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Knowledge of Hypertensive Patients Affects Blood Pressure Reduction

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ABSTRACT

Hypertension is a disease that is often referred to as the Silent Killer, high blood pressure which often does not cause symptoms, is referred to as hypertension when the blood pressure is more than 140/90 mmHg. Knowledge about how to lower blood pressure is very important for people with hypertension. However, several reviews and case reports presenting data on hypertension for lowering blood pressure provide different conclusions. Therefore, the authors are interested in systematically examining the factors that influence blood pressure increases. Articles were searched through the database from 2018 to 2022. Searches were obtained from PUBMED. The keywords used are "Hypertension and Health Knowledge, Attitudes, Practice and Cross Sectional". Search articles are filtered using Free full text and in English or Indonesian. Subjects were confirmed patients with hypertension over 18 years of age. The design in this study uses cross-sectional. Based on the results of the review, it was found that 6 articles met the inclusion criteria and estimated that hypertension sufferers in reducing blood pressure greatly influenced knowledge.

Keywords: *Hypertension, Knowledge, Cross Sectional*

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INTRODUCTION

Hypertension is generally defined as blood pressure above 140/90 mmHg at rest or while taking blood pressure medication (Egan dkk., 2019). Hypertension has long

been recognized as the most important risk factor for coronary heart disease, stroke, and kidney disease (Groopman dkk., 2019).

Hypertension is a major public health problem worldwide and one of the leading causes of cardiovascular disease (Chandrasekar dkk., 2020). Hypertension is a chronic disease that can be prevented and treated, but if left untreated, it can lead to serious life-threatening complications such as brain, heart, and kidney diseases, most of which cause disability.

The prevalence of hypertension in developing countries is estimated to be higher due to hypertension (31.2%) and poor blood pressure control (28.7%), suggesting that age, weight and heart disease are significant risk factors.

Hypertension is strongly influenced by predisposing factors such as diabetes, lipid abnormalities (Lippi dkk., 2020), obesity, hyperuricemia, metabolic syndrome, unhealthy lifestyle, age, gender, increased heart rate and heart disease (Slivnick & Lampert, 2019). High blood pressure can affect vital organs such as the brain, eyes, heart and kidneys.

It is clear that prevention of hypertension, early detection and control of blood pressure is recommended from early adulthood (Piva dkk., 2020). The level of knowledge about hypertension in hypertensive patients plays an important role in managing modifiable risk factors and lowering blood pressure (Jung dkk., 2020). Research shows that understanding blood pressure is associated with better blood pressure control, adherence to therapy, and decreased morbidity and mortality.

Assessment of blood pressure-related knowledge is essential in the treatment of hypertension (Carr & Rowe, 2020). Therefore, this systematic review provides evidence to clarify the relationship between blood pressure knowledge and blood pressure lowering efforts (Huang dkk., 2020). The results of this review can provide us with information so that people with high blood pressure can expand their knowledge to lower their blood pressure.

RESEARCH METHODOLOGY

This research is a systematic review that examines articles published since the last 4 years (2018-2022) (Huang dkk., 2020). The search was obtained by PUBMED database with keywords: Hypertension and Health Knowledge, Attitudes, Practice and Cross Sectional.

RESULT AND DISCUSSION

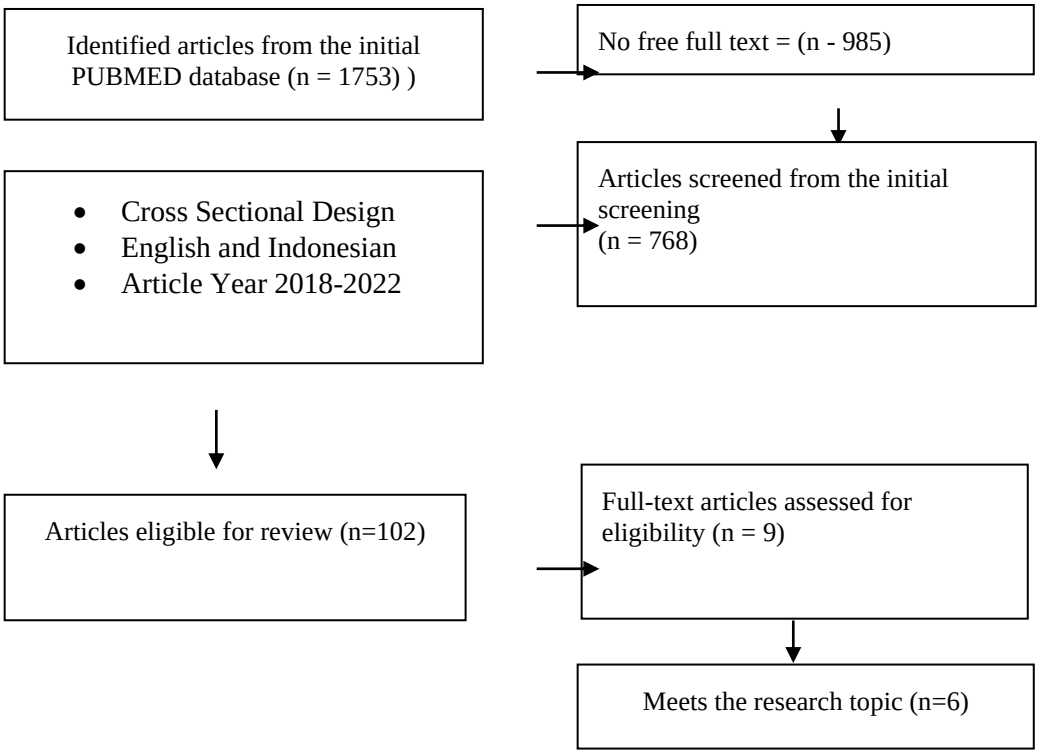
Articles were published in English or Indonesian (Adams & Walls, 2020). The search was filtered using free full text articles that can be downloaded for free (open access), using Cross Sectional design, the population is adults over 18 years of age who suffer from hypertension (Yao dkk., 2020). The risk factor is knowledge of blood pressure reduction efforts and the outcome measured is hypertension (Ren dkk., 2020). Assessment of knowledge of blood pressure reduction should be done using a questionnaire. Assessment of the outcome in the form of hypertension is carried out

