

## **THE CORRELATION BETWEEN TYPE OF PERSONALITY WITH HYPERTENTION DEGREES**

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### **ABSTRACT**

Hypertension or high blood pressure is an abnormal and continuous increase in blood where the systolic pressure is above 140 mmHg and the diastolic pressure is above 90 mmHg. Classification of blood pressure based on the degree of hypertension JNC-VIII there are four categories: normal, prehypertension, first degree hypertension, second degree hypertension. Factors that influence hypertension include genetic, age, sex, high salt consumption, obesity, stress, smoking, drinking alcohol, taking drugs (ephedrine, prednisone, epinephrine), and personality type. Personality type affects the emergence of hypertension can be seen from how someone uses their coping stress. Personality type here is personality type A. Type A behavior patterns cause hypertension associated with being ambitious, like to compete, work never tired, always being chased by time and always feel never satisfied.

This study aims to determine the correlation between type of personality with hypertension degrees in Sukajaya health center Bogor district 2019.

This research is a quantitative analytic descriptive research with cross sectional design. The sample of this study was 85 respondents. The sampling technique in this study uses accidental sampling. Data is processed by Chi Square statistical test.

The results of 85 respondents showed as many as 37 respondents had a type A personality type with hypertension degree I. (43.5%) Statistical test results using chi square, obtained p value of 0.042 (<0.05). Because p value <0.05 then  $H_0$  is rejected and  $H_a$  is accepted. From the results of the study found, there is a correlation between type of personality with hypertension degrees in Sukajaya health center Bogor district 2019.

The conclusion of this study is there is a correlation between type of personality with hypertension degrees in Sukajaya health center Bogor district 2019. Suggestions from researchers are expected that the results of this study can be used as information about the description of the personality type and degree of hypertension experienced by patients at the Sukajaya Health Center.

Keywords : Personality type, degree of hypertension

### **INTRODUCTION**

Hypertension is *the silent disease* because people do not know they have hypertension before checking their blood pressure. Hypertension is the biggest cause of stroke, both systolic and diastolic blood pressure.<sup>1</sup> Hypertension, also

known as high blood pressure, is a condition in which the blood vessels are constantly increasing in pressure. Blood is carried from the heart to all parts of the body in vessels. Every time the heart beats, it pumps blood into the veins. Blood pressure is created by the force of blood pushing against the walls of the blood vessels (arteries) as they are pumped by the heart. The higher the pressure, the harder it is for the heart to pump.<sup>2</sup> Hypertension is an increase in systolic blood pressure of more than 140 mmHg and diastolic blood pressure of more than 90 mmHg on two measurements with an interval of five minutes in a state of rest / calm. The classification of hypertension according to the JNC (*Joint National Committee*) is divided into 3, namely, prehypertension with systolic 120 - 139 and / or diastolic 80 - 89, hypertension degree 1 with systolic 140 - 159 and / or diastolic 90 - 99, hypertension grade 2 with systolic 160 or > 160 and / or diastolic 100 or > 100.<sup>3</sup>

According to WHO (*World Health Organization*) in 2015 there were 1.13 billion people in the world who had high blood pressure.<sup>4</sup> Based on the 2018 RISKESDAS data, the prevalence for blood pressure measurement results due to hypertension rose from 25.8 percent to 34.1 percent.<sup>5</sup> Based on data from the health profile of Bogor Regency in 2017, the population > 18 years with hypertension was 162,866 people, where 70,575 men and 92,290 women. In Sukajaya Puskesmas, the prevalence is 17.75 percent or as much as 1,540 people with hypertension, of which 505 are male and 1035 are female.<sup>6</sup>

Factors that can influence the presence of hypertension are lifestyle (alcohol, smoking), obesity (overweight), lack of exercise, heredity, stress and personality type.<sup>7</sup>

Personality is a general trait of a person. This personality is a behavior that is shown by the individual in the social environment so that the social environment can capture and have the desired impression of him. Overall behavior is systematically influenced by thoughts, activities and feelings. This personality is used to describe the nature of the individual which makes the difference between himself and others.<sup>8</sup> There are many kinds of personality types, one of which is type A and B. The personalities personality types A and B were first introduced by Friedman and Ray Rosenman. They concluded that people with type A personality are very competitive and achievement-oriented, feel that time is always pressing, find it difficult to relax and become impatient or angry when faced with tardiness or with people who are seen as non-committal. Meanwhile, people with type B are more able to relax without feeling guilty and work without seeing lust, do not have to rush that causes impatience and not easily angry.<sup>9</sup>

