

ELDERLY PEOPLE'S KNOWLEDGE ON PREVENTION AND TREATMENT OF HYPERTENSION: AN OVERVIEW

Agus Citra Dermawan, Santun Setiawati, Raden Siti Maryam

School of Nursing Bina Insan, North Jakarta, Indonesia,
Nursing Major Poltekkes Kemenkes Jakarta III, West Java, Indonesia,
Nursing Major Poltekkes Kemenkes Jakarta III, West Java, Indonesia

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Abstract – Hypertension is still the most concerning non-communicable disease in Indonesia as its mortality and morbidity rates are still on its rise. Prevention of hypertension becomes one of the primary programs within Puskesmas, developed through numerous researches. The aim of this research was to learn on the overview of elderly people's knowledge on prevention and treatment of hypertension. A descriptive analytic study was applied with cross-sectional study design. Also, the use of consecutive sampling within this study resulted to the chosen 448 respondents. This study was conducted on the work area of Puskesmas Cilincing sub-district, North Jakarta, Indonesia. The results showed that the proportion of elderly people who had poor knowledge towards prevention and treatment of hypertension were 69.6%. It also showed significant relationship between hypertension prevention and treatment knowledge and educational background of elderly people with pvalue 0.019. Therefore, this research suggests to Puskesmas to intensify the health promotion and prevention, specifically on hypertension in the elderly.

Keywords: hypertension, elderly, prevention, knowledge, treatment

INTRODUCTION

People aged above 60 years old are considered to be vulnerable population. It is because generally senior people are vulnerable to health and body function decline. There are five primary diseases which suffered mostly by elderly, such as hypertension, arthritis, stroke, chronic obstructive pulmonary disease (COPD), and diabetes mellitus (Riskesdas, 2013). Hypertension is considered to be the most common primary diagnosis on elderly. There are about 16-31% of the total population within each province in Indonesia suffered from hypertension. Meanwhile, the prevalence of non-communicable diseases, such as cancer, stroke, kidney illness, and hypertension is increasing compared to the year of 2013. Moreover, the hypertension rate is increasing from 25.8 % to 34.1% in the year of 2018. According to a report arranged by Puskesmas in Cilincing sub-district, North Jakarta, in 2019, hypertension was recorded to be the second most disease suffered by the elderly.

Hypertension has become the primary cause of mortality and morbidity in Indonesia. A person with hypertension can be identified through the systolic blood pressure which is ≥ 140 mmHg or diastolic blood pressure which is ≥ 90 mmHg on frequent tests (PERKI, 2015). People who had suffered from hypertension in Indonesia are mostly aged below or above 60 years old. The prevention attempt of this disease has become one main program in Puskesmas which is developed through various researches.

It can be fatal for people with hypertension if it does not get detected soon because on some cases, the disease will cause other health problems as the long-term effects of hypertension, such as cardiovascular disease, brain damage, vision impairment, as well as kidney problems (Savitri, 2017).

Many available studies out there are trying to convey on the factors for hypertension. According to Agustina, Sari and Savita (2014), the genetic and familial factors played a role in hypertension disease in elderly. A research by Mahmudah, et al (2015) showed that physical activities, fat intake, and natrium intake were become the risk factors mostly associated with hypertension. Meanwhile, Adam (2019) described in his study that the most associated risk factors with hypertension were ageing and smoking behavior. While there are various factors which associated with hypertension, it is also studied that hypertension can be treated through the pharmacological as well as non-pharmacological approaches (Rezky, Haseneli and Hasanah, 2015). The non-pharmacological treatments for people with hypertension can be applied through stress management, weight-loss treatment, reducing alcohol, natrium as well as tobacco intake, physical exercise, relaxation techniques, and acupuncture. A research by Lestari (2016)

revealed that Swedish massage could be an effective intervention which also applicable, efficient, and reachable in terms of expense in decreasing high blood pressure in elderly.

In addition to expand the research on hypertension and to support other studies focused on factors and medication of hypertension, this research aimed to convey an overview of knowledge on prevention and treatment of hypertension possessed by older people.

METHODS

This research was a descriptive analysis study with cross-sectional design conducted on the work area of Puskesmas Cilincing (Community Health Center), North Jakarta, with the total of older people population estimated around 1200 older people. 448 subjects were selected through consecutive sampling, with inclusion criteria such as an individual aged above 60 years old and considered to be an elderly, suffered from hypertension, and able to read and write. While, the exclusion criteria were listed, such as an elderly with visual and hearing impairment as well as having to do bed rest.

