

The Relationship of Health Education to Elderly Knowledge about How to Prevent Hypertension in the Elderly

Pinondang Hotria Siregar

Undergraduate Program in Public Health Sciences, Faculty of Health,
Efarina University, Indonesia

ARTICLE INFO

ABSTRACT**Keywords:**

Health Education,
Knowledge,
Elderly

Hypertension is still a health problem in the elderly group. Increased age is often followed by degenerative diseases and health problems in the elderly group. Therefore, researchers are interested in conducting a study entitled Relationship of health education to elderly knowledge on how to prevent hypertension in the elderly in the Working Area of Puskesmas Sindar Raya Simalungun District in 2017. This study was conducted in May-July 2017 with a population of 198 people while the sample used as many as 99 people using the formula from Lemeshow book using simple random sampling techniques. The results of this study stated that health education has a relationship to the knowledge of the elderly in the Working Area of Puskesmas Sindar Raya Simalungun District in 2017, because p value < 0.05 . It is expected that it can be increased the knowledge of elderly posyandu cadres about hypertension and how to prevent it and improve the ability of cadres in providing counseling so that counseling to the elderly is more effective. Education Institutions provide elderly posyandu material which is one of the basic health services through courses related to elderly services both integrally and specifically cases of hypertension in the elderly and prevention methods. The results of this study as preliminary data to conduct other research on the elderly with different variables

E-mail:
pinria85@gmail.com

Copyright © 2022 Science Midwifery.

1. Introduction

Hypertension or high blood pressure can be a problem, which puts a strain on the circulatory system and organs that receive blood supply. If high blood pressure is not controlled properly, a series of serious complications and cardiovascular disease can occur (Anna, 2007). Hypertension affects 16 million people in the UK, 34% of men and 30% of women have high blood pressure above 140/90 mmHg and tends to increase in the entire adult population (Anna, 2007). According to a survey conducted by the World Health Organization (WHO) in 2000, the number of people in the world who suffer from hypertension is around 26.6% for men and around 26.1% for women and it is estimated that by 2025 the number will increase to 29.2% (Apriany, 2012). The prevalence of hypertension sufferers in Indonesia continues to increase. The results of the Household Health Survey (SKRT) in 2000 were 21% to 26.4% and 27.5% in 2001 and 2004. Furthermore, it is estimated to increase again to 37% in 2015 and to 42% in 2025. According to Data from the Ministry of Health of the Republic of Indonesia in 2009 showed that the prevalence of hypertension was 29.6% and increased to 34.1% in 2010. Data from the Semarang City Health Service in 2009 stated that the prevalence of hypertension was 12.85% with a total of 2063 cases (Apriany, 2012). Basic Health Research (Riskesdas) in 2013 showed that people with hypertension over the age of 18 reached 25.8 percent of the total population of Indonesia. From this figure, women with hypertension are 6 percent more than men. Meanwhile, those diagnosed by health workers only reached around 9.4 percent. This means that there are still many people with hypertension who are unreachable and diagnosed by health workers and do not undergo treatment as recommended by health workers. This causes hypertension as one of the highest causes of death in Indonesia (Riskesdas, 2013). Hypertension is still a health problem in the elderly group. Increasing age is often

followed by degenerative diseases and health problems in the elderly group. Hypertension is a degenerative disease that is often found in the elderly group (Kuswardani, 2007). Old age factors can lead to hypertension due to structural and functional changes in the peripheral vascular system that is responsible for blood pressure (Brunner & Suddarth, 2012). The condition of reduced flexibility of the main arteries due to old age causes the hardening of the arterial walls so that blood flow cannot flow smoothly (Wolff, 2008). In the elderly, the number of people with high blood pressure is even more experienced by more than half of the population of people aged over 60 years (Anna, 2007). Based on the prevalence data contained in the elderly posyandu, the researchers were interested in conducting research on the relationship between health education and knowledge of the elderly about how to prevent hypertension in the elderly at the Sindar Raya Public Health Center, Simalungun Regency.