Personality types influence the emergence of hypertension. It can be seen from how a person uses coping stress. Negative emotions and emotional control depend on the personality type of each individual.<sup>7</sup>

According to research conducted by Rut AL Tandi in 2018, it shows that there is a relationship between personality types and the incidence of hypertension in outpatients at the Kakaskasen Community Health Center in Tomohon City, which was carried out by distributing questionnaires and measuring blood pressure. The data were processed with a computer program, analysis *Chi Square Test* with  $\alpha$  0.05. The results of statistical tests using the *Chi Square Test* obtained  $pvalue= 0.000$ .<sup>10</sup>

Based on a preliminary study conducted at the Sukajaya Community Health Center on August 23, 2019, which coincided with the POSBIDU (Integrated Assistance Post) schedule. Researchers measured blood pressure and distributed questionnaires to 10 respondents. The results obtained from 10 respondents who suffer from hypertension, 2 of them have pre hypertension, 5 respondents with grade 1 hypertension and 3 respondents with grade 2 hypertension. Of the 10 respondents, 8 respondents have type A personality and 2 others are type B personality. The possibility exists that there is a relationship between personality type and the degree of hypertension.

In general, the purpose of this study is to determine the relationship between personality types and the degree of hypertension at the Sukajaya Community Health Center, Bogor Regency in 2019.

## **RESEARCH METHOD**

This type of research is *descriptive quantitative analytic*, which is a research method that aims to see a description of the phenomena that occur in a certain population and try to explore how and why these phenomena occur. Then perform a dynamic analysis of the correlation between phenomena or between the independent variable and the dependent variable.<sup>11,12</sup>

For the design of this study using a approach *cross sectional*, which is an analytical research design that aims to determine the relationship between variables in which the dependent variable and the independent variable are identified at one time unit (*point time approach*). Each research subject was observed only once and measurements were made of the character status or subject variables at the time of examination.<sup>11,13</sup>

The variable *independent* in this study is the personality type. The variable *dependent* in this study is the degree of hypertension.

In this research, it was carried out at the Sukajaya Community Health Center, Bogor Regency. The time of this study was 23-27 September 2019. The population in this study were hypertension patients at the Sukajaya Community Health Center, Bogor Regency, with 108 hypertension patients in July 2019.

The sample in this study was taken using *accidental sampling technique*. This technique is used by taking cases or respondents who happen to be there or are willing to be in a place according to the research context. The total sample size is determined using the Slovin formula:

Description:

n = Number of sample members

N = number of population

d = level of confidence desired

Based on the calculations obtained above, the total sample studied was 85 respondents.

The tools used in collecting data used a questionnaire for personality types and a tension meter to determine the degree of hypertension. The questionnaire used is a questionnaire about personality type A. This questionnaire consists of 20 closed statements of questions in this questionnaire using a scale *Guttman* with yes and no answers.

Univariate analysis was carried out on the variables from the research results. The independent variable is the personality type and the dependent variable is the degree of hypertension. Bivariate analysis is used to test the hypothesis by determining the relationship between the independent variables and the Statistical Test theory variable *Chi-Square*.

## RESEARCH RESULTS

The general description characteristic of the place of this research was carried out at the Sukajaya Community Health Center, Bogor Regency on 23-27 September 2019. Sukajaya Health Center, which is located in Sukajaya District, Bogor Regency. Sukajaya Puskesmas has 6 Assisted Villages with Assisted Villages, namely: Sukajaya Village, Sipayung Village, Sukamulih Village, Jaya Raharja Village, Pasir Madang Village, Cileuksa Village.

This study aims to determine the relationship between personality types and the degree of hypertension in Sukajaya District Health Center. Bogor in 2019.

The variables studied included the dependent variable on the degree of hypertension and the independent variable for personality type.