Upon giving their consent of being the respondent for this study, all respondents' privacy was assured, and the informed consent was being given and explained. This study made sure that it did not violate their autonomy, trust, and their personal data secrecy which was merely used for the sake of research only. The ethical approval was granted by ethical commission from Poltekkes Kemenkes Jakarta III Number: KEPK-PKKJ3/ S.53/ II/ 2020.

RESULTS

Univariate Analysis

Table 1. Characteristics of respondents according to their sex, education level, marital status, and medical card ownership in Puskesmas Cilincing sub-district, North Jakarta (n=448)

Variable(s)	n	%
Sex		
-Male	135	30.1
-Female	313	69.9
Education level		
-Uneducated	151	33.7
-Elementary School	141	31.5
-Primary School	80	17.9
-Secondary School	60	13.4
-Higher education	16	3.6
Marital status		
-Single	4	0.9
-Married	273	60.9
-Widow/Widower	171	38.2
Health insurance		
-Yes	448	100
-No	-	-

The table 1 above shows the proportion of respondents are mostly woman (69.9%); most of respondents do not get formal education or uneducated (33.7%); most of respondents are married (60.9%); and all of respondents have been registered to the health insurance (100%).

Table 2. Characteristics of respondent's according to their age

Variable	Mean	Median	SD
Age	67.22	65	5.908

Table3. Characteristics of respondents in Puskesmas Cilincing sub-district, North Jakarta, according to their habit (n=448)

Variable(s)	n	%
Smoking habit		
-Yes	57	12.7
-No	391	87.3
Physical exercise routine (3x a week)		
-Yes	191	42.6
-No	257	57.4
Medication adherence		
-Yes	387	86.4
-No	61	13.6
The current availability of antihypertensive drug:		
-Available	329	73.4
-Unavailable	119	26.6
The place of regular health checkup		
-Puskesmas	359	80.1
-Doctor-led clinic	4	0.9
-Midwife-led clinic	1	0.2
-Hospital	60	13.4
-Clinic	24	5.4
Participation in any social activities		
-Yes	290	64.7
-No	158	35.3
Sleep quality within a week		
-Good	273	60.9
-Poor	175	39.1

Table 3 shows the proportion of respondents who regularly smoking are 12.7%; respondents who regularly do physical exercise three times a week are 42.6%; most of respondents comply to medication adherence (86.4%); most respondents are still having the antihypertensive drugs during the study (73.4%); Most of respondents prefer puskesmas for their regular checkups(80.1%); most of respondents are actively participating in social activities (64.7%); and most of participants are having good quality of sleep within the past week (60.9%).

Table 4. Characteristics of respondents according to knowledge level about hypertension

Knowledge level	n	%
-Poor	312	69.6
-Good	136	30.4
Total	448	100

Table 4 shows the proportion of older people are mostly having a poor knowledge on prevention and treatment of hypertension (69.6%).

Table 5.The desired information on hypertension prevention and medication by older people

The desired information	n	%
-Description of hypertension	28	6.26
-Signs and symptoms	30	6.69
-Causes	60	13.39
-Prevention	81	18.09
-Treatment	99	22.09

-Dietary management of hypertension	54	12.06
-Long-term effects	44	9.82
-Alternative treatments	48	10.71
-None	4	0.89
Total	448	100

Table 5 shows the data of desired information by older people with hypertension as follows: the description, signs and symptoms, causes, prevention, treatment, dietary management, long-term effect, and alternative treatment for the disease.

Table 6. The correlation between respondents' education level and knowledge level

Education level	Knowledge level		pValue
	Poor	Good	
Elementary school	268	104	0.019
Primary-secondary school	35	25	
Higher education	8	8	

Table 6 shows the positive correlation between education level and knowledge level on the prevention and treatment of hypertension disease with pvalue 0.019.

DISCUSSION

Most of respondents for this study were female (69.9%). Based on the data from Pusat Data dan Informasi Kemenkes RI (2015), women life expectancy is higher compared to men. Moreover, older people are mostly dominated by women (9.53%) than men (8.54%) (Kemenkes RI, 2017). According to Kusumawaty, Hidayat and Ginanjar's research (2016), it showed most hypertensive patients were women. The intensity of hypertension on women is higher compared to men. There were also significant correlation between sex differences as the factor of hypertension with the hypertension cases occurred within Ciamis area

The basic health research (Riskesdas, 2013) in 2013 showed that hypertension was mostly suffered by women who did not have formal educational background and also unemployed. There is a slight ambiguity in terms of employment status between this study and other researches, in which the unemployed status on other research can also be meant to be housewife which technically the same thing. A woman is likely to be suffered from hypertension, specifically after menopause in which the estrogen hormon is significantly reduced affecting to the blood pressure.

