





Correlation Between Knowledge and Attitude with Practice Toward Hypertension in The Community of Sidikalang District in Dairi Regency

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ABSTRACT

Background: Hypertension contributes to 71% of deaths in the world and 85% of them are found in developing countries. In Indonesia, it is reported that 91.3 million people suffer from hypertension which contributes to 35% of deaths of the population in Indonesia. The high incidence of hypertension is known to be closely related to a lack of knowledge and attitudes toward hypertension. Therefore, it is necessary to know the relationship between knowledge, attitudes and practices toward hypertension.

Method: This study used a cross-sectional research design. The sample in this study was the people of Sidikalang District who met the inclusion and exclusion criteria. The data used is primary data obtained using a questionnaire instrument and using the consecutive method. **Results.** Test results Chi-Square showed that there was no relationship between age ($p>0.05$), gender ($p>0.05$), and education ($p>0.05$) on knowledge and attitudes towards hypertension. Age ($p=0.304$) and education ($p=0.150$) showed there was no relationship with practice toward hypertension, and gender (and $p=0.032$) showed there was a relationship with practice toward hypertension. The level of knowledge ($p=0.005$) and attitude ($p=0.000$) show that there is a relationship with practice toward hypertension.

Conclusion: There is a relationship between knowledge and attitude with practice toward hypertension in the Sidikalang District community.

Keyword: Hypertension, Knowledge, Attitude, Practice

ABSTRAK

Latar Belakang: Hipertensi berkontribusi terhadap 71% kematian di dunia dan 85% diantaranya ditemukan pada negara berkembang. Di Indonesia, dilaporkan 91,3 juta jiwa menderita hipertensi dan berkontribusi terhadap 35% kematian penduduk di Indonesia. Tingginya kejadian hipertensi diketahui berhubungan erat dengan pengetahuan dan sikap yang kurang terhadap tindakan pencegahan hipertensi. Maka dari itu, perlu diketahui hubungan tingkat pengetahuan dan sikap terhadap tindakan pencegahan hipertensi.

Metode: Penelitian ini menggunakan rancangan penelitian cross-sectional. Sampel pada penelitian ini adalah masyarakat Kecamatan Sidikalang yang telah memenuhi kriteria inklusi dan eklusi. Data yang digunakan merupakan data primer yang diperoleh menggunakan instrument kuesioner serta menggunakan metode konsekutif.

Hasil: Hasil uji Chi-Square menunjukkan tidak terdapat hubungan antara usia ($p>0,05$), jenis kelamin ($p>0,05$), dan pendidikan ($p>0,05$) terhadap tingkat



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pengetahuan dan sikap pencegahan hipertensi. Usia ($p=0,304$) dan pendidikan ($p=0,150$) menunjukkan tidak terdapat hubungan dengan tindakan pencegahan hipertensi, jenis kelamin ($p=0,032$) menunjukkan terdapat hubungan dengan tindakan pencegahan hipertensi. Tingkat pengetahuan ($p=0,005$) dan sikap ($p=0,000$) menunjukkan terdapat hubungan dengan tindakan pencegahan hipertensi.

Kesimpulan: Terdapat hubungan antara tindakan pencegahan dan sikap dengan tindakan pencegahan hipertensi pada masyarakat Kecamatan Sidikalang.

Kata Kunci: Hipertensi, Tingkat Pengetahuan, Sikap, Tindakan Pencegahan

1. Introduction

According to data from WHO in 2023, the world's population aged over 30 years will experience hypertension reaching 1.28 billion people (16%), however, only 42% of people with hypertension will be diagnosed and treated [1]. Survey results show that the incidence of hypertension in adults in Asia is 15-35%. The incidence of hypertension in Southeast Asia is 35%, while the incidence of hypertension is lower in the South Asian population group, namely 31.2% [2]. In 2017, Indonesia reported that 91.3 million people suffered from hypertension which contributed to 35% of deaths of the population in Indonesia due to complications of hypertension in the form of cardiovascular disease, stroke, chronic kidney disease, and other serious health problems. According to the 2018 Basic Health Research survey, the incidence of hypertension in Indonesia, which has a population of around 260 million people, increased by 34.1% compared to the 2013 Riskesdas of 25.8%. It is estimated that only a quarter of hypertension cases in Indonesia are diagnosed, and data shows that only 0.7% of patients diagnosed with hypertension are taking antihypertensive drugs [3].

The incidence of hypertension can be caused by non-modifiable risk factors and modifiable risk factors. Risk factors that cannot be modified are gender, age, and genetics. Meanwhile, risk factors that can be modified are obesity, lack of exercise, smoking habits, excessive salt consumption, drinking coffee, alcohol consumption, and stress [4]. Hypertension is one of the non-communicable diseases (NCDs) that contributes to 71% of deaths in the world and 85% of them are found in developing countries [5]. In developing countries, hypertension is the most common disease, and lack of public knowledge and awareness of hypertension and its complications such as cardiovascular disease, kidney disease, retinopathy, cognitive impairment, sexual dysfunction, and pregnancy complications is the main factor in the incidence of hypertension [6].