The following is a table of respondents' descriptions based on the questionnaires distributed regarding the frequency distribution of the hypertension respondent descriptions at the Sukajaya Community Health Center, Bogor Regency:

Table 1 Frequency Distribution of Research Respondents by Age at the Sukajaya Community Health Center, Bogor Regency in 2019

Age	Frequency	Percentage (%)
16-25 Years	6	7.1
26-35 Years	5	5.9
36-45 Years	32	37.7
46-55 Years	26	30.5
56-65 Years	11	12.9
66-75 Years	5	5,9
total	85	100

Based on table 1, the frequency distribution of research respondents based on age at Puskesmas Sukajaya, Bogor Regency, from 85 respondents showed that 32 respondents were in the age range of 36 - 45 years. (37.7%).

Table 2 Frequency Distribution of Research Respondents by Gender at the Sukajaya Community Health Center, Bogor Regency in 2019

Gender	Frequency	Percentage (%)
Male	15	17.6
Female	70	82.4
Total	85	100

Based on table 2, the frequency distribution of research respondents based on gender at Puskesmas Sukajaya, Bogor Regency, out of 85 respondents showed that 70 respondents were female. (70%).

Table 3 Frequency Distribution of Research Respondents based on Smoking Habits at the Sukajaya Health Center, Bogor Regency in 2019

Smoking Habit	Frequency	Percentage (%)
Yes	17	20
No	68	80
Total	85	100

Based on table 3, the frequency distribution of research respondents based on smoking habits at the Sukajaya Community Health Center, Bogor Regency, out of 85 respondents showed that 68 respondents did not smoke. (80%).

Table 4 Frequency Distribution of Research Respondents based on Latest Education at the Sukajaya Community Health Center, Bogor Regency in 2019

Age	Frequency	Percentage (%)
Elementary school	25	29.4
Junior high school	35	41.2
Senior high school	15	17.6
Diploma	6	7.1
Bachelor	4	4.7
Total	85	100

Based on table 4 the frequency distribution of research respondents based on education at the Sukajaya Community Health Center, Bogor Regency, out of 85 respondents showed 35 respondents whose last education was junior high school. (41.2%).

Table 5 Frequency Distribution of Research Respondents based on High Sodium Food Eating Habits at Sukajaya Public Health Center, Bogor Regency in 2019

Habit of Consuming Salty Foods	Frequency	Percentage (%)
Yes	75	88.2
No	10	11.8
Total	85	100

Based on the frequency distribution table of research respondents based on the habit of consuming high-sodium foods at the Sukajaya Community Health Center, Bogor Regency, out of 85 respondents showed that 75 respondents had a habit of eating foods that were high in sodium or salty. (88.2%).

Table 6 Frequency Distribution of Research Respondents based on Compliance with Medication at the Sukajaya Community Health Center

Compliance with Medication	Frequency	Percentage (%)
Yes	42	49.4
No	43	50.6
Total	85	100

Based on table 6, the frequency distribution of research respondents based on adherence to taking medication at the Puskesmas Sukajaya, Bogor Regency, from 85 respondents showed that 43 respondents did not have compliance in taking medication (50.6%).

Table 7 Distribution of Personality Types in Hypertension Patients at Sukajaya Health Center, Bogor Regency in 2019

Personality Type	Frequency	Percentage (%)
Type A	69	81.2
Type B	16	18.8
Total	85	100

From the results of the table above, it is known that of the 85 respondents the frequency distribution of personality types in hypertensive patients at Sukajaya Health Center, Bogor Regency shows 69 respondents with personality type A. (81.2%).

Table 8 Frequency Distribution of Hypertension Degrees at Puskesmas Sukajaya, Bogor Regency, 2019

Degree of Hypertension Grade	Frequency	Percentage (%)
Pre Hypertension	35	41.2
Hypertension I	40	47.1
Hypertension II	10	11.8
Total	85	100

From the results of the table above, it is known that the frequency distribution of the degree of hypertension at Puskesmas Sukajaya, Bogor Regency, from 85 respondents shows that 40 respondents with grade I hypertension (47.1%).