using a blood pressure measuring instrument, namely a tensimeter (Sphygmomanometer).

EXCLUSION CRITERIA

Articles published in Chinese (Liu dkk., 2020), Arabic, Spanish, Japanese and French (Alatab dkk., 2020). Articles with randomized controlled trials, clinical trials, reviews and observations. Hypertensive patients with mental disorders, pregnant women, have complicating diseases such as stroke.

RESULTS



PRISMA flow diagram for article selection in a systematic review

A meta-analysis by showed that overall good knowledge of blood pressure associated with reduced blood pressure was 51.7% (95% CI = 46.3-56.8) (Kumar dkk., 2019). According to research this is also in line with the results showing that more than 75% of the study population had accurate blood pressure knowledge.

This is not in line with the results of research (Machaalani et al., 2022) which states that 74.85% of hypertensive patients have "limited" knowledge of hypertension (33.9% poor and 40.9% fair) and 25.15% of hypertensive patients state their knowledge level is "good" (Baabdullah dkk., 2019). This is also not in line with the results of research (Abdalla, 2021) which shows that 31.3% of respondents have good knowledge about hypertension.

The results of research (Chimrengwa & Naidoo, 2018) are also contradictory, because in general there is still little knowledge about risk factors, causes and awareness in people with high blood pressure. Most respondents (65%) thought that high blood pressure was caused by stress and only 17% knew the real cause of high blood pressure.

The results of the study also contradict the results that 79 respondents (46.7%) had good information and 90 respondents (53.3%) were poor about lowering blood pressure.

In the study most of the hypertensive patients were male, this study also examined the attitudes and behavior of hypertensive patients with the results based on this study it can be concluded that the decrease in blood pressure is not only due to the level of knowledge, but also the attitudes and behavior of hypertensive patients when controlling or lowering their blood pressure. Many people with hypertension have extensive knowledge (Alola dkk., 2019), but their attitudes and behaviors are inadequate, for example, patients know that smoking and alcohol are one of the factors that cause hypertension, but the attitudes of patients still smoke and consume alcohol.

This is in line with research which shows the results of the factor of hypertensive patients with female gender being more knowledgeable 3.79 (AOR = 3.79, 95% CI (1.55, 9.28)) than men. In this study gender, family history of hypertension, education, occupation and residence are factors associated with knowledge about hypertension. Women 3.79 (AOR = 3.79, 95% CI (1.55, 9.28)) had better information than men about lowering blood pressure. In the cross tabulation of gender and education level, women had a higher education level than men (Bojanic & Warnick, 2020). Those with higher education can have a better understanding and can easily obtain information (knowledge) (Saha dkk., 2020). Therefore, women's significant association with knowledge can be attributed to this fact. However, in the south of Iran, knowledge about hypertension and its treatment was higher in men (27.1%) than women (23.9%). Respondents with a family history of hypertension had 2.36 (AOR=2.36, 95% CI (1.42, 3.92)) more information (Korfiatis dkk., 2019). This observation is supported by research conducted in Armenia and China, according to which a high probability of obtaining information or knowledge about hypertension is found in a family history of hypertension. (Kassa Mekonnen et al., 2019; Motlagh Z et al., 2015)

