

Perception regarding hypertension treatments and prevention of hypertension complications among individuals with hypertension

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Abstract

Purpose: This study aims to explore hypertension patients' perceptions about hypertension treatments and preventing hypertension complications. **Method:** This study was qualitative with a phenomenological approach. Informants of this study were selected using purposive sampling. This study was performed on 12 individuals with hypertension, three family members of an individual with hypertension, and one health worker. Data were collected using in-depth interviews and a semi-structured interview guide. This study's trustworthiness was achieved using triangulation data sources and member checking. **Results:** Informants in this study perceived that hypertension treatments consist of pharmacological and herbal treatments. Informants who stopped taking antihypertensive admitted that they did not feel the effectiveness of antihypertensive and felt more effective with herbal treatments. They were also afraid of the long-term side effects of drugs and thought that herbal treatments had no long-term side effects. The informants who felt the effectiveness of antihypertensive regularly continued the treatment and combined it with herbal treatment. The treatments carried out by the informant aim to prevent complications of hypertension; besides that, the informant also believes that a healthier lifestyle can prevent complications. **Conclusion:** The effectiveness of hypertension treatments that individuals feel can affect their' continuation of the treatments they did. The individuals who did not feel the benefits of treatment tend to take another treatment that is considered more effective. Their concern about hypertension complications is the reason for their adherence to both pharmacological and herbal treatment.

Keywords: complications of hypertension; perception; treatments of hypertension

INTRODUCTION

According to the World Health Organization, there were 1,13 billion people in the entire world who got hypertension in 2015 [1]. The death rate due to hypertension in Indonesia was high in 2018, with 427,218 deaths from 63,309,620 people who had hypertension. Special Region of Yogyakarta was ranked fourth as a province with the highest hypertension cases in Indonesia [2]. According to data from 2018, hypertension was the most common disease that appeared, with new cases in Yogyakarta [3]. The data shows that from 2017 to 2019, the number of hypertension sufferers increased in the Special Region Of Yogyakarta. Based on data from the primary healthcare surveillance report in Yogyakarta in 2017, there were 29,862 cases of hypertension; in 2018, it increased by 56,668 cases, and in 2019, it increased by 78,468 cases. The data also shows that hypertension ranks first out of ten diseases that often appear from 2017 to 2019 in outpatients based on primary healthcare surveillance reports. The same thing was found in the hospital surveillance report in 2017 in Yogyakarta; there were 4,472 cases of hypertension, which increased by 6124 cases in 2018, then increased in 2019 to 15,388 cases. It also shows that hypertension is ranked first in the top ten diseases that most often appear in hospital inpatients in Yogyakarta [3].

There were 32.3% of individuals diagnosed with hypertension who had not taken medicine regularly, and there were 13.3% who had not taken medicine at all. There was some reason why they did not take medicine, consisting of 59.8% of individuals with hypertension who felt quite well, 31.3% did not visit healthcare facilities regularly, 14.5% took traditional medicine, 12.5% took another treatment, 11.5% forgot to take the medicine, 8.1% unable to buy medicine, 4.5% felt side effects of medicine, 2% the medicine not available in healthcare facilities [2]. Adherence to hypertension treatment and lifestyle changes are actions that can determine the success of hypertension treatment to prevent hypertension complications. Most people with hypertension know the complications that may occur due to hypertension. Still, patients have a perception that their hypertension is not something that needs great attention, so this causes a lack of patient desire to control blood pressure, which includes medication and lifestyle changes [4].

Differences in perceptions about hypertension from the point of view of people with hypertension often cause hypertension to become a disease that is not easy to control because it can affect individual awareness.

Several factors influence individual awareness about hypertension and also hypertension complications, including the acceptance of hypertension sufferers to their condition, then the perception of hypertension sufferers about hypertension management, which is related to the ability of hypertension sufferers to control their blood pressure and prevent complications [4].

METHODS

This study was qualitative with a phenomenological approach. The informants were selected by purposive sampling with the following criteria: 1) the informant was a patient with hypertension diagnosed with primary hypertension, 2) The informant was more than 18 years old, and 3) did not suffer from complications. The number of informants involved was 12 people with hypertension, three family members, and one health worker. The data was collected using the in-depth interview method and a semi-structured interview guide. This study's trustworthiness was achieved using triangulation data sources and member checking. This study was conducted from August 2021 to October 2021 in 3 hamlets in the Gamping II Primary Health Care working area.