Table 9 Relationship between Personality Types and Degrees of Hypertension at Sukajaya Public Health Center, Bogor Regency in 2019

Degree of Hypertension	Personality Type				Total	<i>P Value</i>	
	Type A		Type B				
	N	%	N	%	N	%	
Pre hypertension	25	29.4	10	11.8	35	41.2	0.042
Hypertension degree I	37	43.5	3	3.5	40	47.7	
Hypertension degree II	7	8.2	3	3.5	10	11.8	
Total	69	81.2	16	18.8	85	100	

From the table above shows the results of the analysis of the relationship between personality types and degrees hypertension at Puskesmas Sukajaya, Bogor Regency in 2019 from 85 respondents showed as many as 37 respondents were type A personality types with grade I hypertension (43.5%). The results of statistical tests using *chi square*, the results obtained *p value* of 0.042 (<0.05). Because *p value* <0.05,  $H_0$  rejected and  $H_a$  accepted, it can be concluded that there is a personality type relationship with the degree of hypertension in Bogor District Health Center Sukajaya 2019.

## DISCUSSION

### 1. Personality Type

Based on table 7, it is known that of the 85 respondents the frequency distribution of personality types in hypertensive patients at Sukajaya Public Health Center, Bogor Regency shows 69 respondents with personality type A. (81.2%).

Personality is a general characteristic of a person contained in an individual that guides and gives direction to the visible individual behavior and invisible thoughts, and is not only something, but does something. According to Meyer Friedman and Ray Roseman, personality types are divided into 2, namely: personality type A and personality type B. People at type A are considered more

likely to experience higher levels of stress because they put themselves under time pressure. by creating a certain time limit for their life, whereas people with type B are the opposite of type A.<sup>14</sup>

The traits of type A personality are thinking and doing two things once; scheduling more activities in less time; does not show or is not interested in the environment or beauty; getting other people to speak quickly; very impatient if you have to queue or drive a car behind a slow-moving vehicle; always move hands when talking; frequently shaking feet and tapping fingers; explosive speech patterns; make always arrive on time as worship; it was hard to just sit there doing nothing; when playing, you always want to win, even if you play with children; assess the success of yourself and others by comparing the number (number of patients who came, articles written, etc.); when talking, he often wet his lips, nodded his head, clasped his hands hitting the table or sighed; can't wait to see other people do the things you think can be done faster and better; likes to blink or raise eyebrows.<sup>9,14,15</sup>

The characteristics of type B personality, namely: fair ambition, not aggressive and healthy in competing and not pushing yourself; calm, not easily irritated and not easily angry (controlled emotions); vigilance within reasonable limits as well as self-control and trust is not excessive; unhurried way of speaking, acting at the right time, non-hyperactive behavior; can manage the time at work (provide time for rest); in organizing and leading to be accommodating and humane; prefer to cooperate and not push yourself when faced with challenges; good at managing time and calm (relaxed), not in a hurry; easy to get along with, friendly and can generate empathy to achieve togetherness (*mutual benefit*); not rigid (flexible), can respect other people's opinions, does not feel that he is the most righteous; can free oneself from all kinds of problems of life and work while on vacation; in controlling things able to restrain and control oneself; patient; do a job one by one; better able to understand other people; can relax after finishing work; leads to things that are worthy of respect; playing games for fun, not victory; It's hard to be candid for fear of hurting others.<sup>9,14,15</sup>

This research is in line with the research conducted by Rut AL Tandi with the title of the relationship between personality type and the incidence of hypertension in outpatients at the Kakaskasen Public Health Center in Tomohon City, which was conducted in 2018. The results of this study illustrate that of the 220 respondents, 122 respondents were found have a type A personality (55.5%).<sup>10</sup> This research is also in line with the research conducted by Anis Prabowo with the title of the relationship between personality type and the degree of hypertension in female hypertensive patients aged 30-50 years at Pajang Surakarta Health Center which was conducted research in 2018. The results of

this study illustrate that of the 30 respondents, 22 were found. respondents who have personality type A (73.3%).<sup>16</sup>

According to the researcher's analysis of the above theory quotations, there is harmony with the results of the research that the researchers conducted with the results of the above research. Personality types in hypertensive patients at Puskesmas Sukajaya, Bogor Regency, out of 85 respondents showed 69 respondents with personality type A (81.2%). This can be attributed to respondents who are hypertensive patients.

