AGE CORRELATION AND PHYSICAL STRESS TO CHANGES IN BLOOD PRESSURE IN PRE OPERATIVE PATIENTS

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ABSTRACT

The World Health Organization (WHO), the number of patients with operating actions year after year have increased. In 2012 there were 148 million patients throughout the patient's hospital with surgical action, in the year 2015 estimated 11% of the world's disease burden could be repeated by surgery and WHO stated that surgical cases are a problem Health for the community. The purpose of research for the correlation of age and physical stress to changes in blood pressure in patients pre operative at Hospital Kabupaten Ciawi Bogor In 2019.
The type of research used is descriptive analytic using Cross Sectional design and using data analysis that is Univariat analysis, Bivariat analysis and multivariate analysis. The study was done at the Hospital Kabupaten Ciawi Bogor on 13th September 2019 to 20th September 2019. Sampling using non probability sampling by accidental sampling sample of 21 respondents. The instruments are obtained in the form of an observation sheet and a closed questionnaire sheet in the statistical test using Kendall tau analysis.
Results of univariate analysis for age variables with age criteria of 11 respondents (36.7%), variable physical stress weight categories of 13 respondents (43.3%) and Variable change blood pressure by change high blood pressure (hypertension) as 19 respondents (63.3 %). The results of the analysis bivariat obtained ρvalue= 0,000 meaning that more than of α (<0,05) so that there was a correlation between the ages of to the completely altered the pressure of the blood and obtained ρvalue= 0,000 meaning that more than of α (<0,05) so there was a correlation between physical stress with changes in pressure in patients pre operation blood hospital Kabupaten Ciawi Bogor in 2019. Multivariate analysis or value OR exp (B) variable aged is 0,613 and value OR exp (B) 4941413871,162 physical stress.
In order for local health workers can provide information about the results of this study can be input for policy planning related to nursing care primarily about pre operative.

Keywords : Ages, Physical Stress, Blood Pressure

INTRODUCTION

Surgery is a potential or actual threat to a person's integrity that can generate physiological and psychological stress reactions. The Indonesian Surgical Chamber of Nurses Association (HIPKABI) defines surgery as an invasive medical procedure for diagnosis, treatment of disease, trauma, and deformities.[1] Patients undergoing surgery almost always show emotional reactions such as anxiety. In addition, patients also often experience concerns about financial problems, family responsibility, work and fear of a poor prognosis.[2]

Stage preoperative begins when the decision for surgery was made and ends when the patient was transferred to the operating table. The success of the operation as a whole really depends on this stage so that mistakes made at this stage will be fatal in the next stage. Therefore, a comprehensive assessment of the patient's physical and psychological functions is necessary for the success and success of an operation.[1]

Data from the *World Health Organization* (WHO) shows that the number of patients with surgery has increased from year to year. In 2012, there were 148 million patients in all hospitals in the world with surgery. In 2015 it was estimated that 11% of the world's disease burden could be handled by surgery and WHO stated that surgical cases were a health problem for the community.[3]

Whereas in Indonesia, surgery ranks 11th out of the first 50 disease treatments in hospitals throughout Indonesia with as many as 1.2 million surgical patients. The number of visits to the general surgical installation at Marzoeki Mahdi Hospital, Bogor City, surgery includes special surgery, major surgery, medium surgery and minor surgery throughout 2016, namely 371 patients, decreased throughout 2017, namely as many as 363 patients.[4]

Blood pressure is the force needed so that blood can flow in circulating blood vessels to reach all the tissues of the human body which consists of two pressures, namely systolic which is the blood pressure when the heart is closed and diastolic which is the blood pressure when the heart relaxes again. Human blood pressure can always change according to the heart rate which is divided into three groups, namely low blood pressure (hypotension), normal blood pressure (normotension) and high blood pressure (hypertension).[5]

The results of the preliminary study conducted by the researchers in the Jasmin Room at Ciawi Hospital, Bogor Regency, the number of operations from May to July 2019 was 450 patients. On average every month as many as 150 patients undergo surgery at Ciawi Hospital, Bogor Regency in 2019. From the results of the study, 10 patients will undergo *pre* surgery, 7 patients experience changes in blood pressure, these changes in blood pressure are caused by ignorance of the procedure to be undertaken, lack of information, and hear from other people about the unpleasant experience due to surgery and 3 patients who will perform *preoperative* no change in blood pressure. Thus researchers interested in conducting research on the relationship Age and Physical Stress on Changes in Blood Pressure in Patients *Pre* Operation in hospitals Ciawi Bogor Regency Year 2019.

