Assessment of Knowledge, Attitude, and Practice (KAP) towards Hypertension in the Elderlies

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ABSTRACT

Introduction: The role of knowledge, attitude, and practice (KAP) in hypertension is crucial in controlling prevalence and preventing long-term complications against cardiovascular diseases. **Method**: Cross-sectional study on the elderlies with hypertension in Wijayakusuma Geriatric Outpatient Main Clinic, Bogor using valid KAP questionnaire. **Results**: The sample was 100 elderly hypertensive patients, 33% were male and 67% were female with an average of 67.43+5.13 years of age. As many as 75% of patients with controlled hypertension, 68% with obesity, 56% with hypertension less than 5 years, 54% had a family history of hypertension, and 2% had a history of smoking. The comorbidities were diabetes (40%), congestive heart disease (15%), and stroke (12%). The average knowledge is 81.88+16.8% (very good), the average attitude is 67.33+25.06% (good), and practice average 95+11.79% (very good). Knowledge is associated with education level (p=0.008) and hypertension duration (p=0.05). Attitudes are associated with controlled hypertension (p=0.008), whereas practice is related to age < 70 years (p=0.05). There is a relationship between knowledge and attitude (p=0.029). **Conclusion**: The role of KAP on hypertension in the elderly with hypertension are adequate, but can be improved.

Keywords: Attitude, elderly, hypertension, knowledge, practice

ABSTRAK

Pendahuluan: Peran pengetahuan, sikap, dan perilaku (PSP) pada hipertensi penting untuk mengontrol prevalensi dan mencegah komplikasi jangka panjang. **Metode**: Studi *cross-sectional* menggunakan kuesioner yang *valid* terkait PSP pada pasien lanjut usia (lansia) hipertensi di poliklinik Klinik Utama Geriatri Wijayakusuma, Bogor. **Hasil**: Didapatkan 100 orang pasien terdiri dari 33% laki-laki dan 67% perempuan dengan rerata umur 67,43±5,13 tahun. Sebanyak 75% pasien dengan hipertensi terkontrol, 68% dengan obesitas, 56% dengan hipertensi di bawah 5 tahun, 54% memiliki riwayat hipertensi pada keluarga, dan 2% dengan riwayat merokok. Komorbid adalah diabetes (40%), penyakit jantung kongestif (15%), dan *stroke* (12%). Rerata pengetahuan adalah 81,88±16,8% (sangat baik), rerata sikap adalah 67,33±25,06% (baik), dan rerata perilaku adalah 95±11,79% (sangat baik). Pengetahuan berkaitan dengan tingkat pendidikan (p=0,008) dan durasi hipertensi (p=0,05). Sikap berkaitan dengan hipertensi terkontrol (p=0,008) dan terkait pada kelompok usia ≤ 70 tahun (p=0,05). Terdapat hubungan antara pengetahuan dan sikap (p=0,029). **Simpulan:** Peran PSP terkait hipertensi pada lansia sudah adekuat tetapi dapat ditingkatkan. **Rahmadia Kusumamardhika, Anis Puspita Utami, Hendro Darmawan. Penilaian Pengetahuan, Sikap, dan Perilaku (PSP) Pasien Hipertensi Usia Lanjut**

Kata Kunci: Perilaku, lanjut usia, hipertensi, pengetahuan, sikap

Introduction

Hypertension or high blood pressure is defined as 130 mm Hg or higher for the systolic blood pressure measurement, or 80 or higher for the diastolic blood pressure measurement.[1] Globally, hypertension caused 10.4 million of deaths annually and is a risk factor for the world's leading cause of death; heart disease.[2] Nearly half of adults in the United States of America are diagnosed with hypertension (47% or 116 million).[3] According to WHO, 63.309.620 people in Indonesia are diagnosed with hypertension. In 2018, hypertension prevalence was 34,1%, increasing by 8.3% in five years.

Hypertension prevalence among elderlies is still high due to inadequate hypertension control.[4] It was estimated that only 30% of hypertension cases are diagnosed, leaving the remaining 70% of cases undiagnosed.[5] As a chronic, non-communicable disease, the goals in treating high blood pressure are to control hypertension and to prevent complications.[6] Knowledge, attitude, and practices (KAP) play a principal role in controlling prevalence and preventing long-term complication of hypertension.[7]

Purpose

To measure the role of KAP in hypertension control including factors that influence KAP in elderly hypertension patients at outpatient department in Geriatric Main Clinic Wijayakusuma (KUGWK), Bogor, Indonesia.