## **2. Degree of Hypertension**

Based on table 8, it is known that the frequency distribution of the degree of hypertension at the Sukajaya Health Center, Bogor Regency, from 85 respondents, shows that 40 respondents with grade I hypertension (47.1%).

Hypertension or what is called high blood pressure is an abnormal increase in blood that changes and continuously where the systolic pressure is above 140 mmHg and the diastolic pressure is above 90 mmHg. Blood flow in people with hypertension will be difficult to flow because of the contraction of the arterioles and eventually cause an increase in blood pressure. The workload of the heart will also increase with hypertension, as a result of this the heart will be damaged as well as blood vessels.<sup>17</sup>

Classification based on the degree of hypertension JNC-VII (*The Eighth Joint National Committee*) which is based on the average measurement of two or more blood pressures at two or more clinical visits for adult patients (age  $\geq$  18 years). The blood pressure classification includes four categories, namely: normal with systolic blood pressure (TDS)  $<120$  mmHg and / or diastolic blood pressure (TDD)  $<80$  mmHg; Prehypertension is not considered a disease category but identifies patients whose blood pressure is likely to increase to the classification of hypertension in the future. Prehypertension values with systolic blood pressure (TDS) 120-139 mmHg and / or diastolic blood pressure (TDD) 80-89 mmHg; First degree hypertension with systolic blood pressure (TDS) 140-159mmHg and / or diastolic blood pressure (TDD) 90 - 99 mmHg; Second degree hypertension with systolic blood pressure (TDS) $> 160$ mmHg and / or diastolic blood pressure (TDD) $> 100$  mmHg<sup>18</sup>

Factors that influence hypertension include heredity / genetics, age, sex, high salt consumption, obesity (obesity) ), stress, smoking, drinking alcohol, taking drugs (*ephedrine, prednisone, epineprine*), and personality type.<sup>7,18</sup>

The results of this study contradict research conducted by Riza Fikriana with the title of the relationship between personality type and blood pressure in hypertension sufferers which was conducted in 2017. The results of this study

illustrate that of the 56 respondents, 37 respondents with stage 2 hypertension (66.1%).<sup>19</sup>

According to the researcher's analysis of the above theoretical quotations, it is contrary to the results of the research that the researchers conducted with the results of the above research. The degree of hypertension at Puskesmas Sukajaya, Bogor Regency, out of 85 respondents, showed that 40 respondents had grade I hypertension (47.1%). This can be related to the factors that influence hypertension experienced by hypertensive sufferers in their respective research sites.

### **3. Relationship Type of Personality with Degrees of Hypertension**

Based on table 9 shows the results of the analysis of the relationship between personality types and degrees of hypertension at the Sukajaya Community Health Center, Bogor Regency in 2019, out of 85 respondents, there were 37 respondents with type A personality type with grade I hypertension (43.5%). The results of statistical tests using *chi square*, the results obtained *p value* of 0.042 (<0.05). Because *p value* <0.05,  $H_0$  rejected and  $H_a$  accepted, it can be concluded that there is a personality type relationship with the degree of hypertension in Puskesmas Sukajaya Bogor Regency Year 2019.

Hypertension related to the increase in systolic or diastolic blood pressure or the pressure of both. Hypertension can be defined as persistent high blood pressure where the systolic pressure is above 140 mmHg and the diastolic pressure is above 90 mmHg. In the elderly population, hypertension as a systolic pressure of 160 mmHg and a diastolic pressure of 90 mmHg.<sup>20</sup> One of the classifications of hypertension based on the degree of hypertension is according to the JNC (*Joint National Committee*) which is divided into 3, namely prehypertension with systolic 120 - 139 and / or diastolic 80 - 89, hypertension grade 1 with systolic 140 - 159 and / or diastolic 90 - 99, 2 systolic hypertension degree 160 or > 160 and / or diastolic 100 or > 100.<sup>18</sup>

factors that influence hypertension include heredity / genetics, age, gender, high salt intake, obesity (obesity), stress, smoking, drinking alcohol, taking drugs (*ephedrine, prednisone, epineprine*), and personality type.<sup>7,18</sup>

Personality type affects the emergence of hypertension can be seen from how a person uses coping stress. Negative emotions and emotional control depend on the personality type of each individual. The personality type here is the type A.

