



Research Article

Effectiveness of Audiovisual Education Methods with Whatsapp Group Media for Knowledge Self Management in Hypertension

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ABSTRACT

Audiovisual media is media that contains audio and visual elements which have the ability to be more interesting because they include sound and images. Whatsapp groups are usually used for learning together and can be used for discussions. Self-management refers to a person's activity of doing something as a whole in his life independently to improve and maintain his health. Knowledge is the result of human sensing or the result of a person's knowledge of an object through his or her five senses. The aim of this research is to determine the effectiveness of audiovisual education methods using WhatsApp group media in increasing knowledge and self-management in hypertension patients. This research uses a pre-experimental design with the form of a one group pretest-posttest design. The sample in this study was someone who experienced hypertension in the elderly in the Cihaurbeuti Community Health Center working area. The technique used was purposive sampling with a sample of 35 respondents. The results of the research showed that the level of self-management knowledge of respondents before being given the intervention was in the fair category (77.2%), the majority of respondents' level of self-management knowledge after being given the intervention was in the good category (65.7%). There was an effect of providing audiovisual video media using the WhatsApp group method after being given the intervention with an increase of 3.09. The results of statistical tests using the Independent T test obtained Sign. (2-tailed) $0.00 < 0.05$ means there is a significant influence.

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INTRODUCTION

Non-communicable diseases (NCDs) are diseases that are not transmitted to others by any form of contact, resulting in death and killing around 35 million people each year or around 60% of all deaths globally, with a prevalence of 80% in developing countries. Non-communicable diseases, especially cardiovascular diseases, hypertension, cancer, chronic respiratory diseases, and diabetes mellitus are major threats to human health and development today. NCDs that are currently of concern among Indonesians are Hypertension. (Sudayasa et al., 2020).

Heart and Vascular (cardiovascular) disease poses a significant health issue in both developed and developing nations. Cardiovascular disease remains the leading cause of death globally, with hypertension being one of the most prevalent cardiovascular conditions in the population. Hypertension, commonly known as high blood pressure, is frequently called the silent killer due to being asymptomatic; thus, the patient may be unaware of having hypertension until complications arise (Ministry of Health, 2019).

According to Sarweni & Sari (2020), hypertension is a condition in which a person experiences an increase in blood pressure above normal, someone is said to have hypertension if the systolic blood pressure is > 140 mmHg and or systolic blood pressure > 90 mmHg. Yahya (2018), in Aliffandi, 2022), says that hypertension or high blood pressure is a condition of an abnormal increase in blood pressure in arterial blood vessels and occurs continuously. According to (Rizkiana & Maulianda, 2021), said that hypertension is caused by several causative factors, namely family heredity, obesity, smoking habits, consuming alcohol, high salt intake, stress and ignorance of the community in regulating lifestyle.

According to (Hudan & Alvita 2018), hypertension is a non-communicable disease (NCD) and a health problem in many

countries. Hypertension is among the top five causes of death in Indonesia and the prevalence of hypertension continues to increase. Data from the Global Status Report on Noncommunicable Diseases (2018) and the World Health Organization (WHO) show that 27% of developing countries have people with hypertension, while developed countries have 18% of people with hypertension (Setyowati & Wahyuni, 2019). WHO data in 2015 shows that around 1.13 billion people in the world suffer from hypertension, meaning that 1 in 3 people in the world are diagnosed with hypertension. WHO estimates that by 2025 there will be 1.5 billion people with hypertension and the number of prevalence of hypertension sufferers always increases every year. It is also estimated that every year there are 2.9 million people who have died as a result of suffering from hypertension and experiencing complications from hypertension (Ministry of Health, 2019).

Basic Health Research (Riskesdas) data in 2018 showed that hypertension cases in Indonesia were 63,309,620 people, while the death rate in Indonesia due to hypertension was 327,218 deaths. Riskesdas data showed the prevalence of hypertension in the population aged > 18 years was 34.1%. Prevalence in 2018 was higher than in 2013 at 25.8%. The 2018 hypertension data occurred in the age group 31-44 years at 31.6%, age 45-54 years at 45.3% and age 55-64 years at 55.2% (Ministry of Health, 2021). West Java Province ranks 2nd in the prevalence of high blood pressure with sufferers 39.6% with 24,163 cases of hypertension in men and 23,998 cases in women.

Data Dinas Kesehatan Ciamis in 2020 recorded 68,566 cases of hypertension. It was found that the Cihaurbeuti Health Center was included in the top 5 areas that had the highest cases of hypertension in Ciamis Regency. Patients with hypertension who received services or who were registered in the Cihaurbeuti Health Center work area were 205 cases.