2. Method

This type of research is cross sectional, which is a research design by observing at the same time (Hidayat.A.A, 2009). This is intended to obtain a description of the knowledge of the elderly about how to prevent hypertension in the elderly in the work area of the Sindar Raya Health Center, Simalungun Regency in 2017. The study was carried out in the work area of the Sindar Raya Health Center, Simalungun Regency and this study will be carried out in May-July 2017. The population in this study are all the elderly in the working area of the Sindar Raya Health Center, Simalungun Regency in 2017 as many as 198 people and the sample in the study as many as 99 people.

3. Results and Discussion

After conducting research on the relationship of health education to the knowledge of the elderly about how to prevent hypertension in the elderly in the work area of the Sindar Raya Health Center, Simalungun Regency in 2017 with 99 respondents, the following results can be obtained:

Table 1
Frequency Distribution of the Elderly in the Work Area of the Sindar Raya Health Center Simalungun Regency in 2017 by Age

No	Age	f	%
1	55 - 64 Year	31	31,3
2	65 - 70 Year	38	38,4
3	>70 Year	30	30,3
Total		99	100

Based on Table 1. it is obtained that the majority of respondents are aged 65-70 years, namely 38 people (38.4%) while the minority has an age of >70 years, namely 30 people (30.3%). According to Kuswardani (2007), hypertension is still a health problem in the elderly group. Increasing age is often followed by degenerative diseases and health problems in the elderly group. Hypertension is a degenerative disease that is often found in the elderly group. Old age factors can lead to hypertension due to structural and functional changes in the peripheral vascular system that is responsible for blood pressure (Brunner & Suddarth, 2012)

Table 2
Frequency Distribution of the Elderly in the Work Area of the Sindar Raya Public Health Center, Simalungun Regency in 2017 by Gender

Nno	Gender	f	%
1	male	32	32,3
2	woman	67	67,7
total		99	100

Based on Table 2. it is obtained that the majority of respondents have female sex, namely 67 people (67.7%) while the minority has male sex, namely 32 people (67.7%). According to a survey conducted by the World Health Organization (WHO) in 2000, the number of people in the world who suffer from hypertension is around 26.6% for men and around 26.1% for women and it is estimated that by 2025 the number will increase to 29.2% (Apriany , 2012)

Table 3

Frequency Distribution of the Elderly in the Work Area of the Sindar Raya Health Center, Simalungun Regency in 2017 by Occupation

No	Pekerjaan	f	%
1	Pensiunan PNS	23	23,2
2	Pedagang/Wiraswasta	23	23,2
3	Petani	23	23,2
4	Pegawai Swasta	12	12,2
5	Tidak bekerja	18	18,2
	Jumlah	99	100

Based on Table 3. it is obtained that the majority of respondents have jobs as retired civil servants as many as 23 people (23.2%), traders/entrepreneurs as many as 23 people (23.2%), farmers as many as 23 people (23.2%) while minority as private employees as many as 12 people (12,2%). According to Rohaendi (2008), as a gerontological consideration, structural and functional changes in the peripheral vascular system are responsible for changes in blood pressure that occur in the elderly. These changes include atherosclerosis, loss of connective tissue elasticity and decreased relaxation of vascular smooth muscle, which in turn reduces the distension and tensile strength of blood vessels. Consequently, the aorta and large arteries are reduced in their ability to accommodate the volume of blood pumped by the heart (stroke volume) resulting in a decrease in heart failure and an increase in peripheral resistance, so the workload affects the incidence of hypertension in the elderly.

Table 4

Distribution of the Frequency of the Elderly in the Work Area of the Sindar Raya Public Health Center, Simalungun Regency in 2017 Based on Education

No	Pendidikan	f	%
1	SD	14	14,1
2	SMP	36	36,4
3	SMA	36	36,4
4	Perguruan Tinggi	13	13,1
	Jumlah	99	100

Based on Table 4. it is obtained that the majority of respondents have junior high school education as many as 36 people (36.4%), high school education as many as 36 people (36.4%) while the minority have higher education education as many as 13 people (13.1%). According to Stanley (2006), aging is a process of decreasing structural function of the body followed by a decrease in body resistance. Everyone will experience old age, but aging in each person is different depending on the various factors that influence it. Education concerns the knowledge gained during life, the higher the education the better in the process of preventing hypertension and vice versa.