The personality type A is often associated with cardiovascular disease based on the traits shown in the type A behavior. Regarding how the type A behavior pattern causes hypertension, it is associated with ambitious, competitive, work never tired, always pressed for time and always felt never satisfied. These properties will release *ketecholamine* which can cause the prevalence of serum cholesterol levels to increase, so that it will facilitate the occurrence of

atherosclerosis. Stress will increase the resistance of peripheral blood vessels to cardiac output so that it will stimulate sympathetic nerve activity. This stress can be related to work, socio-economic class and personal characteristics.<sup>7,18</sup>

This research is in line with research conducted by Rut AL Tandi with the title of the relationship between personality types and the incidence of hypertension in outpatients at the Kakaskasen Public Health Center in Tomohon City, which was conducted in 2018. The results of statistical tests using the *Chi Square Test* obtained  $pvalue= 0,000$ .<sup>10</sup> This research is also in line with the research conducted by Anis Prabowo with the title of the relationship between personality type and the degree of hypertension in female hypertensive patients aged 30-50 years at Pajang Surakarta Health Center which was conducted research in 2018. The results of this study indicate that there is a relationship between personality type A and B with hypertension, in which personality type A tends to have hypertension more than personality type B ( $p = 0.001$ ).<sup>16</sup> However, the results of the study contradict the research conducted by Riza Fikriana with the title of the relationship between personality type and blood pressure in hypertensive patients, which was conducted in 2017. The results of this study showed that there was no significant relationship between personality type and blood pressure in hypertensive patients ( $p= 0.974$ ).<sup>19</sup>

According to the researcher's analysis of the theory quote above. The relationship between personality type and the degree of hypertension at Puskesmas Sukajaya, Bogor Regency, 2019 from 85 respondents showed that 37 respondents had type A personality with grade I hypertension. (43.5%) The results of statistical tests using *chi square* showed a  $p$  value of 0.042 ( $<0,05$ ). Because  $p$  value  $<0,05$ ,  $H_0$  rejected and  $H_a$  accepted, it can be concluded that there is a personality type relationship with the degree of hypertension in the health center of Bogor Regency Year 2019. Sukajaya personality type can affect the degree of hypertension. It is evident from the factors that influence hypertension, one of which is a personality type, from previous research conducted by Anis Prabowo, although the time and place are different, the results show that the relationship between personality type and the degree of hypertension where personality type A tends to have hypertension compared to personality type B .

## CONCLUSION

From the discussion of research conducted in Puskesmas Sukajaya date 23 to 27 September 2019 regarding the relationship with the degree of hypertension Personality type conclusions can be drawn as follows:

1. The frequency distribution of the degree of hypertension at Sukajaya Health Center from 85 respondents showed 69 respondents with personality type A (81.2%).

2. The frequency distribution of the degree of hypertension at Puskesmas Sukajaya, Bogor Regency, from 85 respondents showed that 40 respondents had grade I hypertension (47.1%).
3. Analysis of the relationship between personality types and the degree of hypertension at the Puskesmas Sukajaya, Bogor Regency, 2019 from 85 respondents showed that 37 respondents had type A personality types with grade I hypertension. (43.5%) The results of statistical tests using *chi square* showed a *p value* of 0.042 ( $< 0.05$ ). Because *p value*  $< 0.05$ ,  $H_0$  rejected and  $H_a$  accepted, it can be concluded that there is a personality type relationship with the degree of hypertension in Bogor District Health Center Sukajaya 2019.

### **SUGGESTION**

Based on the above conclusions, the researcher can provide several suggestions, namely as follows:

1. Theoretical  
As an effort to apply nursing science to increase knowledge and insight about hypertension and personality types.
2. Practical
  - a. For Sukajaya Community Health Center  
As research information and documentation of further research data on personality types with degrees of hypertension.
  - b. For STIKes Wijaya Husada  
As additional information and scientific application in hypertension material that has been obtained and input for future researchers
  - c. For Respondents  
For information regarding the description of blood pressure experienced and the type of personality they have.

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