The purpose of research is known the relationship of age and physical stress to changes in blood pressure in patients with *preoperative* in Ciawi Hospital District Bogor in 2019.

RESEARCH METHOD

The type of research used is *descriptive analytic*. *Analytical descriptive* is a research method carried out with the main objective of making an objective description

or description of a situation which is used to solve and answer problems. Using a design *Cross Sectional.*

The research was conducted at room Jasmin Ciawi Bogor District Hospital on September 13 to September 20, 2019. The population in this study were patients *preoperative* 150 respondents. The sample in this study was 30 samples using techniques *non-probability sampling* by *accidental sampling.*

The research variables consisted of age, physical stress and changes in blood pressure. Data analysis used univariate, bivariate and multivariate analyzes, where the univariate analyzes in this study were Age, Physical Stress and Changes in Blood Pressure. Bivariate analysis analyzed the relationship between age and changes in blood pressure and Physical Stress with Changes in Blood Pressure. Multivariate analysis to analyze the relationship Age and Physical Stress on Changes in Blood Pressure in Patients *Pre* Operations.

RESEARCH RESULTS

This study was conducted to determine the relationship between age and physical stress on changes in blood pressure. With the number of respondents who have studied as many as 30 samples.

Table 1 Minimum on patients preoperative in hospitals Ciawi Bogor District 2019

No	Usia	Frekuensi	Persentase (%)
1	Dewasa Awal	5	16,7 %
2	Dewasa Akhir	7	23,3 %
3	Lansia Awal	7	23,3 %
4	Lansia Akhir	11	36,7 %
	Total	30	100%

Based on Table 1 it can be seen in patients with age preoperative in hospitals Ciawi Bogor District 2019 of 30 respondents showed that respondents with a final elderly age criterion of 11 respondents (36.7%).

Table 2 Stress Physical in patients *pre* operation in hospitals Ciawi Bogor District 2019

No	Stres Fisik	Frekuensi	Persentase (%)
1	Ringan	3	10,0 %
2	Sedang	10	33,3 %
3	Berat	13	43,3 %
4	Sangat Berat	4	13,3 %
	Total	30	100 %

Based on Table 2 can be seen physical stress on the patient *pre* operation in hospitals Ciawi Bogor District 2019 of 30 respondents showed that respondents with physical stress weight categories as many as 13 respondents (43, 3%).

Table 3 Changes in blood pressure in patients with *preoperative* in hospitals Ciawi Bogor District 2019

No	Perubahan Tekanan Darah	Frekuensi	Persentase (%
1	**Normal**	**11**	**36,7 %**
2	**Hipertensi**	**19**	**63,3 %**
	Total	**30**	**100 %**

Based on Table 3 can be seen changes in blood pressure in patients with *preoperative* in hospitals Ciawi Bogor District 2019 of 30 respondents showed that respondents with changes in high blood pressure (hypertension) as 19 respondents (63.3%).

Table 4 Relationship Age of Change Blood Pressure in patients *pre* operation in hospitals Ciawi Bogor District 2019

Usia	Perubahan Tekanan Darah				Total		*P value*
	Normal		Hipertensi		F	%	
	F	%	F	%			
Dewasa Awal	4	13,3%	1	3,3%	5	16,7%	
Dewasa Akhir	4	13,3%	3	10,0%	7	23,3%	
Lansia Awal	2	6,7%	5	16,7%	7	23,3%	0,000
Lansia Akhir	1	3,3%	10	33,3%	11	36,7%	
Total	11	36,7%	19	63,3%	30	100%	

Based on Table 4 it can be seen on the statistical test the relationship of age to changes in blood pressure of 30 respondents categories of elderly end with the change of high blood pressure (hypertension) as many as 10 respondents (33.3%) Statistical test results obtained $\rho value$ = 0.000, which means α (<0.05) so that there is a relationship between age with Blood pressure Changes in Patients *Pre* Operation in hospitals Ciawi Bogor Regency Year 2019.