This is also in accordance with research (Gong et al., 2020) that age, gender and education level have a significant effect on knowledge, attitudes and behavior regarding hypertension (Al-Ansi dkk., 2019). For example, it is easier for women to form healthy behaviors than men (Pierce dkk., 2020). There may be several explanations. First, it is easier for women to obtain knowledge or information about health and healthy lifestyle changes. For example, gender differences in fruit and vegetable consumption have been widely confirmed. In this study, the percentage of women who ate enough fresh fruit was higher at 48.2% compared to men (35.5%) (Hult dkk., 2019). Secondly, due to the influence of Chinese culture, smoking and alcohol consumption are more common and allowed by men, but not by women (Li dkk., 2021). At the same time, men may be more inclined to smoke and drink alcohol at social events, especially work-related events, so men smoke and drink alcohol more often than women (Pfefferbaum & North, 2020). Therefore, it is necessary to implement more targeted measures to promote healthy behaviors in men. For example, men should be taught to eat more fruits and vegetables. Smokers should be educated to limit smoking in public places and at home or even quit smoking.

However, this study is not in line with research (Maharjan et al., 2020) that the majority of hypertensive patients are 111 women (65.7%) and men (34.3%), only 14 active smokers (8.3%). In this study, hypertensive patients reported less physical activity (exercise) than previous findings (Guddad S. et al, 2012), patients reported not exercising due to lack of time due to household or age-related leg pain. This observation is supported by a study (Abdalla, 2021) with the results of men being more knowledgeable than women (p=0.021), the majority of hypertensive subjects in this study (54.5%) were aged 55-70 years. Hypertensive patients said they did not exercise almost every day because they were lazy and said it was not important. This finding is also supported by a study (Chimrengwa & Naidoo, 2018) that 64.5% of hypertensive patients were women, with an average age of 59 years, and 60% of them added salt to their food.

In three research results (Abdalla, 2021; Chimrengwa & Naidoo, 2018; Maharjan et al., 2020) it can be concluded that men have higher knowledge about hypertension than women, the factors that cause increased blood pressure because most women are elderly and have poor behavior such as not doing physical activity (exercising) and still using salt every meal. This is not in accordance with three research articles (Gong et al., 2020; Kassa Mekonnen et al., 2019; Machaalani et al., 2022) whose knowledge scores were higher in women than men.

Hypertension is defined as blood pressure above 140/90 mmHg. Hypertension has long been recognized as the most important risk factor for coronary heart disease, stroke and kidney disease. Despite many new pharmacological agents, most hypertensive patients in Sudan remain uncontrolled. One important and often underutilized form of treatment is lifestyle modification. These lifestyle modifications include making certain changes in the patient's lifestyle, especially limiting sodium-rich foods, losing weight, increasing physical activity, quitting smoking and reducing alcohol consumption. (Tusi, Merlin, & Vanchapo, 2023) Researchers believe that new approaches are needed to include patients diagnosed with hypertension and apply knowledge about therapeutic lifestyle in Sudan. (Abdalla, 2021)

The increasing incidence of hypertension is due to population aging, sedentary lifestyle, urbanization, lack of physical activity, obesity, excessive salt consumption, alcohol consumption and constant stress. (Hamidah, Karim, & Vanchapo, 2023) Hypertension can be treated with non-pharmacological and pharmacological agents. (Maharjan et al., 2020; Bollampally M. et al., 2016) Reduce the need or amount of hypertension medication and stop the increase in high blood pressure in non-hypertensive subjects. (Maharjan et al., 2020; Binu KM et al., 2017)

Non-pharmacological strategies to reduce the risk of hypertension and lower blood pressure include weight loss, not smoking, alcohol reduction, dietary supplements, blood pressure monitoring, Mediterranean diet, low sodium, low carbohydrate and high protein. (Machaalani et al., 2022)

The conclusion from reviewing 6 articles is that 2 articles state their research is in line based on the results of good / adequate hypertension knowledge, and 4 articles state

their research is not in line based on the results of knowledge that is still lacking or below average. In these 6 articles examining hypertensive patients with the aim of knowing the knowledge of hypertensive patients in an effort to reduce blood pressure. Significant or insignificant research results on the knowledge variable are related to other variables because they are interrelated and influence each other. Increased blood pressure apart from low knowledge, other contributing factors are inadequate attitudes and behavior or an unhealthy lifestyle. Therefore, people with hypertension must have extensive knowledge, apply a teraupetic lifestyle / healthy lifestyle and apply good attitudes and behaviors to prevent, control or reduce blood pressure.

CONCLUSION

Knowledge is essential to lower blood pressure. Attitudes and behaviors, awareness and management of hypertension are inadequate worldwide, increasing mortality and morbidity from uncontrolled hypertension. Young age, female gender and higher education are determinants of controlled blood pressure. The incidence of high blood pressure is higher in people with low education. Therefore, it can be concluded that knowledge, attitudes and appropriate behavioral or lifestyle changes related to hypertension are very important for people with hypertension who want to lower their blood pressure.

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