Hypertension education is a process of activities to facilitate the knowledge, skills and abilities required for prehypertension and hypertension self-care. This process incorporates the needs, goals and life experiences of people with hypertension and is guided by standardized guidelines based on various studies. Media in health education can be printed media, electronic media and board media. The purpose of health education is to increase knowledge, self-care behavior, problem solving and improve quality of life (Astuti & Anggarawati, 2021).

The educational media used in this study is an animated video. Animated videos can attract a person's attention because they use elements of images and sounds that present objects in detail, because the animated videos made are received through the five senses, knowledge will be clearer if many five senses are used to receive information (Sari & Fajri, 2021). used to receive information (Sari & Fajri, 2021). This is in line with research (Amalia, 2021).

METHOD

This research is a Pre-Experimental Design, which is a design that is not yet a real experiment because there are still external variables that contribute to the formation of the dependent variable (Hardani et al., 2020), with the design form One Group Pretest - Posttest Design, which is a study that only sees the results of treatment in a group of objects without a comparison group or control group (Adiputra, 2021).

Posttest Design, which is a study that only looks at the results of treatment in a group of objects without a comparison group or control group (Adiputra, 2021) descriptive. This study involved a population of 99 people. The sample of this study was 35 people using purposive sampling. Data collection is based on primary data, namely the results of the questionnaire.

Location And Time It was carried out in July 2024, in the work area of the Cihaurbeuti Health Center, Ciamis Regency.

RESULTS

Table 1. Self Management knowledge of respondents before intervention (n=35)

Category	n	%
Good	4	11,4
Fair	27	77,2
Poor	4	11,4
Total	35	100%

Based on table 1 it can be seen that the majority of self-management knowledge of respondents before being given intervention was in the sufficient category, as many as 27 respondents (77.2%), while 4 respondents good category (11.4%) and 4 respondents in the less category (11.4%).

Table 2. Self Management Knowledge Respondents After Intervention (n=35)

Category	n	%
Good	23	65,7
Fair	12	34,3
Poor	0	0
Total	35	100%

Based on table 2, it can be seen that the majority of self-management knowledge of respondents after being given intervention was in the good category, as many as 23 respondents (65.7%), while 13 respondents (34.3%) were in the sufficient category.

Based on the table, it can be seen that none of them respondents who have knowledge category is lacking after being given intervention, meaning there is an improvement from before.

Table 3. Analysis of Differences in Self-Management Knowledge Before and After Being Given Audiovisual Video Media Whatsapp Group (n=35)

	Respondent N (35)	Sign (2-tailed)
Before Mean (SD)	7,89 (1,906)	0,00*
After Mean (SD)	10,4 (1,882)	0,00*
Difference Increase Mean (SD)	3,09	

Based on the table above, the average value of hypertension self-management knowledge before the intervention was 7.89 with a standard deviation of 1.906, after the intervention it increased to 10.40 with a

standard deviation of 1.882, so there was an increase of 3.09. Test results statistics using test Independent T test obtained Sign. (2-tailed) $0.00 < 0.05$ then H_0 is rejected and H_a is accepted, meaning that there is an influence of audiovisual media with the whatsapp group method in increasing knowledge of hypertension self-management.

DISCUSSION

1. Knowledge of Self Management

Before Intervention Based on table 1, it can be seen that the majority of respondents have a sufficient level of knowledge as many as 27 respondents (77.2%), while 8 respondents (22.8%) were in the good and poor categories. The results of this study are in line with research conducted by (Fernalia, 2019), which states that before audiovisual education was given to the intervention group, the majority of respondents were in the moderate category as many as 20 respondents (55.5%).

According to Melva et al, (2024), generally after a person experiences an increase in age, there will be a decrease in cognitive functions of learning, perception, understanding and psychomotor processes (movement, action and coordination). John Horn (2008) in Julianti (2019), states that crystallized intelligence, namely a set of information and verbal abilities possessed by individuals, increases with age, while fluid intelligence, namely a person's ability to think abstractly, will decrease steadily during middle adulthood. This happened in this study, namely at the limit of characteristics there were 21 respondents (60%) aged > 50 years.

According to (Sakinah et al, 2022), there are still many people and people who think that they are unable to learn new knowledge and skills, and consider themselves elderly, fragile and do not need to work, this kind of thing will cause

stress and distress and despair in the community. At a young age, a person is already drained by heavy tasks, and as they age, they become helpless or resigned. For people, the urge and desire to learn new knowledge and For the community, the urge and desire to learn new knowledge and skills is a common thing, both with the motivation to improve the quality of life and to fill spare time to be more productive and useful (Galuh, 2022). Work factors are also one of the factors that influence the incidence of hypertension.