RESULTS

The results of this study are divided into three themes: the perception of individuals with hypertension at first diagnosis, the perception of individuals with hypertension about hypertension treatments, and the perception of individuals with hypertension about the prevention of hypertension complications.

Perception of individuals with hypertension at first diagnosed

Most of the informants felt vulnerable to their condition related to the susceptibility to complications such as stroke. The informants also felt that there were changes in their daily activities before and after being diagnosed with hypertension, such as being easily tired. The informant's ability to adapt when they were initially exposed to hypertension was supported by family support and information about hypertension obtained through the experience of the informant's relatives.

"...I was afraid when my blood pressure was high, people told me if I fall down I would get a stroke..." (AL, 70 yo, female)

"...It's just I feel like I'm slower in doing activities than before I got high blood pressure, I was agile before..." (R, 56 yo, female)

"Sometimes my child or my husband reminds me to take medicine. Also, my child helped me sell when she had free time" (SM, 47 yo, Female)

Perception of individuals with hypertension about hypertension treatments

Informants have the perception that hypertension treatment can be done with pharmacological and herbal treatments. Some informants routinely consume antihypertensives combined with herbs. Others were not regular or stopped taking antihypertensives and turned to herbal treatments. Informants stopped or did not regularly take antihypertensives because they were afraid of the long-term effects of antihypertensives, such as kidney failure. Some informants also did not feel the effectiveness of antihypertensives, so they chose to stop pharmacological treatment and switch to herbs. Other informants who felt the effectiveness of antihypertensives regularly continued their pharmacological treatment despite knowing the long-term side effects.

"according to the suggestion that I got, I take medicine regularly, and also I often made a herbal juice" (W, 62 yo, female)

"I have not taken medicine for two months, I only drink cucumber and celery juice" (AL, 70 yo, Female)

"....my young brother was regularly taken medicine everyday then he got kidney failure, I'm afraid"(R, 56 yo, female)

"I'm afraid for the side effect if I often take medicine [...] like I would get the others ill [...] like kidney failure" (WS, 56 yo, male)

Perception of individuals with hypertension about prevention of hypertension complications

Informants stated that their lifestyle changed to be healthier after being exposed to hypertension. The change in lifestyle consists of reducing salt consumption and high cholesterol foods and consuming more vegetables and fruit, and also the informants exercise. This lifestyle change was based on the fact that the informant did not want to be exposed to complications of hypertension. Some of the informants who stopped taking antihypertensives had an opinion that lifestyle changes could also help prevent complications, so even though they were no longer taking drugs, the informants continued to maintain their lifestyle. Some of the informants also thought that after being exposed to hypertension, the

informants tended to keep a positive mind and maintain a good mood to manage stress. The informants did this because they feared it would worsen their condition if they overthought.

"doing more exercise and I eat healthy food like tahu tempe, it's better" (S, 48 yo, male)

"...even though I'm not taking the medicine but the food that I eat is healthy food, it's ok, if my blood pressure is not high" (R, 56 yo, female)

"...the important thing is to keep going, keep eating healthy food, less of salt more of vegetables and exercise, keep trying to get medication, don't overthink, it will make us stress" (SM, 47 yo, female)

"...I like fishing, I try to take the time for fishing nearby for relaxing.." (S, 48 yo, male)

DISCUSSION

Perceived severity and perceived susceptibility that individuals with hypertension feel at the time of initial diagnosis will encourage a person to take various treatment measures to prevent complications [5]. People tend to comply with treatment when they believe their health condition is risky. When a person has a high perceived severity and susceptibility to their illness, it will encourage them to make self-care efforts to maintain their health condition [6]. However, this may change over time due to several factors, such as the experiences an individual feels during treatment, so that it can change an individual's perception. The individual's ability to adapt or accept the condition of their illness is influenced by their knowledge of the disease they were suffering from and social support from their family or closest relatives [7]. An individual's knowledge about a disease obtained from the experience of relatives and information obtained independently can influence individuals in carrying out health care for themselves [8].