Methods

A cross-sectional study was conducted

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Table 1. Knowledge, attitude, and practices questionnaire.

	Knowledge Questions		Yes	No
1		I have high blood pressure (hypertension)	1	0
2		Untreated high blood pressure can pose danger to the kidney, brain, eyes, and heart	1	0
3		Blood pressure can rise without having any warning symptoms	1	0
4		I know what the normal blood pressure should be	1	0
5		I know at least one treatment drug for my hypertension	1	0
6		I know what my target blood pressure is	1	0
7		Hypertension is treated for life	1	0
8		High salt and alcohol intake, smoking, and lack of exercise can increase blood pressure	1	0
	Attitude Questions		Yes	No
1		I believe hypertension affects only the rich	0	1
2		I believe hypertension affects only those who think a lot	0	1
3		I believe hypertension is a spiritual disease	0	1
	Practice Questions		Yes	No
1		I do regular self-checks on my blood pressure at least once a week	1	0
2		I eat less fatty foods and more fruits and vegetables	1	0
3		I keep appointments with my doctor always	1	0
4		I take my drugs as I am told to	1	0

Table 2. Scoring guideline KAP/

Questions	Correct Answer (1 point)	Wrong Answer (0 point)
Knowledge	Yes	No
Attitude	No	Yes
Practice	Yes	No

Table 3. Socio-demographic characteristics (n = 100).

	Frequency	%
Age (year)		
60 - 70	75	75%
> 70	25	25%
Sex		
Male	33	33%
Female	67	67%
Occupation		
Employed (Government or Private)	12	12%
Unemployed	46	46%
Retired	42	42%
Marital		
Single	2	2%
Married	68	68%
Divorced	1	1%
Widow/widower	29	29%
Education		
None	1	1%
Elementary	25	25%
Middle	19	19%
High	34	34%
University	21	21%

in KUGWK Clinic in June – July 2021. The sample size is 100 elderly patients with hypertension and were recruited with a purposive sampling method. Informed consent was obtained. Inclusion criteria are elderly (≥60 years-old) outpatient clinic patients diagnosed with hypertension. The exclusion criterion is communication difficulty.

The sample size is calculated as $n = (Z_{1-\alpha/2})^2 . pq / d^2$: $\alpha = 5\%$, prevalence of hypertension based on Riskesdas 2018[5] = 34.1% and precision = 10%. The calculated sample size is 87 respondents and extended to 100 respondents.

The data collected are socio-demographic data: age, sex, and education. The pre-tested and reliable questionnaire consisted of 8 knowledge questions, 3 attitude questions, and 4 practice questions. Questionnaires are taken from Aghoja, *et al.*[8] Validity and reliability tests have been done on 40 elderlies and all questionnaires are valid and reliable. Every correct and wrong answer is given a 1 and 0 score, respectively. The scoring guideline is in the **Table 1**.

The total score is divided into categories: weak (0<score≤25), moderate (25<score≤50), good (50<score≤75), and very good (75<score≤100) according to Aghoja, *et al*, criteria.[8] Significancy is defined as a p-value <0.05.

	Frequency	%
Smoking		
Yes	2	2%
Occasionally	3	3%
No	95	95%
Alcohol		
Yes	0	0%
No	100	100%
Family History of Hypertension		
Yes	54	54%
No	42	42%
Not sure	4	4%
Duration of Hypertension (year)		
0 – < 5	56	56%
5 – 10	25	25%
More than 10	17	17%
Not sure	2	2%

Table 4. Comorbidities (n=100).

Comorbid	Frequency	Percent
Diabetes Mellitus	40	40
CAD	15	15
Stroke	12	12
Atrial Fibrillation	1	1
Asma	1	1
CKD	1	1

Table 5. Knowledge, attitude, and practice toward hypertension.

	KNOWLEDGE ITEMS	NO Freq (%)	YES Freq (%)
1	I have high blood pressure (hypertension)	1(1)	99(99)
2	Untreated high blood pressure can pose danger to the kidney, brain, eyes, and heart	7(7)	93(93)
3	Blood pressure can rise without having any warning symptoms	52(52)	48(48)
4	I know what the normal blood pressure should be	25(25)	75(75)
5	I know at least one treatment drug for my hypertension	7(7)	93(93)
6	I know what my target blood pressure is	23(23)	77(77)
7	Hypertension is treated for life	26(26)	74(74)
8	High salt and alcohol intake, smoking, and lack of exercise can increase blood pressure	4(4)	96(96)
Right Answer		YES	
Mean		81.88 + 16.8 %	