In this study, the majority of respondents were working or already had a job as many as 25 (71.4%). This is in line with research conducted by (Setiani, 2022) which shows that the proportion of people with hypertension is more working (78.3%) than not working (48.6%). This is in line with today's lifestyle that prioritizes work to be successful, to achieve success we have to work hard, causing stress and high pressure on a person. High feelings of stress make blood pressure rise (Setiani, 2022).

2. Self Management Knowledge After Intervention

Based on table 2. it can be known that the majority self management knowledge in respondents after being given intervention is in the good category as much 23 respondents (65.7%) which means that there was an increase from before. This is in line with research conducted by (Lubis, 2023) which stated that 49 respondents (83.1%) experienced an increase in knowledge of hypertension self-management after being given audiovisual media education in the good category which was originally 3 respondents to 49.

According to the researcher's analysis, the increase in knowledge occurs because someone gets information about self-management of hypertension. According to (Notoamdjo, 2018), that

sources of information obtained from various sources, a person tends to have broader knowledge. Information will influence a person's knowledge, even though a person has a low education, but if they get good information from various information media such as TV, radio, magazines and counseling, it will increase a person's knowledge (Coonie, 2021).

Researchers assume that information sources greatly influence a person's knowledge, both the provider and the sender. Information or recipient, but it depends on a person's interest in seeking information from various sources, whether from magazines or health books, leaflets, newspapers, attending health associations or health counseling and watching audiovisual videos such as on YouTube and/or videos that have been made by researchers. Information providers, especially health workers, in conveying information about health influences the knowledge and changes received by a person whether this is good or bad to do (Zainudin, 2020).

3. Analysis of Differences in Self-Management Knowledge Before and After Being Given Audiovisual Media with Whatsapp Group

Providing audiovisual video media with WhatsApp groups can increase self-management knowledge with an increase of 3.09. Hypertension self-management is a health behavior obtained from interactions with humans and their environment which is manifested in the form of healthy lifestyle behavior modification practices which include (physical activity, reducing weight, reducing alcohol consumption, diet regulation, sodium restriction, calcium and magnesium diet, stress management aimed at reducing blood pressure and risk factors for hypertension Canadian Hypertension Education Program.

Implementation Self management this hypertension is influenced by several

factors, including the selection of educational methods. In this study, the audiovisual education method was chosen as a method for delivering information about hypertension self-management, which previously the respondents were collected in a chat application called a WhatsApp group to facilitate monitoring and provide links together and can be used as a reference in implementing hypertension self-management. The average difference in increasing knowledge of hypertension self-management after providing the audiovisual video method can be interpreted as the result of health education with audiovisual video media and the discussions provided have an effect (Irawan, 2023).

Education programs can be successful if supported by good methods. Methods is a means used to convey messages or information that the communicator wants to convey. The media commonly used are posters, leaflets, brochures and flipcharts (Mubarak, 2021).

The results of this study are supported by research conducted by (Saila, 2023) entitled "Effectiveness of Audiovisual Education Methods on Self-Management in Hypertension Patients". In this study, the intervention group received health education on self-management for 60 minutes using audiovisual videos. The results of this study indicate that the implementation of a health education program using attractive media in the form of audiovisual videos can improve hypertension self-management behavior. It can be explained that the selection of audiovisual video media as a health education media can be well received by respondents. This method offers more interesting and non-monotonous health education.

Education through video uses movements, images, and sound, unlike counseling with printed materials, which presents writing alongside the

counselor's voice, potentially creating a more formal impression. According to (Harianto, 2020) audiovisual video media offers incentives to hearing and vision. The results obtained are therefore more optimal. These results are achievable because the eyes are among the five senses that transmit the most knowledge to the brain. (75 to 87%), while 13 to 25% of knowledge is obtained through other senses.

The findings of the present study correspond with those of a study by Iporra titled "Educating Hispanic Mother's Management Of Infant Gastroenteritis, Utilizing Mastery Learning and Overlearning In Conjunction With Audiovisual Instruction Method," which indicated a variation in respondents' knowledge and abilities following the implementation of the audiovisual education method. This study aligns with research also. (Kharisma, 2019), which showed a significant difference in increasing knowledge of hypertension self-management with a p value of 0.002 after being given audiovisual video education.

The results of this study are reinforced by the results of a study conducted by (Busjra, 2019) which stated that there was a significant difference in the average self-management of the intervention group after the audiovisual video education method was carried out with $p = 0.000$.

According to researchers, the increase in knowledge of hypertension self-management before and after being given audiovisual video media is the result of measuring the audiovisual video education method, because by choosing the right method such as audiovisual video, respondents can capture information more effectively because it involves the sense of sight, and increases interest in the information conveyed which ultimately hypertension self-management information can be applied

to everyday life which is expected to reduce the occurrence of complications.