Table 5 relationship with Physical Stress Changes in blood pressure in patients with *preoperative* in hospitals Ciawi Bogor District 2019

Stres Fisik	Perubahan Tekanan Darah				Total		*P value*
	Normal		Hipertensi		F	%	
	F	%	F	%			
Ringan	3	6,60%	0	0%	3	10,00%	
Sedang	8	26,70%	2	6,70%	10	33,30%	
Berat	0	0%	13	43,30%	13	43,30%	0,000
Sangat Berat	0	0%	4	13,30%	4	13,30%	
Total	11	36,70%	19	63,30%	30	100%	

Based on table 5 it can be seen on the statistical test the relationship of physical stress with changes in blood pressure of 30 respondents categories of physical stress weight with changes in high blood pressure (hypertension) as many as 13 respondents (43, 3%). Statistical test results obtained *ρvalue* = 0.000, which means *α* (<0.05) so that there is a relationship between the Physical Stress Blood Pressure Changes InPatients *Pre* Surgeryin hospitals Ciawi Bogor Regency Year 2019.

Table 6 Relation to Age and Physical Stress on Changes in Blood Pressure patient *pre* operation in hospitals Ciawi Bogor District 2019

No	Variabel	P	*OR Exp (B)*	95% *CI For Exp (B)*	
				Lower	Upper
1	Usia	0,604	0,613	0,097	3,888
2	Stres Fisik	0,997	4941413871,162	0,000	

Based on table 6 can be known statistical results there is no relationship between age and physical stress to changes in blood pressure in patients with *preoperative* in hospitals Ciawi Bogor regency in 2019 the results obtained value *OR Exp* (B) variable age is 0.613 and the value of *OR Exp (B*) for physical stress variable is 4941413871.162. From the analysis and physical stress with *OR Exp* (B) is 4,941,413,871.162 have a higher chance for a change in blood pressure in patients with preoperative.

DISCUSSION

a. Age

Based on Table 1 on the age distribution of patients *preoperative* in hospitals Ciawi Bogor District 2019 of 30 respondents showed that respondents with a final elderly age criterion of 11 respondents (36.7%).

This study is comparable to a study conducted by Zeni Wahyuningsih 2014 regarding "The Relationship between Anxiety and Increased Blood Pressure in Preoperative Patients in Bougenvil Room, Dr. Soegiri Lamongan in 2014 "with the

results obtained that respondents aged <20 years were 6 respondents (20%), ages between 20-35 years were 11 respondents (36.7%) and age >50 years were 13 respondents (43.3%).[6]

Age is defined as the length of one's existence measured in units of time in terms of chronology, normal individuals who show the same degree of anatomical and physiological development.[7]

From the research results, it can be concluded between the theory and the results of the study that age differences affect blood pressure. Systolic and diastolic pressures gradually increase with age into adulthood. For every 1 year increase in age, the systolic blood pressure will increase by 0.369 and by 0.283 for diastolic blood pressure.

The results of these studies indicate that the older a person is, the higher his blood pressure. In the elderly, the arteries are harder and less flexible with blood pressure. This results in an increase in systolic pressure. Diastolic pressure also increases because the walls of the blood vessels no longer retract flexibly as blood pressure drops. So that the authors can conclude that there is an agreement between the theory and the results of the research.

b. Physical stress

In Table 2 on the distribution of physical stress on the patient *pre* operation in hospitals Ciawi Bogor District 2019 of 30 respondents showed that respondents with physical stress weight categories were 13 respondents (43.3%).

This study is comparable to research conducted by Anik 2017 concerning "The Relationship between Anxiety Levels and Increased Blood Pressure in Preoperative Elective Patients in the Surgical Room in 2017" with the results obtained from 30 respondents that 17 respondents (56.7%) experienced severe anxiety and 13 respondents (43.3%) experienced moderate anxiety.