	ATTITUDE ITEMS	NO Freq (%)	YES Freq (%)
1	I believe hypertension affects only the rich	98(98)	2(2)
2	I believe hypertension affects only those who think a lot	37(37)	63(63)
3	I believe hypertension is a spiritual disease	67(67)	33(33)
Right Answer		NO	
Mean		67.33 + 25.06 %	

Results

The 100 elderly respondents consist of 33% men and 67% women, with an age average of 67.43±5.13 years with 75% in 60-70 years category. Most respondents are female (67%), unemployed (46%), married (68%), graduated from high school (34%), non-smoker (95%), with a family history of hypertension (54%), duration of hypertension less than 5 years (56%), obese (68%), and have controlled hypertension (75%). Most comorbidities are type-2 diabetes mellitus (40%), followed by coronary artery disease (15%), and stroke (12%).

The mean or average knowledge is 81.88±16.8% (very good); 48% of respondents knew that hypertension could be asymptomatic. The mean attitude is 67.33±25.06% (good). Only 37% of respondents believed hypertension will only occur in people who are worried a lot/ stressed. The practice results were 95±11.79% (very good). Level of education and duration of hypertension are significantly related to knowledge (p=0.008 and p=0.05 respectively). Controlled hypertension is significantly related to attitude (p=0.008), and age is significantly related to practice (p=0.05). Simple regression test resulted in significant correlation between knowledge and attitude (p=0.029) with the equation : Knowledge = 71.99 + 0.147*Attitude

Discussion

This research showed that the knowledge and practices are very good, whereas the attitude is good **(Table 6)**. Regarding knowledge, 52% of respondents still thought that no symptoms mean no hypertension. Regarding attitude, 63% of respondents still thought that hypertension will only occur in people who think a lot. A total of 4% of respondents were in weak to moderate knowledge, 25% of respondents had weak to moderate category in a attitude, and 3% of respondents were in a moderate category in practices **(Table 5)**.

These results showed that there was still room for improvements in KAP practice toward hypertension in elderly, as only 75% of respondents were already controlled. Education level is related to knowledge. Patients with higher education show better knowledge compared to patients with lower education. High attitude had an effect on controlled blood pressure, and aged 60 -≤70-years-old patients have better practice compared to patients with age above 70 years **(Table 7)**.

	PRACTICE ITEMS	NO Freq (%)	YES Freq (%)
1	I do regular self-checks on my blood pressure at least once a week	2(2)	98(98)
2	I eat less fatty foods and more fruits and vegetables	11(11)	89(89)
3	I keep appointments with my doctor always	2(2)	98(98)
4	I take my drugs as I am told to	5(5)	95(95)
Right Answer		YES	
Mean		95 + 11.79 %	

Table 6. Results

Knowledge		
Mean	Very Good	81.88±16.8%
Attitude		
Mean	Good	67.33±25.06%
Practice		
Mean	Very Good	95±11.79%

Table 7. One – Way Anova analysis

	Variables	Test Statistic/F	P-Value
Knowledge	Education	3.666	0.008
Attitude	Duration of Hypertension	2.671	0.052
	Controlled Blood Pressure	7.247	0.008
Practice	Age	3.955	0.050

KAP research in 330 outpatient respondents in Central Hospital, Nigeria, showed that age, occupation, marital status, and duration of hypertension were significantly related to KAP ($p<0.05$). The older respondents showed higher knowledge and attitude compared to younger respondents, whereas practices in older respondents were lower.[8] KAP research in 90 respondents in Buchi Clinic, Zambia, showed a good average score for knowledge and practice. There was no significant relation between age (including elderly patients) and practice. There was a significant relationship between knowledge and practice (p=0.023).[9] Physical, mental, cognitive, and spiritual functions are needed through promotive and preventive efforts.[10] Research on primary health care doctors and nurses in Dammam, Saudi Arabia showed poor knowledge, with better attitude and practices; no difference between doctors and nurses. Knowledge improvement through a comprehensive training program was required.[11] A research in 144 cases with aged ≥55 years in the outpatient department of the sub-district Health Promoting Hospital in Thailand, one of the primary care sectors showed high knowledge, neutral attitude, and low practices. The effort to improve KAP was through adequate information, education, and communication with printed and audio-visual media.[12]

Conclusion

The role of knowledge, attitude, and practices towards hypertension in the elderly with hypertension are adequate, but still need further improvements.

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