CONCLUSION

Based on the research results and discussion results that have been carried out regarding the description of the level of knowledge In the following:

The level of knowledge of self-management of respondents before being given intervention was mostly in the sufficient category, as many as 27 respondents (77.2%), while 4 respondents were in the good category (11.4%) and 4 respondents were in the poor category (11.4%).

The level of self-management knowledge of respondents after being given intervention was mostly in the good category, as many as 23 respondents (65.7%), while 12 respondents (34.3%) were in the sufficient category, meaning there was an increase from before.

There is an effect of providing audiovisual video media with the WhatsApp group method after being given an intervention with an increase of 3.09. The results of the statistical test using the Independent T test obtained Sign. (2-tailed) $0.00 < 0.05$, meaning there is a significant effect.

REFERENCES

- Abdul. W. (2018). The Importance of Learning Media in Improving learning achievement. Istiqra, 5 (increase performance).
- Akbar, F., Nur, H., & Humaerah, UI (2020). Characteristics of Hypertension in the Elderly in Buku Village (Characteristics of Hypertension in the Elderly). Health Insight, 5(2), 35– 42.
- Ariyanti, R., Preharsini, I.A., & Sipolio, BW (2020). Health Education in Efforts to Prevent and Control Hypertension in the Elderly. To Maega: Journal of Community Service, 3(2), 74. <https://doi.org/10.35914/tomaega.v3i2.369>
- Chloranyta, S., Dewi, R., & Wijayanti, S. (2023). Audio Visual Education About Self

- Management in Hypertension Patients. *Malahayati Nursing Journal*, 5(10), 3510–3517. <https://doi.org/10.33024/mnj.v5i10.9380>
- Coonie. (2021). Application of Animated Video Education in Improving Knowledge.
- Daffa, FM, & Vioneery, D., (2022). The Influence of Hypertension Self-Management Images on the Elderly at the Dharma Bhakti Kasih Nursing Home in Surakarta. Kusuma Husada University, Surakarta
- Dewi, PC, Hudiyono, Y., & Mulawarman, WG (2018). Development of Teaching Materials for Writing Complex Procedure Texts with the Discovery Learning Model Using Audio Visual Media (Video) in Class XI of Sma Negeri 1 Samarinda. *DIGLOSIA: Journal of Language, Literature, and Teaching Studies*, 1(2), 101–112.
- Fernalia, T (2019). Management of Hypertension in the Elderly at the Budhi Luhur Jambi Social Home for the Elderly.
- Julianti, A., (2019). Case Study of Nursing Asugab on Mrs. M who had Hypertension in the Ketupat Village Area. Muhammadiyah University of East Kalimantan.
- Lubis, MS, Duta, U., Surakarta, B., Duta, U., Surakarta, B., Miyah, S., Lubis, S., Bangsa, UD, Pengembangan, T., Penderita, P., Usia, H., & Attribution-, CC (2023). Journal of Nursing Practice and The influence of audio-visual self-education care behaviour to increasing knowledge of hypertension sufferers in adulthood. 4(1), 39–44.
- Saila, M. (2023) Effectiveness of Audiovisual Education Methods on Self-Management in Hypertension Patients. *Ners Muda*. 2(3), 100-105.
- Sakinah, S. (2022). The Influence of Video Education on Adolescent Knowledge at the Mitra Adiguna Palembang Health Sciences College. 7(20), 475-483
- Setiani, R., & Wulandari, SA (2022). The Relationship of Genetic Factors with Hypertension Incidence: Scoping Review. *Journal of Health Integration*.
- Suciana, F., Agustina, NW, & Zakiatul, M. (2020). Correlation of Duration of Suffering Hypertension With Level Anxiety Sufferers Hypertension. *Journal of Nursing and Public Health Cendekia Utama*, 9(2), 146. <https://doi.org/10.31596/jcu.v9i2.595>
- Sudayasa, IP, Rahman, MF, Eso, A., Jamaluddin, J., Parawansah, P., Alifariki, LO, Arimaswati, A., & Kholidha, AN (2020). Early Detection of Risk Factors for Non-Communicable Diseases in the Community of Andepali Village, Sampara District, Konawe Regency. *Journal of Community Engagement in Health*, 3(1), 60–66 <https://doi.org/10.30994/jceh.v3i1.37>
- Zainudin, (2020). Providing Education Video Animation In Improving the Knowledge of Hypertension Patients in General Hospitals Ungaran area. *Journal Nursing Sisrhana*, 6(1), 23-30.