The respondents in this study are mostly having elementary level of education. (31.5%) and general respondents are merely spent over 4.65 years of education or equally to 4th grade students (Badan Pusat Statistik, 2018). Meanwhile, the level of education can affect to individuals in processing the information as well as in applying healthy life pattern, specifically to individuals with hypertension. The high level of education is more likely for individuals to have better and healthy lifestyle (Agrina, Rini & Hairitama, 2011).

Then, this study also shows that all respondents have registered themselves to health insurance proven by the ownership of medical card (100%). Meanwhile, the proportion of elderly who have health insurance is higher compared to elderly within rural area (BPS, 2018). It is also recorded that the preferred health insurance by general respondents are Social Security Administrator for Health or BPJS Kesehatan. However, the factors such as sex differences, employment status, health insurance membership, and healthcare access do not related to medication adherence in hypertension (Puspita, 2016).

Respondents in this research are mostly non-smoker (87.3%), yet among them, 12.7%, which most of them are men, are still smoking whether the preference is electric cigarette or usual cigarette (BPS, 2018). Elderly who are a smoker is likely to be diagnosed with hypertension (Arif, Rurnoto & Hartinah, 2013).

More respondents in this study do not routinely exercise three times a week (57.4%). According to Putriastuti (2016), people aged more than 45 years old and not routinely doing physical exercise will likely to suffer from hypertension. Exercise becomes a healthy habit which can impact on the quality of life of the elderly (Wardani, 2016).

Most of the respondents have genes and familial hypertension record (62.2%). If the individual has a family history of hypertension, the following procedures can low and prevent the risk of hypertension, such as doing physical exercise regularly at least 3-4 times a week for 30-40 minutes, managing ideal body weight, consuming healthy foods, and doing regular checkups for blood pressure (Wibowo, 2014). Research by Maryam et al (2018) confirmed that there was a significant difference in the average family support provided to hypertensive elderly after the family support intervention program in the intervention group compared to the control group.

Most of the respondents in the study took the prescribed medicine adherently (86.4%), but there were elderly people who also did not take the prescribed medicine adherently (13.6%). It is necessary to increase for health counseling for hypertensive patients, especially regarding to exercise and proper treatment guidelines, considering that there are still elderly people with hypertension who do not have the healthy habit, like exercising and medication adherence (Moorti, 2010). Most of the respondents prefer to go to the Puskesmas (80.1%) and a small proportion choose the hospital instead (13.4%). Most of the elderly who experience health problems seek for help to the clinic. According to Statistics Indonesia, the majority of the elderly prefer healthcare facilities while few choose traditional or alternative treatment over health professional instead (BPS, 2018). It is because they believe the alternative treatment is sufficiently enough for them.

Most of the respondents participated in social activities (64.7%). Maintaining a healthy life earlier is a valuable investment, for it is possible an individual can achieve in the future life as an active, independent, and productive elderly. One of the efforts to empower the elderly in the community is by participating in the Posyandu or Posbindu for elderly. Elderly people need to do activities that can keep them active, such as: calisthenics, cooking together, handcrafting, and so on. Research by Maryam, et al (2019) strengthened this by explaining that group support activities that had the same health problems (Self-Help Group) could increase elderly knowledge about hypertension.

The analysis showed that there was a significant correlation between the level of education and the level of knowledge on hypertension. Education will affect an individual's the way of thinking and the way of processing information. The higher the level of education, the easier it will be for someone to receive the information provided. However, people who have higher education tend to have hypertension than people who have poor education. This is because it is significantly related to lifestyle, stress, and nutrition intake. The latest education of the elderly does not prevent them from gaining knowledge (Zaenurrohmah & Rachmayanti, 2017). Elderly at this time can get information from any where; one of them is from electronic media, such as smartphone. Elderly people are better able in using such media rather than using computers (BPS, 2018).

CONCLUSION

Based on the results of this study, participants are desired to get more information on the description of hypertension, its signs and symptoms, causes, prevention, treatment, dietary management for hypertension, long-term effects, and traditional or alternative treatment for hypertension. There is a significant correlation between the level of education and the knowledge level of the elderly about the prevention and treatment of hypertension. There are still elderly people who do not take medicines as prescribed by health workers. It is expected that the Puskesmas (Community Health Center) can continue to improve its efforts to promote healthy lifestyle and prevent hypertension, especially for elderly, through home visits or creating attractive media for the elderly through the Android application.

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