Perceived benefits that individuals feel on the effectiveness of hypertension treatment are related to individuals' adherence to antihypertensive medicine. Individuals who perceived the efficacy of antihypertensive medications to affect their health positively are found to be more compliant with treatment [5]. The low adherence of hypertensive patients to the consumption of antihypertensive was influenced by the effectiveness of the medication perceived by individuals. Patients with hypertension did not feel better when taking antihypertensive, so they chose to stop treatment [9]. Non-adherence to treatment is also caused by alternative therapies such as herbal treatment. Individuals with hypertension in

the study admitted that they received information about herbal treatment from friends, family, and other relatives who recommended consuming herbal preparations. Individuals with hypertension feel that herbal treatment is safer and more effective than medical treatment [9].

Individuals who feel the side effects of pharmacological treatment tend to consider this an obstacle, so individuals also take herbal medicine, either in combination with pharmacological treatment or with a single treatment [10]. This is also based on the lack of individual knowledge regarding how antihypertensive drugs work, so individuals perceive this as an obstacle and tend to choose herbal treatment because they are considered to have no side effects. Individuals who have less knowledge about how antihypertensive drugs work and the benefits of antihypertensives obtained will be more likely to be disobedient or not to take antihypertensive drugs at all [11].

Hypertensive patients who prevent hypertension complications are based on perceived susceptibility; hypertension sufferers feel worried about the vulnerability of their health conditions. Patients with hypertension who have a high perceived susceptibility indicate that a person is more likely to make efforts to prevent complications of hypertension [6]. According to the informant, dietary changes that can avoid the risk of hypertension include consuming healthier foods such as vegetables and fruit, reducing consumption of coconut milk, reducing fried foods, and reducing salt consumption. A healthy diet is a diet that includes a minimum consumption of 400gr/day of fruit and vegetables, 180g/day of nuts, and a maximum of 2-3 times a week of poultry meat, while red meat can only be consumed 1-2 times a week [12]. The recommended amount of salt consumption for people with hypertension is <5g a day [13]. Reducing salt consumption in people with hypertension can lower blood pressure, so it can reduce the risk of complications of hypertension, such as kidney failure, and reduce the risk of other cardiovascular diseases [14]. According to the informant, activities that can prevent complications of hypertension include physical activity that provides light exercise, such as gymnastics, leisurely walking, and household chores. Physical activity can reduce the risk of developing cardiovascular disease in hypertensive patients. In carrying out physical activity, a person must also pay attention to the frequency, intensity, time, and type of physical activity [15]. In adults, physical activity should be carried out at least 150 minutes/week with moderate intensity or 75 minutes/week with heavy intensity [16]. According to the informant, maintaining a positive

mood and mind, including efforts to maintain a stable condition, to avoid complications of hypertension. According to the informant, blood pressure can increase when they think about their disease excessively, so the informant feels that as much as possible, they don't overthink about the impact of hypertension in the future but still focus on actions that can prevent complications of hypertension. Individuals with good self-efficacy tend to manage stress by continuously thinking positively about their condition, staying calm when there are problems, and diverting their minds to fun things without forgetting their obligation to change behavior to improve their health status [17].

CONCLUSION

Since the initial diagnosis of hypertension, the informants felt perceived susceptibility, thus determining the actions taken by the informant. This is not the only factor determining whether or not the informants adhere to hypertension treatment because the perceived benefit is also the informants' most dominant perception. Even though the informants feel vulnerable to their condition, when they do not think of the benefits of their actions, they will look for other actions that are considered more effective. The effectiveness of hypertension treatments that individuals think can affect individuals' proceeding in continuing the treatments they did. Their concern about hypertension complications is the reason for their adherence to both pharmacological and herbal medicine. Individuals' perception of the benefits of hypertension treatment is also influenced by individuals' knowledge of how drugs work and their benefits. It is necessary to provide education not only education related to hypertension and how to take medicine but also related to the benefits and workings of antihypertensive drugs themselves.