Lack of knowledge and attitudes towards the incidence of hypertension is closely related to the lack of practice toward hypertension. In Africa such as Zimbabwe and Ethiopia, the majority of the population has a lack of knowledge about hypertension and has an important role in preventing hypertension [5]-[6]. Research data conducted by Khoiry et.al. in [7] shows that Indonesian society still has low awareness of hypertension. Low public awareness of hypertension prevention will influence the level of knowledge and attitudes regarding the practice of hypertension.

Dairi Regency in North Sumatra Province has a hypertension incidence rate of 6.82% and high smoking behavior, excessive salt consumption, coffee consumption, and alcohol consumption are risk factors for the high incidence of hypertension in Sidikalang District, Dairi Regency [8].

Until now there is no data on whether the knowledge and attitudes of the people of Sidikalang District influence practice toward hypertension. Therefore, in our cross-sectional study, we aimed to assess the baseline KAP (knowledge, attitude, and practice) of hypertension in the community of Sidikalang District, Dairi Regency, and identify the factors affecting hypertension KAP scores in the community.

2. Methods

This study used a cross-sectional research design. This research was conducted in July – November 2023 on a population of Sidikalang District residents who met the inclusion and exclusion criteria. The sample size used in this research was 100 people from the Sidikalang District community and the sampling technique used the consecutive method. Data collection was carried out using primary data obtained directly from research subjects through filling out questionnaires by respondents which were sent directly by researchers via Google Form.

The measurement aspect of the research includes 10 questions regarding knowledge of hypertension, 10 questions regarding attitudes toward preventing hypertension, and 10 questions about practices toward preventing hypertension. The level of knowledge is good if the total correct answers are $\geq 75\%$, fair if 56-74%, and poor if $<55\%$. A good attitude if the total answer is 76%-100%, fair if 56%-75%, and poor if 0%-

55%. Preventive action is positive if the respondent's T value > T means, and negative if the respondent's T value < T mean.

The data that has been collected will be processed and analyzed using the SPSS program which will then be presented in the form of a distribution table. Using a confidence level of 90%, this research was carried out using univariate analysis and bivariate analysis.

This research was carried out after obtaining Ethical Clearance from the Research Ethics Commission, Faculty of Medicine, University of North, Sumatra, and is confidential and will not be used other than for research purposes.

3. Results

Table 1, it can be seen that the frequency of respondents' characteristics can be seen in terms of age, the number of teenagers aged 1 respondent (1%), adults aged 68 respondents (68%), pre-advanced aged 29 respondents (29%), and elderly age 2 respondents (2%). In terms of gender, it can be seen that the largest group is the male group, namely 56 respondents (56%), followed by the female group with 44 respondents (44%). Regarding educational characteristics, the number of respondents with secondary education was 66 respondents (66%), college 6 respondents (6%), university 27 respondents (27%), and master or equivalent 1 respondent (1%). In the body mass index section, it was found that 4 respondents (4%) were underweight, 45 respondents (45%) were normal weight, 15 respondents (15%) were overweight, 27 respondents (27%) were grade 1 obese, and 9 respondents (9%) with obesity grade 2. In the sports section, 60 respondents (60%) did not do sports and 40 respondents (40%) did sports. In the alcohol section, it was found that 7 respondents (7%) consumed alcohol and 93 respondents (93%) avoided alcohol consumption. In the coffee section, it was found that 42 respondents (42%) consumed coffee and 58 respondents (58%) avoided consuming coffee. In the fruit and vegetable section, it was found that 35 respondents (35%) rarely consumed fruit and vegetables and 65 respondents (65%) consumed fruit and vegetables. In the stress section, it was found that 26 respondents (26%) experienced stress and 74 respondents (74%) rarely experienced stress. In the salty food section, it was found that 52 respondents (52%) consumed salty food and 48 respondents (48%) avoided consuming salty food.