Table 5

Distribution of the Frequency of the Elderly in the Work Area of the Sindar Raya Public Health Center, Simalungun Regency in 2017 Based on Health Education

No	Pendidikan Kesehatan	f	%
1	Pernah	54	54,5
2	Tidak Pernah	45	45,5
	Jumlah	99	100

Based on Table 5. it is obtained that the majority of respondents had received health education, namely 54 people (54.5%) while the minority had never received health education, namely 45 people (45.5%). According to the Indonesian Ministry of Health (2009), a service forum for the elderly in the community carried out by health cadres who have received education and training from the puskesmas regarding basic health services aimed at the welfare of the elderly. The container is a place for providing health education to the elderly, it is hoped that hypertension that often occurs in the elderly can be handled properly.

Table 6

Distribution of the Frequency of the Elderly in the Work Area of the Sindar Raya Health Center, Simalungun Regency in 2017 Based on Knowledge

No	Pengetahuan	f	%
1	Baik	35	35,4
2	Cukup	44	44,4

No	Pengetahuan	f	%
3	Kurang	20	20,2
	Jumlah	99	100

Based on Table 6. it is obtained that the majority of respondents have sufficient knowledge, namely 44 people (44.4%) while the minority has less knowledge as many as 20 people (20.2%). If high blood pressure is not controlled properly, a series of serious complications and cardiovascular disease can occur, so the knowledge of the elderly about hypertension has an effect on reducing the death rate in the elderly due to hypertension (Anna, 2007).

Table 7

Cross Table of Relationship between Health Education and Knowledge of the Elderly in the Work Area of the Sindar Raya Health Center, Simalungun Regency in 2017

HJ	Pendidikan Kesehatan	Pengetahuan						Jlh	%	P value
		Baik		Cukup		Kurang				
		f	%	f	%	f	%			
1	Pernah	30	30,3	21	21,2	3	3	54	54,5	0,000
2	Tidak Pernah	5	5,1	23	23,2	17	17,2	45	45,5	
	Jumlah	35	35,4	44	44,4	20	20,2	99	100	

From the results of table 7 above, it can be seen that of the 54 respondents (54.5%) who had received health education, the majority had good knowledge, namely 30 people (30.3%) the minority had less knowledge, namely 3 people (3%), out of 45 people. (45%) who have never received health education, the majority have sufficient knowledge, as many as 23 people (23.2%) minority have good knowledge as many as 5 people (5.1%). From the results of the chi-square test of the cross table of health education with knowledge, the p value of 0.000 was obtained. It can be concluded that health education has a relationship with knowledge of the elderly at the Posyandu for the elderly, Nagori Dusun Ulu, Ujung Padang District, Simalungun Regency in 2016, because the p value <0.05. According to data from the Indonesian Ministry of Health (2009) shows that the prevalence of hypertension in Indonesia continues to increase. This increase can occur due to a lack of individual knowledge in preventing hypertension. Knowledge is obtained from various sources, including through health education conducted by health workers in hospitals, health centers and other health service centers.

3.1 Discussion

Based on the results of research conducted on the relationship between health education and knowledge of the elderly about how to prevent hypertension in the elderly in the Sindar Raya Community Health Center, Simalungun Regency, 2017 with 99 respondents, it can be discussed as follows:

a. The Relationship between Health Education and Knowledge of the Elderly in the Work Area of the Sindar Raya Public Health Center, Simalungun Regency in 2017

From the results of table 5.1.7 above, it can be concluded that health education has a relationship with the knowledge of the elderly in the Sindar Raya Community Health Center, Simalungun Regency in 2017, because the p value <0.05. Education affects the learning process, the higher a person's education, the easier it is for that person to receive information. With higher education, someone will tend to get information, both from other people and from the mass media. Knowledge is very closely related to education where it is expected that someone with higher education will have more extensive knowledge (Efendi, 2011). Health education can be useful so that the elderly can define their own problems and needs, understand what they can do about the problem, with the resources available to them coupled with external support and decide on the most appropriate activities to improve the health and welfare of the community so that the welfare of the elderly is met.

4. Conclusion

- The majority of respondents have an age of 65 – 70 years as many as 38 people (38.4%) while the minority has an age of >70 years as many as 30 people (30.3%)
- The majority of respondents have a female gender, namely 67 people (67.7%) while the minority has a male gender, namely 32 people (67.7%).
- The majority of respondents have jobs as retired civil servants as many as 23 people (23.2%), traders/entrepreneurs as many as 23 people (23.2%), farmers as many as 23 people (23.2%) while the minority as private employees that is as many as 12 people (12,2%).

