

Relationship Between Smoking And Stress Behavior Related To Hypertension In Men Aged 35-45 Years In Cihampelas Health Center

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Abstract: Hypertension cases in West Bandung District, especially in the work area of Cihampelas Public Health Center in 2018 in the period of January to March reach 575 cases. Based on hypertension data, there are 82 hypertension cases that are engaged in male patients in aged 35-45 years. The purpose of this study is to determine the relationship between smoking and stress behavior in hypertension cases in men aged 35-45 years at the Cihampelas Health Center. The research design in this study was an analytical survey research with cross sectional method, meaning that each research subject was only observed once and measurements were taken on the character status or subject variables at the time of examination. The method used in this study is a standardized questionnaire. The independent variables of this study are smoking and stress behavior and the dependent variable of this study is hypertension. The population in this study is 82 male respondents aged 35-45 years and the sample used is 45 male respondents aged 35-45 years who fulfilled the requirements. The sampling method used is non probability sampling using the Slovin formula. Based on the results of this study, it is known that: the p value of smoking behavior = $0.042 \leq \alpha$ (0.05) and the p value of stress behavior = $0.014 \leq \alpha$ (0.05). So, it can be concluded that there is a relationship between smoking and stress behavior in hypertension cases in men aged 35-45 years at Cihampelas Health Center.

Keywords: cross sectional, smoking behavior, stress, hypertension, men aged 35-45 years.

1 INTRODUCTION

Hypertension is the most common condition in primary care. Hypertension according to the World Health Organization (WHO) is a condition where blood vessels have high blood pressure (systolic blood pressure ≥ 140 mmHg or diastolic blood pressure ≥ 90 mmHg) that persists. Blood pressure is the power of the blood to fight the pressure of the artery wall when the blood is pumped by the heart throughout the body. The higher the blood pressure, the harder the heart works (WHO, 2013).

Hypertension is a public health problem. One risk due to hypertension is the occurrence of heart disease. Hypertension often does not show symptoms so it is not realized after causing organ disorders such as heart function disorders and strokes. Not infrequently hypertension is found accidentally at the time of a health check or comes with another complaint (MOH 2012).

Hypertension is a degenerative disease. Degenerative disease is a disease that causes damage or destruction of tissue or organs. The process of this damage can be caused by age or because of an unhealthy lifestyle. Generally blood pressure increases slowly with increasing age, the risk for hypertensive patients at the age of > 55 years. Hypertension is often referred to as the silent killer, because often people with hypertension for years without feeling something disturbed or symptomatic. Unconsciously sufferers experience complications in vital organs such as the heart, brain or kidney. Symptoms due to hypertension such as dizziness, vision problems, and headaches. (Triyanto, 2014).

In people over 50 years, systolic blood pressure greater than 140 mmHg is more at risk of cardiovascular disease when compared with diastolic blood pressure. However, in 2008 there was a shift in the age of hypertensive patients around 40% of adults worldwide aged ≥ 30 years were

diagnosed with hypertension. At that age the incidence of hypertension increased from around 600 million in 1980 to 1 billion in 2008 (WHO, 2013).

According to the World Health Organization (WHO) the prevalence of hypertension in the world in 2013 for the population aged ≥ 40 years reached 1 billion people, the highest number was in Africa (46%) while the lowest prevalence was in America (35%). The researchers estimate that hypertension is almost 9.4 million deaths from cardiovascular disease each year. In general, the death rate from cardiovascular disease is around 17 million per year, almost one third of the total, of which 9.4 million deaths each year are due to complications from hypertension. About 40% of adult men and women experience hypertension, which is responsible for at least 45% of deaths due to heart disease and 51% of deaths from stroke (WHO, 2013). In America it is known that the prevalence of hypertension at ≥ 60 years is 65%, population awareness of hypertension is 86.1%, treatment for hypertension is 82.2%, and controlled hypertension is 50.5%, American Heart Association (AHA, 2012).