Stress is a condition of a person with tension and anxiety, fear and worry which is caused by an imbalance between human demands and abilities which is accompanied by emotional tension and has an influence on a person's physical and psychological (mental) condition.[8]

This heavy category of stress can cause symptoms, including feeling unable to feel positive feelings, feeling no longer strong enough to do an activity, feeling that there is nothing to be expected in the future, sadness and depression, hopelessness, loss of interest in everything, feel worthless as a human being, think that life is useless. The increasing stress experienced by final year students will gradually decrease energy and adaptive response.[8]

From the research results it can be concluded between the theory and the results of the research that stress is a feeling experienced when someone receives pressure. Emotions, anxiety, fear, physical stress and pain can increase blood pressure because stimulation of the sympathetic nervous system increases cardiac output and arteriolar vasoconstriction, thereby increasing blood pressure yield. Physical aspects have an

impact on decreasing a person's condition during times of stress so that the person experiences pain in his body organs, such as headaches, indigestion. So that the authors can conclude that there is an agreement between the theory and the results of the research.

c. Blood Pressure Changes

Based on Table 3 on the distribution of blood pressure changes in patients *pre* operation in hospitals Ciawi Bogor District 2019 of 30 respondents showed that respondents with changes in blood pressure (hypertension) were 19 respondents (63.3%).

This study is comparable study conducted by Susanti 2017 on "The Relationship Anxiety With Increased Blood Pressure in Patients *Pre* Elective Surgery at the Hospital General Ahmad Yani Metro City Year 2017" with the result that the majority of hypertension of 61.5% and respondents who have a level of anxiety very heavy most of them have hypertensive blood pressure which is equal to 58.8%.

Blood pressure is the pressure inside the blood vessels when the heart pumps blood around the body. Blood pressure is the force of blood flowing in the walls of blood vessels that leave the heart (arteries) and return to the heart of the veins.

Human blood pressure can be classified into 3 groups, namely low blood pressure (hypotension), which is a decrease in systolic blood pressure of more than 20-30% compared to the baseline measurement or systolic blood pressure <100 mmHg. Normal blood pressure (normotension) is a measure of normal adult blood pressure ranging from 120/80 mmHg. Blood pressure in life varies naturally, as infants and children normally have much lower blood pressure than adults. And persistent high blood pressure (hypertension) where the systolic pressure is above 140 mmHg and the diastolic pressure is above 90 mmHg. According to WHO, hypertension is an increase in systolic pressure greater than or equal to 160 mmHg and or diastolic pressure equal to or greater than 95 mmHg.[6]

From the research results, it can be concluded between the theory and the results of the study that blood pressure is differentiated between systolic blood pressure and diastolic blood pressure. Systolic blood pressure is the blood pressure when it contracts (contracts) whereas, diastolic blood pressure is the blood pressure when it relaxes again (relaxes). Human blood pressure can be classified into 3 groups, namely low blood pressure (hypotension), normal blood pressure, and high blood pressure (hypertension). The rising and falling of the blood pressure bubble corresponds to the pumping of the heart to circulate blood in the arteries. So that the authors can conclude that there is an agreement between the theory and the results of the research.

d. Relationship between Age and Changes in Blood Pressure in preoperative patients at Ciawi District Hospital in 2019

Based on table 4, the results of statistical tests on the relationship between age and changes in blood pressure from 30 respondents in the late elderly category with changes in high blood pressure (hypertension) were 11 respondents (36.7 %) Statistical test results obtained *ρvalue* = 0.000, which means α (<0.05) so that there is a relationship between age with Blood pressure Changes in Patients *Pre* Operation in hospitals Ciawi Bogor Regency Year 2019.

this study is comparable study conducted by Susi Sasmalinda 2014 on "Factors Affecting Changes in Patient Blood Pressure at Puskesmas Malalo Batipuh Selatan in 2014" with the results at the age of 40-59 years 18.51%, then at the age of ≥ 60 years to 25.93%. The results of statistical tests obtained a *P-value* <0.05 (0.026 <0.05) so that there is a relationship between age and changes in blood pressure of patients at the Malalo Batipuh Selatan Health Center in 2014.