REFERENCES

1. WHO. Hypertension. 2015. Available from: <https://www.who.int/news-room/fact-sheets/detail/hypertension>
2. Badan Penelitian dan Pengembangan Kesehatan Kementerian Kesehatan RI. Riset Kesehatan Dasar (Riskesdas) tahun 2018. 2018. Available from: https://kesmas.kemkes.go.id/assets/upload/dir_519d41d8cd98f00/files/Hasil-riskesdas-2018_1274.pdf
3. Dinas Kesehatan Provinsi DIY. Profil Kesehatan Kabupaten Sleman 2018. Available from:

- <https://www.dinkes.jogjaprovo.go.id/download/download/27>
4. Rahman, A. R., Wang, J. G., Kwong, G. M., Morales, D. D., Sritara, P., Sukmawan, R., & all members of the Asian Cardiovascular Expert Forum Committee. Perception of hypertension management by patients and doctors in Asia: potential to improve blood pressure control. *Asia Pacific Family Medicine*. 2015;14(1): 2. doi: 10.1186/s12930-015-0018-3
 5. Al-Noumani, H., Wu, J. R., Barksdale, D., Sherwood, G., Alkhasawneh, E., & Knafl, G. Health beliefs and medication adherence in patients with hypertension: a systematic review of quantitative studies. *Patient Education and Counseling*. 2019;102(6):1045-1056. doi:10.1016/j.pec.2019.02.022
 6. Ma, Chunhua. An investigation of factors influencing self-care behaviors in young and middle-aged adults with hypertension based on a health belief model. *Heart & Lung*. 2018;47(2);136-141. doi: 10.1016/j.hrtlng.2017.12.001
 7. Angwenyi V, Aantjes C, Kajumi M, De Man J, Criel B, Bunders-Aelen J. Patients experiences of self-management and strategies for dealing with chronic conditions in rural Malawi. *PloS one*. 2018;13(7):e0199977.doi:10.1371/journal.pone.0199977
 8. Long E, Ponder M, Bernard S. Knowledge, attitudes, and beliefs related to hypertension and hyperlipidemia self-management among African-American men living in the southeastern United States. *Patient Education and Counseling*. 2017;100(5):1000-6.doi:10.1016/j.pec.2016.12.011
 9. Atinga, R. A., Yarney, L., & Gavu, N. M. Factors influencing long-term medication non-adherence among diabetes and hypertensive patients in Ghana: a qualitative investigation. *PloS one*. 2018;13(3):e0193995.doi:10.1371/journal.pone.0193995
 10. Devkota, S., Dhungana, R. R., Pandey, A. R., Bista, B., Panthi, S., Thakur, K. K., & Gajurel, R. M. Barriers to treatment and control of hypertension among hypertensive participants: a community-based cross-sectional mixed method study in municipalities of Kathmandu, Nepal. *Frontiers in Cardiovascular Medicine*. 2016;3:26. doi: 10.3389/fcvm.2016.00026
 11. Tan, C. S., Hassali, M. A., Neoh, C. F., & Saleem, F. A qualitative exploration of hypertensive patients' perception towards quality use of medication and hypertension management at the community level. *Pharmacy Practice (Granada)*. 2017;15(4). doi: 10.18549/PharmPract.2017.04.1074
 12. World Health Organization. *Healthy Diet*. 2019. https://applications.emro.who.int/docs/EMROPUB_2019_en_23536.pdf
 13. World Health Organization. 2014. *Salt Reduction and Iodine Fortification Strategies in Public Health*. <https://www.who.int/publications/i/item/978924150669>
 14. He, F. J., Tan, M., Ma, Y., & MacGregor, G. A. Salt reduction to prevent hypertension and cardiovascular disease: JACC state-of-the-art review. *Journal of the American College of Cardiology*. 2020;75(6):632-647. doi: 10.1016/j.jacc.2019.11.055
 15. Rhodes RE, Janssen I, Bredin SS, Warburton DE, Bauman A. Physical activity: Health impact, prevalence, correlates and interventions. *Psychology & Health*. 2017;32(8):942-975.doi:10.1080/08870446.2017.1325486
 16. World Health Organization (WHO). *Global Recommendations on Physical Activity for Health*. 2010. https://apps.who.int/iris/bitstream/handle/10665/44399/9789241599979_eng.pdf?sequence=1
 17. Gholamnejad H, Darvishpoor-Kakhki A, Ahmadi F, Rohani C. Self-actualization: self-care outcomes among elderly patients with hypertension. *Iranian Journal of Nursing and Midwifery Research*. 2019;24(3):206.doi:10.4103/ijnmr.IJNMR_95_18.

