

Descriptive of Knowledge of Hypertension Preventive in Adolescents

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ABSTRACT

Hypertension is the world's leading cause of death and one of the diseases that trigger to other non-communicable diseases. There are several factors that influence the incidence of hypertension in adolescents, one of which is low knowledge about hypertension. Knowledge can influence the lifestyle of teenagers to be unhealthy. Individual actions or behaviors are greatly influenced by cognitive or knowledge. The aim of this study was to see the level of knowledge about hypertension and prevention of hypertension in adolescents. The population in this study were students of Universitas Teuku Umar, with a sample of 282 respondents. The data were collected using a nine-item hypertension knowledge questionnaire. The knowledge level was classified as follows: good (points average ≥ 18); sufficient (< 18 points). The results showed that the frequency of good and sufficient levels of knowledge about hypertension was 74.5% and 25.5%, respectively.

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Introduction

Hypertension is a health problem to watch out for because it can increase mortality and morbidity rates in the community (Sinnott et al., 2017).

Hypertension is a disorder of the blood circulation system which results in an increase in blood pressure above the normal value, or blood pressure $\geq 140/90$ mmHg. Hypertension is defined as an increase in systolic blood pressure of more than 140 mmHg and diastolic blood pressure of more than 90 mmHg above the normal limit (Ekaningrum, 2021).

There are 2 risk factors that come from hypertension, namely, risk factors that cannot be changed and risk factors that can be changed. Risk factors that cannot be changed are: age; gender, men have a higher risk of increasing blood pressure than women, after entering menopause, the prevalence of

hypertension in women rises, after the age of 65 due to hormonal factors in women the incidence of hypertension is higher than men; family history. Then there are modifiable risk factors, namely: smoking; not eating enough fruits and vegetables; excessive salt consumption; overweight or obesity; lack of physical activity; excessive alcohol consumption; dyslipidemia; a high-fat diet; and stress (Delfriana, 2022).

Several studies have shown that elevated blood pressure in childhood increases the risk of adult hypertension and metabolic syndrome. One study found that adolescents with high blood pressure developed hypertension at a rate of 7% per year. In addition, young patients with hypertension tend to experience faster vascular aging. The results of autopsy and imaging studies show that cardiovascular damage is related to increased blood pressure at a young age

(Flynn et al., 2017). There are several factors that influence the incidence of hypertension in adolescents, one of which is low knowledge about hypertension. Knowledge can influence the lifestyle of teenagers to be unhealthy. Individual actions or behavior are greatly influenced by cognitive or knowledge (Siswanto, Y et al., 2019). Early and first-level prevention efforts are needed to prevent adolescents from developing hypertension. Good knowledge regarding hypertension is important for adolescents so they can know how to prevent it properly and avoid risk factors (Panggaila et al., 2020). The aim of this study was to see the level of knowledge about hypertension and the prevention of hypertension in adolescents.

Method

This study is descriptive-analytical research with the design of a cross-sectional study. The population in this study were students of Universitas Teuku Umar, with a sample of 282 people. The research was conducted in November 2021 at Universitas Teuku Umar. Determining the category of knowledge level of respondents is done by calculating the average score and standard deviation so that the level of knowledge of respondents can then be grouped into 'good' and 'sufficient'. The data were collected using a nine-item hypertension knowledge questionnaire. The knowledge level was classified as follows: good (points average ≥ 18); sufficient (< 18 points). Research data were analyzed using the software SPSS. The analysis using the Chi-Square test.

Results

The questionnaire used consisted of nine questions that aimed to measure the level of knowledge possessed by Universitas Teuku Umar students regarding hypertension.

Table 1. Frequency Distribution of Respondent's Knowledge of Hypertension

Topic	Option			
	Correct		Incorrect	
	n	%	n	%
Smoking	96	34	186	66
Salt use	98	34.8	184	65.2
Unmanaged stress	113	40.1	169	59.9
Frequent consumption of packaged food	213	75.5	69	24.5

Topic	Option			
	Correct		Incorrect	
	n	%	n	%
Wrong sleep pattern	201	71.3	81	28.7
Overweight	205	72.7	77	27.3
Exercise and metabolism	61	21.6	221	14.5
Consumption of low fat food	241	85.5	41	14.5
Consumption of vegetable and fruit	256	90.8	26	9.2