Age is defined as the length of time a person is measured in terms of time. chronologically, normal individuals who show the same degree of anatomical and physiological development.[7]

Age is the age of an individual who is counted from the time of birth to several years. The more old enough, the maturity level of a person will be more mature in thinking and working. In terms of public trust, someone who is more mature will be more trusted than someone who is not mature enough.[7]

Blood pressure is the pressure inside the blood vessels when the heart pumps blood around the body. Blood pressure is the force of blood flowing in the walls of blood vessels that exit the heart (arteries) and return to the heart veins.[8]

Human blood pressure can be classified into 3 groups, namely Low blood pressure (hypotension) is a decrease in systolic blood pressure of more than 20-30% compared to the baseline measurement or systolic blood pressure <100 mmHg. Normal blood pressure (normotension) is a measure of normal adult blood pressure ranging from 120/80 mmHg. Blood pressure in life varies naturally, as infants and children normally have much lower blood pressure than adults. And persistent high blood pressure (hypertension) where the systolic pressure is above 140 mmHg and the diastolic pressure is above 90 mmHg. According to WHO, hypertension is an increase in systolic pressure greater than or equal to 160 mmHg and or diastolic pressure equal to or greater than 95 mmHg.[6]

Based on the above theory can be concluded that the age effect on blood pressure changes in patients with *preoperative.* Age differences affect blood pressure. Systolic and diastolic pressures gradually increase with age into adulthood. The results of these studies indicate that the older a person is, the higher his blood pressure. In the elderly, the arteries are harder and less flexible with blood pressure. This results in an increase in systolic pressure. Diastolic pressure also increases because the walls of the blood vessels no longer retract flexibly as blood pressure drops. So that the

authors can conclude that there is an agreement between the theory and the results of the research.

e. Correlation between Physical Stress and Changes in Blood Pressure inPatients *Preoperative* at Ciawi District Hospital in 2019

Based on table 5 of the statistical test results of the relationship between physical stress and changes in blood pressure from 30 respondents in the category of severe physical stress with changes in blood pressure (hypertension) as many as 13 respondents (43 , 3%). Statistical test results obtained *ρvalue* = 0.000, which means *α* (<0.05) so that there is a relationship between the Physical Stress Blood Pressure Changes InPatients *Pre* Surgeryin hospitals Ciawi Bogor Regency Year 2019.

This study is comparable study conducted by Katrin Indah Islami 2015 on "The Relationship Between Stress and Hypertension in Outpatients at the Rapak Mahang Community Health Center, Kutai Kartanegara Regency, East Kalimantan Province in 2015" with the results of respondents suffering from hypertension, 33 respondents (70.2%) experienced stress and 14 respondents (29.8%) who don't experience stress. After the statistical analysis test was carried out with the Contingency Coefficient correlation test, the p value was obtained <0.001 which means that there is a very significant correlation with a value of r = 0.473 which means that the strength of the correlation tested is moderate, with a positive correlation direction (+) which means unidirectional.

Stress is defined as tension, pressure, inner pressure, tension and conflict. Stress also refers to changes, both positive and negative, in the environment of an organism, which receive a response from that organism.[8]

This heavy category of stress can cause symptoms, including feeling unable to feel positive feelings, feeling no longer strong enough to do an activity, feeling that there is nothing to be expected in the future, sadness and depression, hopelessness, loss of interest in everything, feel worthless as a human being, think that life is useless. The increasing stress experienced by final year students will gradually decrease energy and adaptive response.[8]

Blood pressure is the pressure inside the blood vessels when the heart pumps blood around the body. Blood pressure is the force of blood flowing in the walls of blood vessels that leave the heart (arteries) and return to the heart veins.[6]

Human blood pressure can be classified into 3 groups, namely low blood pressure (hypotension), which is a decrease in systolic blood pressure of more than 20-30% compared to the baseline measurement or systolic blood pressure <100 mmHg. Normal blood pressure (normotension) is a measure of normal adult blood pressure ranging from 120/80 mmHg. Blood pressure in life varies naturally, as infants and children normally have much lower blood pressure than adults. And persistent high blood pressure (hypertension) where the systolic pressure is above 140 mmHg and the diastolic pressure is above 90 mmHg. According to WHO, hypertension is an

increase in systolic pressure greater than or equal to 160 mmHg and or diastolic pressure equal to or greater than 95 mmHg.[9]

