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## SMOKING HABIT AND PHYSICAL ACTIVITY WITH HYPERTENSION TOWARD POLICE IN DELI SERDANG

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### Abstract

Noninfectious disease became a problem in health which must be solved seriously. The risk general factor that noninfectious disease was hypertension, high blood sugar, unnormal fat embolism and obesity. Hypertension becomes interested disease caused it caused of death. The number of the persons who have hypertension was rising from year to year. It was caused of factors. There were low potash, high natrium, les nutrition, commonly consumme animal grease, stress, smoking, and less excercising. It used quantitative research. It has been Done since March until April 2015. The object of research was police. It used systematic sampling. The collecting data was done with questioners and to measure blood pressure was done by nurses. The research finding was shown that 28% of smoking persons had high hypertension, vise versa the lowest smoking persons shown that 36.6% normal. Responden who had floaty activity was 26.8%. Medium with normal blood pressure was 32.9%. The conclusion of this research was there were relationship between smoking persons and ecercising activity with hypertension. To solve the problem above was the pearsons must be done more excercises than smoking.

**Keywords:** Smoking Habit, Physical Exercises, Hypertension.

### Introduction

Non Communicable Diseases(NCDs) become a health problem that should receiveserious attention. PTMhascaused threemilliondeaths in 2005(Hengli, 2013). According topredictionsfrom the WorldHealth Organization (WHO) that NCDs accounted for56% of all deaths and 44% of the disease burdenonthe countriesinSoutheastAsia. The mainrisk factorsthat causeNCDs are hypertension, high blood glucose, obesityandabnormal bloodfats(Harikedua, 2012). Hypertension has become a diseaseof concernin many countries around the world. According to WHO data, worldwide, around972millionpeople or26.4% inhabitantsof hypertension,this figureis likely to riseto 29.2%

in 2025. Of the 972 million people with hypertension, 333 million are in developed countries and 639 million the rest are in developing countries, including Indonesia (Ana 2007 in Anggara, 2012). Based on data 2007, the national prevalence of patients with hypertension in people aged >18 years of 29.8% (based on measurements), this figure decreased to 25.8% in 2013 (Riskesdas, 2013). However, the prevalence of hypertension is based on interviews (if ever diagnosed health workers and taking medication hypertension) an increase of 7.6 percent in 2007 to 9.5 percent in 2013.

There is an increasing incidence of hypertension, in theory not independent of the factors that influence the occurrence of hypertension. Hypertension is influenced by many factors, such as lack of physical activity, smoking, stress, family history, and the habit of consuming animal fats, lack of fiber, high sodium and low potassium (Mulyati, 2011).

The national prevalence of physical inactivity in the population aged > 10 years is 48.2%. A total of 16 provinces have prevalence of physical inactivity in the population aged > 10 years above the national prevalence, namely Nanggroe Aceh Darussalam, North Sumatra, West Sumatra, Riau, Jambi, Riau, Jakarta, West Java, Banten, West Nusa Tenggara, South Kalimantan, East Kalimantan, North Sulawesi, South Sulawesi, Maluku and West Papua (Riskesdas, 2007).

According to Leonard Marvyn (Utami, 2007; Mulyati 2011) the less do sports activities, controlling appetite are very unstable, causing excessive energy consumption, resulting in increased appetite which ultimately weight gain and can lead to obesity. If a person's weight increases, then the blood volume will increase as well, so the burden of the heart to pump blood also increases.

Smoking habits also affect the occurrence of hypertension. National percentage of smoking every day in people aged > 10 years is 23.7%. Nationally, 85.4% of smokers smoke in the house when with other household members. While this type of cigarette most in demand is the clove with a filter (64.5%).

Nationally, the average number of cigarettes smoked per day by more than half (52.3%) of smokers is 1-10 rods and about 20 percent as much as 11-20 cigarettes per day. The average age of starting to smoke nationally is 17.6 years (Riskesdas 2013).

Research Susilowati, 2007; Wati 2011 in Adhi, 2012, shows the prevalence of police in Semarang who have nutritional status is not normal at 48.1%, while the police in Bandung shows obesity prevalence of 14.3%. Preliminary results of a survey conducted at the Police on duty at the police station Deli Serdang by measuring

weight and height at 115 policemen police obtained the nutritional status with BMI > 27 as many as 63 people (54.78%). The objective of this research was to determine the smoking habits and physical activity with hypertension in the Police in Deli Serdang.

**Research Method**

The location of this research was in Police Area *Deli Serdang* from March to April 2015. There were 421 police. Hypertension could be attacked in every age, but it usually attacked in 35 age or more (Hengli, 2013). So the limit was started from 30 became inclusion in this research. The sample was done by systematic method so the number of sample was 82 police. The data obtained through interviews using questionnaires and physical activity form.

**Finding**

**Age:** Age is a time unit that measures the presence of an object or creature. Measurements are usually set with years of age. In this research, it is known that the police sampled age between 30-57 years. Sample distribution by age groups is shown in Table-1.