Table 1. Respondent Characteristics

Karakteristik	Kategori	n	%
Age	Teenagers	1	1
	Adults	68	68
	Pre advanced	29	29
	Elderly	2	2
Gender	Man	56	56
	Woman	44	44
Education	Secondary	66	66
	College	6	6
	University	27	27
	Master or equivalent	1	1
Body Mass Index	Underweight	4	4
	Normal	45	45
	Overweight	15	15
	Grade 1 Obesity	27	27
	Grade 2 Obesity	9	9
Sport	Not doing sports	60	60
	Exercising	40	40
Alcohol	Consuming alcohol	7	7
	Avoid alcohol consumption	93	93
Coffee	Drinking coffee	42	42
	Avoid consuming coffee	58	58
Fruits and Vegetables	Rarely eat fruit and vegetables	35	35
	Consume fruit and vegetables	65	65
Stress	Experiencing stress	26	26
	Rarely experiences stress	74	74
Salty Foods	Eating salty foods	52	52
	Avoid consuming salty foods	48	48

Based on Table 2, you can see the univariate analysis of the research. The knowledge section shows that most respondents have good knowledge with 76 responses (76%), 10 respondents (10%) had fair knowledge, and 14 respondents (14%) had poor knowledge. In the attitude section, it was found that 67 respondents (67%) had a good attitude, 30 respondents (30%) had a fair attitude, and 3 respondents (3%) had a poor attitude. In the preventive measures section, it was found that 47 respondents (47%) had positive behavior and 53 respondents (53%) had negative behavior.

Table 2. Respondent Knowledge, Attitude, and Practice Toward Hypertension

Characteristics	Category	n	%
Knowledge	Good	76	76
	Fair	10	10
	Poor	14	14
Attitude	Good	67	67
	Fair	30	30
	Poor	3	3
Practice	Positive	47	47
	Negative	53	53

Results of analysis with tests Chi-Square between age and level of knowledge shows that the p-value = 0.165 (p-value > 0.05) which indicates there is no relationship between age and level of knowledge. Results of analysis with tests Chi-Square secondly, between gender and level of knowledge, it shows that the p-value = 0.561 (p-value > 0.05) which indicates there is no relationship between gender and level of knowledge. Results of analysis with tests Chi-Square Lastly, between education and level of knowledge, it shows that the value of p-value = 0.202 (p-value > 0.05) which shows that there is no relationship between education and level of knowledge.

Table 3. Correlation Between Respondent Characteristics and Knowledge Toward Hypertension

Characteristics	Category	Knowledge						p-value
		Good		Fair		Poor		
		n	%	n	%	n	%	
Age	Teenagers	0	0.0	0	0.0	1	7.1	0.165
	Adults	52	68.4	8	80.0	8	57.1	
	Pre advanced	23	30.3	2	20.0	4	28.7	
	Elderly	1	1.3	0	0.0	1	7.1	
Gender	Man	44	57.9	4	40.0	8	57.1	0.561
	Woman	32	42.1	6	60.0	6	42.9	
Education	Secondary	46	60.5	6	60.0	14	100.0	0.202
	College	6	7.9	0	0.0	0	0.0	
	University	23	30.3	4	40.0	0	0.0	
	Master	1	1.3	0	0.0	0	0.0	

Results of analysis with tests Chi-Square between age and attitude shows that the p-value = 0.529 (p-value > 0.05) which indicates there is no relationship between age and attitude. Results of analysis with tests Chi-Square secondly, between gender and attitudes, it shows that the p-value = 0.555 (p-value > 0.05) which indicates there is no relationship between gender and attitudes. Results of analysis with tests Chi-Square Lastly, between education and attitude, it shows that the p-value = 0.272 (p-value > 0.05) which shows that there is no relationship between education and attitude.

Table 4. Correlation Between Respondent Characteristics and Attitude Toward Hypertension

Characteristics	Category	Attitude						p-value
		Good		Fair		Poor		
		n	%	n	%	n	%	
Age	Teenagers	0	0.0	1	3.3	0	0.0	0.529
	Adults	46	68.7	21	70.0	1	33.3	
	Pre advanced	20	29.8	7	23.4	2	66.7	
	Elderly	1	1.5	1	3.3	0	0.0	
Gender	Man	35	52.2	19	63.3	2	66.7	0.555
	Woman	32	47.8	11	36.7	1	33.3	
Education	Secondary	38	56.7	25	83.3	3	100.0	0.272
	College	6	8.9	0	0.0	0	0.0	
	University	22	32.8	5	16.7	0	0.0	
	Master	1	1.6	0	0.0	0	0.0	

Results of analysis with tests Chi-Square between age and practice shows that the p-value = 0.304 (p-value > 0.05) which indicates there is no relationship between age and practice. Results of analysis with tests Chi-Square secondly, between gender and practice, it shows that the p-value = 0.032 (p-value < 0.05) which shows that there is a relationship between gender and practice. Results of analysis with tests Chi-Square Lastly, between education and practice, it shows that the p-value = 0.150 (p-value > 0.05) which indicates there is no relationship between education and practice.