According to the National basic health survey the prevalence of hypertension in Indonesia in the age group 15-24 years is 8.7% in the age group 25-34 years is 14.7%, age group 35 - 44 years 24.8% aged 45 - 54 years 35,6%, age 55 - 64 years 45.9% for ages 65 - 74 years 57.6% while more than 75 years is 63.8%, with a high prevalence of unconscious hypertension the amount can be even higher. This occurs because hypertension and its complications are far fewer than those with no symptoms. (Widjaja.dkk 2013) from these data it can be seen that the prevalence in the late adult group (35-45) is quite high. Based on the analysis of hypertension, it was found that the national prevalence was (6.0% men and 4.7% women), rural (5.6%) higher than urban (5.1%) (Rikesdas, 2013).

In Indonesia there is an increase in the prevalence of

hypertension. Overall the prevalence of hypertension in Indonesia in 2013 was 26.5% (Risksdas, 2013). The prevalence of hypertension in West Java in 2014 was 29.4%. (Data and Information Center of the Indonesian Ministry of Health, 2014)

Many factors influence the occurrence of hypertension, namely, obesity, stress, smoking habits and alcohol consumption, poor lifestyle, rarely exercise and an unhealthy environment can increase hypertension (Herwati, 2014).

According to Gunawan (2001), one of the causes of increased blood pressure in hypertensive patients is stress. Stress is an unpleasant physical and psychological pressure, stress can stimulate the adrenal hormone glands and stimulate the heart to beat faster and stronger, so that blood pressure will increase. The high incidence of stress in Indonesia is also the reason why stress should be prioritized because in 2010 there were around 10% of the total Indonesian population experiencing mental or stress disorders. This high level of stress is generally caused by economic pressure or poverty. (MOH, 2010 in Adientya & Handayani, 2012).

Indonesia is a country with a high level of cigarette use. In 2009, Indonesia was ranked 4th in the world with 260,800 cigarettes (4%) (Michael Eriksen, 2012). Meanwhile for the number of smokers as many as 140 million smokers (WHO, 2008). Whereas in Asia, Indonesia ranks second largest after Cambodia with a percentage of male smokers: Cambodia 54%, Indonesia 53%, Vietnam 50%, Malaysia 49%, and Thailand 39%. (Hilyana, 2013). Like smokers in West Java province, the prevalence of smokers every day is quite high. Smokers every day in West Java province range from 30.9% (FETA, 2010). Nationally the prevalence of current smokers is 34.7% (West Java Health Profile 2012).

The mechanism of smoking is influenced by the number of cigarettes smoked, the type of cigarette smoked, the way smoking is smoked, and the length of cigarettes smoked. From the number of cigarettes smoked can cause vasoconstriction of blood vessels to increase. Smoking a cigarette every day will increase the systolic pressure of 10-25 mmHg and increase heart rate 5-20 times per minute. Sucking a cigarette will have a big effect on increasing blood pressure. This is due to harmful substances contained in cigarettes. These substances cause blood pressure to increase and the heart rate to accelerate, besides that it can also stimulate cancer and various other diseases such as narrowing of the arteries, high blood pressure, heart, lungs, and bronchitis (Anitasari, 2011). One of the habits of today's society that can be found in almost every community is smoking behavior. Cigarettes are not new and unfamiliar among the people. Both men and women, young and old alike. Smoking people are easy to find, such as at home, office cafes, public places, in

The number of smokers in the world reaches 2.8 billion people, where every year there are 5 million people who die from diseases caused by smoking (WHO, 2015). According to Peto et al (2014, in daughter 2016) prevalence of cigarettes in adults aged ≥ 35 years is men 63.1% and women 4.5%. This is one of the biggest threats to health that can cause smoking deaths from 5 million people in 2010 and will be 10 million in the next few years. In 2007 it reached 34.2 (Risksdas, 2007), then in 2010 it increased again to 34.7 (Risksdas, 2010). From the results of research by Yessy Nur Handayani (2013) on hypertension in oil and gas company X workers in East Kalimantan, Indonesia showed that the prevalence of hypertension was influenced by age and body mass index (BMI). The most dominant factor associated with hypertension is age, from this study all hypertensive patients have more than 40 years of age. This is because they tend to have smoking and stress habits compared to respondents who have less than 40 years of age.