Science Midwifery

journal homepage: www.midwifery.iocspublisher.org

- d. The majority of respondents have junior high school education as many as 36 people (36.4%), high school education as many as 36 people (36.4%) while the minority have college education as many as 13 people (13.1%).
- e. The majority of respondents had received health education as many as 54 people (54.5%) while the minority had never received health education as many as 45 people (45.5%).
- f. The majority of respondents have sufficient knowledge as many as 44 people (44.4%) while the minority has less knowledge as many as 20 people (20.2%).
- g. From the results of the chi-square test of the cross table of health education with knowledge, the p value of 0.000 is obtained. It can be concluded that health education has a relationship with knowledge of the elderly in the Sindar Raya Public Health Center, Simalungun Regency in 2017, because p value <0.05.

Reference

- Andra. 2007. Serious Threat of Hypertension in Indonesia. http://www.majalahfarmacia.com/rubrik/one_news.asp?IDNews=256, accessed 24 May 2016
- Angraini D.A, W. A. 2009. Factors Associated with the Incidence of Hypertension in Patients Treated at the Adult Polyclinic of Bangkinang Public Health Center January to June 2008. Riau: University of Riau
- Anna, Palmer. 2007. Simlpe guide : High Blood Pressure, Jakarta : Erlangga
- Arikunto. 2006. Research Procedure. Jakarta. Rhineka Cipta _____ . 2010. Research Procedures A Practical Approach. Jakarta. Rhineka Cipta
- Azizah. 2011. Elderly Nursing. Yogyakarta: Graha Ilmu
- Azwar, S. 2006. Human Attitude Theory and Its Measurement. Yogyakarta Student Library
- Brunner and Suddarth. 2012. Surgical Medical Nursing Edition 8 Volume 2. Jakarta: EGC Medical Book Publisher Indonesian Ministry of Health, 2006. Indonesian Health Profile. Jakarta _____, 2009. National Health System. Jakarta
- Fitriani, S. 2011. Health Promotion. Print 1. Yogyakarta: Graha Ilmu
- Hans Peter. 2008. Hypertension. PT Bhuana Popular Science. grammar. Jakarta
- Hidayat, A. A. 2009. Nursing Research Methods. Jakarta : Salemba
- Medika Kuswardhani T. 2007. "Management of Hypertension in the Elderly". Journal. Denpasar : Unud
- Marliani, T. S. 2007. 100 Questions & Answers Hypertension. Jakarta: PT Elex Media Komputindo
- Meilani. 2009. Community Health Promotion. Yogyakarta : Fitramaya
- Mubarak & Cahyati. 2009. Public Health Education. Jakarta: Salemba Medika.
- Notoadmojo S. 2010. Health Research Methods. Jakarta : Rineka Cipta _____ . 2010. Education and health behavior. Jakarta: Rineka Cipta
- Nugroho, Wahyudi, 2008, Gerontic and Geriatric Nursing, Edition 3, Jakarta: EGC
- Nursalam. 2008. Concept and Application of Nursing Research Methodology. Jakarta
- Rahyani. 2007. Epidemiology of Patients with Essential Hypertension Treated at the Internal Medicine Department of Perjan Hospital DR. M. Djamil Padang. Essay. field Riskesdas.2007.<http://www.k4health.org/system/files/laporanNasional%20Riskesdas%202007.pdf> (accessed April 13, 2016)
- Rohaendi. 2008. Treatment Of High Blood Pressure. Jakarta :Gramedia Main Library
- Salma Elsanti S. 2009. Guidelines for a Healthy Life Free of Cholesterol, Stroke, Hypertension & Heart Attack. Yogyakarta : Araska
- Stanley. 2006. Textbook of Gerontic Nursing. Jakarta: EGC.
- Suliha. 2007. Health Education in Nursing, Medical Book Publisher. Jakarta: EGC.
- Sustrani L. 2006. Hypertension. Jakarta : PT Gramedia Pustaka
- Sutanto. 2009. Beware 7 Degenerative Diseases. Yogyakarta : Indonesian Paradigm
- Wolff, H.P. 2008. Hypertension. PT Bhuana Popular Science. grammar. Jakarta.