Table 5. Correlation Between Respondent Characteristics and Practice Toward Hypertension

Characteristics	Category	Practice				p-value
		Positive		Negative		
		n	%	n	%	
Age	Teenagers	0	0.0	1	1.9	0.304
	Adults	30	63.8	38	71.6	
	Pre advanced	15	31.9	14	13.5	
	Elderly	2	4.3	0	0.0	
Gender	Man	21	44.7	35	66.1	0.032
	Woman	26	55.3	18	33.9	
Education	Secondary	31	65.9	35	66.0	0.150
	College	5	10.6	1	2.9	
	University	10	21.3	17	32.1	
	Master	1	2.1	0	0.0	

Results of analysis with tests Chi-Square between knowledge and practice shows that the p-value = 0.005 (p-value < 0.05) which indicates there is a relationship between knowledge and practice. Results of analysis with tests Chi-Square secondly, between attitude and practice, it shows that the p-value = 0.000 (p-value < 0.05) which shows that there is a relationship between attitude and practice.

Table 6. Correlation Between Knowledge and Attitude with Practice Toward Hypertension

Characteristics	Category	Practice				p-value
		Positive		Negative		
		n	%	n	%	
Knowledge	Good	41	87.3	35	66.0	0.005
	Fair	5	10.6	5	9.5	
	Poor	1	2.1	13	24.5	
Attitude	Good	43	91.5	24	45.3	0.000
	Fair	4	8.5	26	49.0	
	Poor	0	0.0	3	5.7	

4. Discussion

The results of this study show that the majority of people in Sidikalang District have a good knowledge of hypertension, namely 76 (76%) respondents. This is by research conducted at the Tanggulangin Community Health Center, Sidoarjo Regency, East Java, which stated that the majority of people had a good knowledge

about hypertension, namely 60% of respondents [9]. This research is also in line with research conducted at the Peukan Bada Community Health Center, Aceh Besar Regency, which stated that 55.4% of respondents had good knowledge about hypertension]. This research is also supported by research by Bogale et al. [11] conducted in Eastern Ethiopia, that as many as 73% of respondents had a good knowledge of hypertension. The good knowledge about hypertension in the people of Sidikalang District may be because the majority of people have received formal education. Apart from that, various media such as television and social media that convey information and promote health knowledge to the public can also increase the knowledge of the Sidikalang District community regarding hypertension. Increasing an individual's awareness and knowledge regarding the most frequent risk factors and steps to prevent hypertension is an important factor in preventing hypertension [12].

The results of this study show that the majority of people have a good attitude toward hypertension, namely 67 respondents (67%). This is by research conducted in the Jatinangor District community which states that the majority of people have a good attitude toward hypertension, namely 60.83% of respondents [13]. This research is also in line with research conducted in Eastern Ethiopia in as many as 66.4% of respondents had a good attitude toward hypertension [11]. This research is also supported by research conducted in Lebanon stating that as many as 67.2% of respondents had a good attitude toward hypertension [14]. The good attitude toward hypertension in the people of Sidikalang District may be because people can easily obtain health information through various media which is useful in improving attitude toward hypertension. Apart from that, good knowledge in the community can also influence better attitudes towards preventing hypertension. A good attitude toward hypertension is a good step in preventing hypertension [12].

The results of this study show that the majority of people have negative practices toward hypertension, namely 53 respondents (53%). This is following research conducted in Cijayanti Village, Bogor Regency, which stated that 54% of respondents had negative practices toward hypertension [15]. This research is also in line with research conducted at the Dessie City Public Health Facility, Ethiopia, which found that 51% of respondents had negative practices toward hypertension [16]. The majority of negative practices toward hypertension in the Sidikalang District community were found in men. This can be caused by smoking habits and alcohol consumption which tend to be higher in men [17]. Therefore, it is important to carry out more appropriate interventions in health promotion in men, for example by educating them to consume more fruit and vegetables, limiting smoking habits in public places and at home or even quitting smoking, and limiting alcohol consumption [18].

The results of this study show that there is a relationship between knowledge (p -value = 0.005) and attitude (p -value = 0.000) with practice toward hypertension. This is following research conducted in Semper Barat Subdistrict, North Jakarta, which states that there is a relationship between knowledge and attitude with practice toward hypertension [19]. This research is also in line with research conducted in Lebanon stating that there is a relationship between knowledge and attitude with practice toward hypertension [14]. The results of this study explain that apart from knowledge, good attitudes also influence better practice toward hypertension. For example, someone who knows that the habit of consuming alcohol is a risk factor for hypertension will stop consuming alcohol, whereas someone who thinks that alcohol consumption is not a risk factor for hypertension will continue to consume alcohol. Therefore, it is important to provide better health education and promotion to the community, so that the knowledge and attitude with practice toward hypertension in the community can be better [20].

5. Conclusions

This study revealed that in the Community of Sidikalang District, Dairi Regency had good knowledge and attitude but practice level was poor. On the other hand, there is a relationship between the knowledge and attitude of respondents with practice toward hypertension in the Sidikalang District community. Therefore, it is important to provide better health education and promotion to the community, so that the knowledge and attitude with practice toward hypertension in the community can be better.

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