**Table 1: Responden Based Age Distribution.**

Age	N	%
30 – 40 year	33	40,2
41 – 50 year	27	32,9
>50 year	22	26,8
Total	82	100

**Univariate Analysis**

Based on the research collect in 82 police, got the data below:

**Tabel 2(a): Responden based on Blood Pressure, Physical Activity, and Smoking Habit Distribution.**

No	Variabel	Annotation	Number	
			n	%
1	Smoking Habit	Non Smoking	52	63,4
		Smoking	30	36,6
2	Physical Activity	Easy	32	39,0
		Medium	50	61,0
3	Blood Pressure	Normotension	37	45,1
		Pre Hypertension	10	12,2
		Hypertension	35	42,7
Total			82	100

The blood pointed to norm tension 45.1% and had pointed to hypertension 54.9% (pre hypertension and hypertension). Smoking Hypertension was one factor which was caused hypertension. From the data collection in smoking habit with hypertension could be shown in Tabel 2 below:

**Tabel 2(b). Relationship between Smoking Habit and Hypertensioni**

Smoking	Hypertension				Total		p value
	Normotension		Hypertension		n	%	
	n	%	N	%			n
Non Smoking	30	36,6	22	26,8	52	63,4	0,003
Smoking	7	8,5	23	28,0	30	36,6	
Total	37	45,1	45	54,9	82	100	

It can be concluded that there were relationship between smoking habit and hypertension.

**Tabel 3. Relationship between Physical Activity and Hypertension.**

Physical Activitu	Hypertension				Total		p value
	Normotension		Hypertension		n	%	
	n	%	N	%			n
Easy	10	12,2	22	26,8	32	39	0,043
Medium	27	32,9	23	28,0	50	61	
Total	37	45,1	45	54,9	82	100	

It can be concluded that there were relationship between physical activity and hypertension.

**Discussion**

**Smoking habit with Hypertension**

Statistical test results illustrate that there is a relationship between smoking and the incidence of hypertension, it is in line with research conducted by Siburain (2004) and Anggara (2013). Smoking relationship with hypertension is not yet clear, according to the literature, the carbon dioxide nicotine contained in cigarettes will damage the endothelial lining of the arteries, reduced elasticity of blood vessels, causing blood pressure why respondents who smoke every day are at risk to suffer from hypertension. According to research in Deli Serdang (North Sumatra) in 2008, which

states that people smoke have a risk 2.2 times (OR = 2.2) more likely to develop hypertension than non-smokers (Rosalina, 2008)

From interviews conducted in respondents who smoked in mind that the average respondent smoked about 13.33 years, whereas the lowest value 1 year (12 months) and the longest has been smoking for 35 years. The number of cigarettes each day is spent on average 19.22 rods, where respondents were least smoked at least 1 rod per day and most are 4 packs a day. This is according to research conducted at the Regional Hospital Cepu which states that the longer and the more the number of cigarettes smoked, the greater risk of someone suffering from Hypertension (Suheni, 2007).

**Physical Activity by Hypertension** Physical inactivity increases the risk of someone suffering from hypertension due to low activity will lead to the risk of being overweight. The basis of this study is also due to the high number of overweight respondents, of which 115 respondents found that the measured weight is the Body Mass Index (BMI) > 27 were 63 people (54.78%). Obesity is a characteristic of a population of hypertension, and proved that these factors are closely linked with the occurrence of hypertension in the future. It can be seen from the results of this study in which respondents with moderate activity as much as 28% suffer from hypertension, the possibility of hypertension suffered by the respondents as being overweight, not because of a lack of physical activity. Long physical activity is helpful in preventing weight gain. Weight reduction with physical activity can reduce the risk of cardiovascular and diabetes (Soegondo 2009 in Harikedua, 2012).

People are inactive tend to have a heart rate that is higher so that the heart muscle has to work harder at each contraction. Increasingly loud and frequent pumping of the heart muscle, the greater the pressure imposed on the arteries (Sheps 2005 in Anggara, 2013). This is confirmed by Brown (2006) in Hengli (2013), that a person who is not physically active have a 30-50% greater risk for hypertension.

Exercise is physical activity has a great benefit because it can improve physical fitness elements, namely the heart and respiratory system, joint flexibility and strength of certain muscles. Exercise can reduce the incidence and severity of cardiovascular disease, obesity, diabetes, hypertension, some disorders of joints, muscles, bones and stress (Mulyati, 2011). According Sutarina in Nugraheni (2008), an exercise session the average blood pressure of five to seven mm Hg, the effect of this decline can last up to 22 hours after exercise. Physical activity in the form of regular physical exercise is the first intervention for the prevention and treatment of hypertension.

## **Conclusion and Suggestion**

Respondents who had a habit of smoking have a tendency to suffer from hypertension; otherwise the respondents who do not smoke have a tendency normotensive (normal blood pressure).

Respondents who have a mild physical activity tends to increase blood pressure, whereas respondents with moderate activity tends normal blood pressure (normotensive).

It is recommended that the respondents to stop smoking are detrimental to health, so it can reduce productivity and cause a bad image of the police as public protector. Scaled back sports activities that can prevent weight gain so that the image of "Police fat" can be eliminated.

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