2 METHOD

The design of this research is analytical survey research with cross sectional method, which is a study to study the dynamics of correlation between risk factors and effects, by approaching, observing or collecting data at one time. This means that each research subject is only observed once and the measurements are made on the character status or subject variable at the time of examination (Notoatmodjo, 2010).

3 RESULT AND DISCUSSION

a. Univariate Analysis

Univariate analysis in this study was conducted to describe the smoking behavior, stress events, and the incidence of hypertension in men aged 35-45 years at the Cihampelas Health Center.

Distribution of smoking behavior in men aged 35-45 years at the Cihampelas Health Center.

Smoking Behavior	Result	
	Frequency	Percentage (%)
Light	35	77,8
Moderate	8	17,8
Heavy	2	4,4
Total	45	100

Based on the results from the table, it is known that the respondents in the Cihampelas Health Center who smoked with the normal category were 0 (0%) who smoked in the mild category as many as 35 (77.8%) who smoked with the moderate category 2 (17.8%) smoked with heavy category 2 (4.4%) who smoked with a very heavy category of 0 (0%).

Distribution of the incidence of stress in men aged 35-45 years at the Cihampelas Health Center.

Incident of stress	Result	
	Frequency	Percentage (%)
Normal	2	4,4
Mild	10	22,2

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vehicles, even at editorial schools plus (2010, in Sari 2011)

Based on the results from the table, it is known that respondents in the Cihampelas Health Center experienced stress events with a normal category of 2 (4.4%) who experienced stress with a mild category of 10 (22.2%) experiencing stress with a moderate category of 18 (40.0%) those who experienced stress with a severe category of 11 (24.4%) who experienced stress in the very heavy category 4 (8.9%).

Distribution of the incidence of hypertension in men aged 35-45 years at the Cihampelas Health Center.

Incident of hypertension	Result	
	frequency	Percentage (%)
Mild Hypertension	21	46,7
Moderate Hypertension	18	40,0
Severe Hypertension	6	13,3
Total	45	100

Based on the results from the table, it is known that respondents in Cihampelas Health Center who experienced hypertension with mild category 21 (46.7%) who experienced hypertension with a moderate category of 18 (40.0%) who experienced hypertension with a severe category 6 (13.3%) who experience hypertension in the category of maligma 0 (0%).

b. Bivariate analysis

Bivariate analysis was carried out on two variables that allegedly related or correlated with how to do data processing.

Bivariate analysis in this study was conducted to determine the relationship of smoking behavior with the incidence of hypertension in men aged 35-45 years in Cihampelas Health Center and the relationship of stress to the incidence of hypertension in men aged 35-45 years at the Cihampelas Health Center.

Based on the results from table, it can be seen that the relationship between smoking behavior and the incidence of hypertension in men aged 35-44 in the Cihampelas Health Center, it is known that 12 respondents had mild smoking behavior and the incidence of mild hypertension, 17 respondents had mild smoking behavior and the incidence of hypertension moderate, 6 respondents had mild smoking behavior and severe hypertension. Next, it is known that 7 respondents have moderate smoking behavior and mild hypertension, 1 respondent has moderate smoking behavior and the incidence of moderate hypertension. Furthermore, 2 respondents had severe smoking behavior and mild hypertension.

Based on the results of the chi square test conducted in this study, the results obtained p value (0.042) α (0.05) then Ho is rejected and Ha accepted means that there is a relationship between smoking behavior and the incidence of hypertension in men aged 35-45 years in Cihampelas Health Center.

Distribution of the relationship between stress and the incidence of hypertension in men aged 35-45 years at the Cihampelas Health Center.

