on knowledge of controlling hypertension.(15,16) This increase in respondents' knowledge was influenced by the assistance of learning media which made it easier for respondents to remember the material provided, namely with video media. Videos make learning outcomes through a combination of the senses of sight and hearing higher. Therefore, counseling using video media is considered very appropriate to be carried out for targets in various age groups, including pregnant women.(17) Video is an effective health promotion tool for increasing public knowledge.(18,19). Providing education via video is also effective in training for health workers and health students.(20)

### **The Influence of Health Education Through Video Media on Community**

## Attitudes Regarding Hypertension in Terebino Village

Health education with videos can also improve attitudes about hypertension. This is because their attitude is to realize what they already know, then they try to apply it. This is also in accordance with previous studies that information obtained through health education using audio-visual media such as videos can sharpen a person's beliefs in a positive direction.(15) Videos can improve attitudes because message recipients gain new experiences that they get in videos. Video media relies on the senses of hearing and sight. So as to increase the involvement of the senses in the reception and process of synthesis and evaluation of the information obtained. Memory effectively transfers sounds and images to memory. So it's easy to understand.(21) Previous research results identified that humans are able to remember 20% of what they see, and 30% of what they hear.(16) The increase in positive attitudes after video counseling is also because it encourages willingness to receive information more quickly. Starting from giving assessments to determining attitudes. Attitudes are formed from the process of an individual's willingness to accept external stimuli.

## CONCLUSION

Based on the discussion, it can be concluded that there is an influence of counseling through video media on public knowledge about hypertension in Terebino Village. Likewise with attitudes, the influence of counseling through video media on community attitudes regarding hypertension in Terebino Village is very significant. This finding is supported by other

study that stated health promotion with video is effective to increase knowledge, attitude and health practices.(22-24).

By solving the problem of hypertension prevalence through increasing knowledge, it will also encourage a reduction in the number of other chronic diseases. Considering that hypertension can lead to the emergence of complications including chronic kidney disease, if appropriate treatment is not carried out, such as compliance with taking hypertension medication.(25-27)

## Implications

For the Terebino Village government, it is important to optimize time and invite all the people of Terebino Village to participate in the outreach carried out to increase knowledge and attitudes among the community regarding diseases, especially hypertension. It is hoped that the community will further develop their knowledge and attitudes in accessing various information about the health of themselves and their families, so that they can avoid disease, especially hypertension. For further researchers, it is recommended that a study be conducted relating to the influence of counseling which is associated with other aspects of disease such as diabetes, chronic kidney disease and other chronic diseases.

## REFERENCES

1. Maulidina F. Factors Associated with the Incident of Hypertension in the Working Area of the Jati Luhur Bekasi Community Health Center. *Arsip Kesehat Masy.* 2019;4(1):149–55.
2. World Health Organization. *A Global Brief on Hypertension: Executive Summary.* Geneva: World Health Organization; 2019.

3. Cheng HM, Lin HJ, Wang TD, Chen CH. Asian management of hypertension: Current status, home blood pressure, and specific concerns in Taiwan. *J Clin Hypertens.* 2020;22(3):511–4.
4. Central Sulawesi Health Department. Central Sulawesi Health Profile in 2020. Palu: Central Sulawesi Health Department; 2020.
5. Ulunambo Health Center. Ulunambo Health Center Profile in 2022. Ulunambo: Ulunambo Health Center; 2022.
6. Putra S, Susilawati. The Influence of Lifestyle on the Incident of Hypertension in Indonesia: A Systematic Review. *J Pendidik Tambusai.* 2022;6(2):15794–8.
7. Akbar H, Santoso BE. Analysis of Factors Causing the Occurrence of Hypertension in the Community (Case Study in West Passi District, Bolaang Mongondow Regency). *Media Publ Promosi Kesehat Indones.* 2020;3(1):12–9.
8. Luthfiani R, Lina N, Maywati S. The Effect of Counseling Using Video Media on Pre-Elderly Knowledge Regarding Hypertension. *J Kesehat Komunitas Indones.* 2021;17(2):329–38.
9. Adam M, McMahon SA, Prober C, Bärnighausen T. Human-Centered Design of Video-Based Health Education: An Iterative, Collaborative, Community-Based Approach. *J Med Internet Res.* 2019;21(1):1–18.
10. Gupta S, Garima, Kumar P, Kumar V. Uses and advantages of advanced communication media for different purpose and extension work. *Int J Home Sci.* 2018;4(3):250–2.
11. Aditama MG, Haryanti D, Musiman, Sari FW. The Advantages of Personal Documentation Video in Improving Students' Speaking Skill for Presentation. In: Proceedings of the 5th Progressive and Fun Education International Conference (PFEIC 2020). 2020.
12. Bezzubtseva MV, Demkina AE, Lipilina MN, Benimetskaya KS, Pivenstein AL, Gavriyuk ND, et al. Video or text? Education through a social media website in hypertension. *Int J Cardiol Cardiovasc Risk Prev.* 2022;14(200139):1–5.
13. Russo A, Di Gaetano C, Cugliari G, Matullo G. Advances in the Genetics of Hypertension: The Effect of Rare Variants. *Int J Mol Sci.* 2018;19(3):688.
14. Pakpahan AF, Prasetyo A, Negara ES, Gurning K, Risanti., Situmorang FR, et al. Metodologi Penelitian Ilmiah. Medan: Yayasan Kita Menulis; 2021. 176 p.
15. Wahyuni A, Amelia R, Nababan I, Pallysater D, Lubis N. The Difference of Educational Effectiveness Using Presentation Slide Method with Video About Prevention of Hypertension on Increasing Knowledge and Attitude in People with the Hypertension Risk in Amplas Health Center. *Maced J Med Sci.* 2019;7(20):3478–82.
16. Hamid MRA, Yusof NDBM, Buhari SS, Malek KA, Noor HM. Development and validation of educational video content, endorsing dietary adjustments among patients diagnosed with hypertension. *Int J Heal Promot Educ.* 2021;1–12.
17. Sarabi N, Gareh Sheykhlo S, Moosavi A, Afshar S. The Effect of Video Education on Knowledge of Pregnancy Blood Pressure and Preventive Self-care Among Primiparous Pregnant Mothers: A Quasi-experimental Study. *J Nurs Midwifery Sci.* 2024;11(1):e143631.
18. Edward A, Kagaruki GB, Manase F, Appel LJ, Matsushita K. Effectiveness of instructional videos for enhancing healthcare provider competencies for hypertension management – a pre-post study in primary healthcare settings,