Table 1 contains several questions regarding risk factors for the occurrence of hypertension. The first question regarding smoking only affects the lungs rather than the heart as much as 66% of respondents. While on the question whether the use of excess salt does not affect blood pressure, respondents answered as much as 65.2%. For questions about the stress that is not managed properly, it does not affect the occurrence of hypertension, which is equal to 59.9%. questions regarding frequent consumption of packaged food are at risk of hypertension, namely by 75.5% and knowledge about irregular sleep patterns can be a risk of hypertension, namely by 71.3%. Respondents were asked questions about whether being overweight could be a risk for hypertension, namely 72.7%. Questions about exercise can increase the body's metabolism and facilitate bleeding, so it is not good for the heart, namely 78.4%, a low-fat diet is good for controlling blood pressure, namely 85.5%, and consumption of vegetables and fruit reduces the risk of hypertension, namely 90.8%. Then the respondents' answers were categorized into 2, namely 'good' if they could answer questions above the average value and 'sufficient' if they answered questions with a value below the average.

Table 2. Frequency Distribution of Respondent's Knowledge level of Knowledge of Hypertension

Question	Category			
	Good		Sufficient	
	n	%	n	%
Knowledge level	210	74.5	72	25.5

Table 2 shows the respondents' knowledge of the risk factors for hypertension with a good categorization, namely 74.5% and 25.5% with sufficient knowledge.

Discussion

In people with hypertension, common symptoms of hypertension do not have a specific disease and do not know that others suffer from hypertension. For people with high blood pressure, treatment is important because diseases caused by other diseases that cause high blood pressure, such as those that prevent increased blood pressure, blood vessels, or headaches, especially when you wake up, immediately disappear. After some time, the face will look reddish, tired, lethargic, and impotent. Symptoms that may arise due to blood vessel disorders include: nosebleeds, blood in the urine (hematuria), visual disturbances due to retinal disorders, pain in the chest (angina pectoris), and weakness. Lethargy is often caused by ischemic disorders of the brain's blood vessels (Delfriana, 2022).

In table 1, we can see from the proposed questionnaire, the factors that cause hypertension, including knowledge about smoking habits, salt use, stress management, consumption of foods that trigger hypertension, sleep patterns, nutritional status, exercise and metabolism, and consumption patterns. In table 1, as many as 90.8% of respondents agreed with the statement that the consumption of vegetables and fruit reduces the risk of hypertension.

A good diet for people with hypertension is to reduce consumption of salt and fat, eat a little salt, eat lots of vegetables and fruit to avoid organs, brains, thick coconut milk, chicken skin, and drink lots of water (Aristi, 2020).

Based on table 2, the category of the respondent's level of knowledge about the factors that cause hypertension that can be changed is as much as 74.5% is good and the level of knowledge sufficient is 25.5%.

The results showed that most adolescents were still wrong in their answer to questions related to hypertension. Other studies show the same thing that knowledge about hypertension among adolescents is still not satisfactory (Grad et al, 2015).

With good knowledge of hypertension, it is more likely to prevent or reduce the severity of hypertension based on medical information and other knowledge. There is a positive influence of news or informational knowledge about hypertension-on-hypertension prevention measures in adolescents (Puspita et al., 2017)

Self-regulation is influenced by factors of knowledge, motivation, and self-discipline. Knowledge as a factor in adolescents can regulate themselves in preventing hypertension risk behavior. Some of the risk behaviors for hypertension in adolescents are smoking, salt consumption, physical activity, consumption of vegetables, consumption of junk food, and consumption of fatty foods. Knowledge related to the risk of hypertension is important for adolescents. Knowledge about hypertension can be obtained from anywhere, such as from the experiences of relatives or friends, social media, and others. Moreover, with the advancement of digital technology today, it is possible for teenagers to get information related to hypertension prevention to increase their knowledge (Wibrata et al., 2022 ; Siregar & Lubis, 2022).

The limitation of this study is that it only looks at the level of knowledge of adolescents regarding the causative factors of hypertension and has not included clinical data related to the blood pressure examination of respondents to identify the relationship between the level of knowledge and clinical data of these patients. This preliminary research is the first step in an effort to identify the level of knowledge possessed by hypertensive patients regarding the prevention of hypertension as early as possible. In future studies, it will be analyzed in relation to the attitudes and behaviors of adolescents for the prevention of hypertension and its correlation to the level of knowledge and various risk factors related to hypertension.

Conclusion

Based on the results of research, the frequency of good and sufficient levels of knowledge about hypertension was 74.5% and 25.5%, respectively.

It is necessary to have health education activities related to hypertension for adolescents. Collaboration with health workers to provide education in schools is very necessary to increase the knowledge of adolescents. In addition, an approach to increasing the role of the family in preventing hypertension in adolescents can also be carried out.

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