Stress	Incident of Hypertension										Total	P Value	
	Normal		Mild		Moderate		Severe		Very Heavy/Maligma				
	F	%	F	%	F	%	F	%	F	%			N
Normal	0	0	0	0	0	0	2	100	0	0	2	100	0,014
Mild	0	0	4	40,0	5	50,0	1	10,0	0	0	10	100	
Moderate	0	0	12	66,7	5	27,8	1	5,6	0	0	18	100	
Severe	0	0	4	36,4	5	45,5	2	18,2	0	0	11	100	
Very Haeavy	0	0	1	25,0	3	75,0	0	0	0	0	4	0	
Total	0	0	21	46,7	18	40,0	6	13,3	0	0	45	100	

Based on the results from table 4.5, it can be seen that the relationship between stress and the incidence of hypertension in men aged 35-44 in the Cihampelas Health Center, it is known that 2 (100%) respondents have normal stressful events and the incidence of severe hypertension. Furthermore, 4 (40.0%) respondents have mild stress events and mild hypertension events, 5 (50.0%) respondents have mild stress events and moderate hypertension events, 1 (10.0%) respondents have mild stress events and hypertension events weight. Furthermore, 12 (66.7%) respondents had moderate

Distribution of the relationship between smoking behavior and the incidence of hypertension in men aged 35-45 years at the Cihampelas Health Center.

Smoking Behavior	Incident of Hypertension										Total	P Value	
	Normal		Mild		Moderate		Severe		Very Heavy/Maligma				
	F	%	F	%	F	%	F	%	F	%			N

stress events and mild hypertension events, 5 (27.8%) respondents had moderate stress events and moderate hypertension incidence, 1 (5.6%) respondents had moderate stress events and hypertension failure. weight. Furthermore, 4 (36.4%) respondents had severe stress events with mild hypertension, 5 (45.5%) respondents had severe stress events and moderate hypertension incidence, 2 (18.2%) respondents had severe stress events and hypertension events weight. During 1 (25.0%) had a very severe stress event and the incidence of mild hypertension, 3 (75.0%) respondents had very severe stress events and the incidence of moderate hypertension.

Based on the results of the chi square test conducted in this study, the results obtained p value $(0.014) < \alpha (0.05)$ then H_0 is rejected and H_a is accepted means that there is a relationship between stress and the incidence of hypertension in men aged 35 - 45 years in the Puskesmas Cihampelas.

4 CONCLUSION

Based on the results of research that has been conducted on "Relationship between smoking behavior and stress with the incidence of hypertension in men aged 35-45 years in the Cihampelas Health Center" then it can be concluded as follows:

1. Description of smoking behavior on respondents in the Cihampelas Health Center who smoked got results that were dominant in the mild category as many as 35 (77.8%) respondents.
2. Gambaran stress on respondents in the Cihampelas Community Health Center who experienced stress events were found to be the dominant category with 18 (100.0%) respondents.
3. An overview of the incidence of hypertension in respondents in the Cihampelas Health Center who experienced the results that were dominant in the light category of 21 (46.7%) respondents.
4. There is a relationship between smoking behavior and the incidence of hypertension in men aged 35-45 years in the Cihampelas Health Center, with the results of p value $0.042 < \alpha (0.05)$ then H_0 is rejected and H_a is accepted.
5. There is a relationship between stress and the incidence of hypertension in men aged 35-45 years in the Cihampelas Health Center, with the results of p value $0.014 \leq \alpha (0.05)$ then H_0 is rejected and H_a is accepted.

5 SUGGESTION

This research can be used as an ingredient in continuing research on other factors that can cause hypertension including age, sex, ethnicity, family history, obesity, salt intake patterns, alcohol consumption, lack of exercise. This study can be used as an ingredient in continuing research on Other factors that can cause hypertension include age, sex, ethnicity, family history, obesity, salt intake patterns, alcohol consumption, lack of exercise and as an ingredient in conducting health promotion activities in the form of counseling to hypertensive patients regarding the dangers of smoking and stress levels.

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