- Tanzania. *BMC Health Serv Res.* 2022;22(721):1–4.
19. Ab Hamid MR, Mohd Yusof NDB, Buhari SS. Understandability, actionability and suitability of educational videos on dietary management for hypertension. *Health Educ J.* 2022;81(2):238–47.
  20. Rashid AA, Thew HZ, Zakaria Z, Faizal MSDM, Choo ZC. The effectiveness of short educational Videos on proper home blood pressure monitoring knowledge among medical students: A pilot study. *J Hypertens.* 2023;41(Supplement 1):e241.
  21. Gusty RP. Health Education Model for Elderly Hypertension on Knowledge, Attitudes, and Adherence to Following the Dietary Approaches to Stop Hypertension (DASH). *J Aisyah J Ilmu Kesehatan.* 2023;8(3):955–62
  22. Akbar MI, Effendi DS, Dewi N, Lestari H, Kohali RE. Interconnection study of stunting events in North Buton District. In *Proceedings of the 2nd Alauddin Health and Medical International Conference 2024 Mar 28.*
  23. Ahmad, N., Tasnim, T., Wahab, H. The effect of video and simulation Counselling on children's Hand washing using soap in the Private Vocational School of Lambandia District East Kolaka District. *Indonesian Journal of Health Sciences Research and Development (IJHSRD).* 2020. 2(1), 39-45. doi: <https://doi.org/10.36566/ijhsrd/Vol2.Iss1/26>.
  24. Welliam, D., Tasnim, Asri, A. The Effect of Dental and Oral Health Education with Animated Video Media and Props (Phantom) Teeth Brushing Behaviorin Asy-Syati'iyah Madrasah and Baitul Quran Kendari in 2021. *Waluya The International Science Of Health Journal.* 2022, 1(4), 130-135. doi: <https://doi.org/10.54883/wish.v1i4.25>.
  25. Tasnim, T., Sugireng, Imran, Akib, N.I. Analysis of differences in early detection of chronic kidney disease with urine creatinine, proteins and individual health status based on behavioural, stress and genetic factors in Kendari City, Indonesia. *Public Health of Indonesia.* 2024. 10(2). 203-213. Doi: <https://doi.org/10.36685/phi.v10i2.801>
  26. Tasnim, T., Sugireng, Imran, Akib, N.I. Early Detection Patterns Of Chronic Kidney Disease Based On Differences In Individual Health Status In Kendari City. *Indonesian Journal of Health Sciences Research and Development.* (2023). 5(2), 168-177. Doi: <https://doi.org/10.36566/ijhsrd/Vol5.Iss2/190>.
  27. Tasnim, T., Imran, Sugireng, Akib, N.I. Early detection of the risk of chronic kidney disease based on eating and drinking behaviors in Kendari City Indonesia. *Healthcare in Low-resource Settings.* 2024. Early access (89), 1-18. Doi: <https://doi.org/10.4081/hls.2024.12133>