Stress can increase blood pressure at any time. The hormone adrenaline will increase when we are stressed, and it can cause the heart to pump blood faster so that blood pressure increases. If the stress lasts long enough, the body will try to make adjustments so that organic abnormalities or pathological changes occur. Symptoms that will appear are hypertension or ulcer disease. Stress can increase blood pressure for a while and when the stress is gone, blood pressure can return to normal.

Based on the above theory can be concluded that physical stress affects the blood pressure changes in patients with *preoperative.* Based on data from the questionnaire, respondents experienced stress before performing surgery as experienced by individuals, including headaches, sleep disorders, indigestion, eating disorders, skin disorders, and excessive sweat production. So that the authors can conclude that there is an agreement between the theory and the results of the research.

f. The Relationship between Age and Physical Stress on Changes in Blood Pressure in Preoperative Patients at Ciawi Hospital, Bogor Regency in 2019

Based on Table 6 shows the results of multivariate analysis, it turns out that the *OR Exp (B*) value of the age variable is 0.613 and the *OR Exp (B*) value of the stress variable physical is 4,941,413,871.162, which turns out is no relationship between age and physical stress to changes in blood pressure in patients with *preoperative.* From the analysis and physical stress with *OR Exp* (B) is 4,941,413,871.162 have a higher chance for a change in blood pressure in patients with *preoperative* in Ciawi Bogor District Hospital in 2019.

This study is comparable study conducted by Sumadi 2015 on "The Relationship between Age Phase and Anxiety Level in *Pre* Operation at Pondok Al Karomah Wonosobo, Central Java in 2015" with the results of 11 respondents (44.0%) having no anxiety, 11 respondents (44.0%) experiencing moderate anxiety and 3 respondents (12.0%) experienced severe anxiety with a *p value of* 0.574, which means *p value* 0.05, so there is no relationship between the level of age and the level of anxiety in *preoperative* at Pondok Al Karomah Wonosobo, Central Java in 2015.

Age is the individual's age calculated from the time of birth to several years. The more old enough, the maturity level of a person will be more mature in thinking and working. In terms of public trust, someone who is more mature will be more trusted than someone who is not mature enough.[8]

Stress is a condition of a person with tension and anxiety, fear and worry which is caused by an imbalance between human demands and abilities which is accompanied by emotional tension and has an influence on a person's physical and psychological (mental) condition.[8]

Blood pressure is the pressure inside the blood vessels when the heart pumps blood around the body. Blood pressure is the force of blood flowing in the walls of blood vessels that leave the heart (arteries) and return to the heart veins.[6]

Age differences affect blood pressure. Newborns have a mean systolic pressure of 73 mmHg. Systolic and diastolic pressures gradually increase with age into adulthood. For every 1 year increase in age, the systolic blood pressure will increase by 0.369 and by 0.283 for diastolic blood pressure. The results of these studies indicate that the older a person is, the higher his blood pressure. In the elderly, the arteries are harder and less flexible with blood pressure. This results in an increase in systolic pressure. Diastolic pressure also increases because the walls of the blood vessels no longer retract flexibly as blood pressure drops.

Human blood pressure can be classified into 3 groups, namely low blood pressure (hypotension), which is a decrease in systolic blood pressure of more than 20-30% compared to the baseline measurement or systolic blood pressure <100 mmHg. Normal blood pressure (normotension) is a measure of normal adult blood pressure ranging from 120/80 mmHg. Blood pressure in life varies naturally, as infants and children normally have much lower blood pressure than adults. And persistent high blood pressure (hypertension) where the systolic pressure is above 140 mmHg and the diastolic pressure is above 90 mmHg. According to WHO, hypertension is an increase in systolic pressure greater than or equal to 160 mmHg and or diastolic pressure equal to or greater than 95 mmHg.[9]

Stress can increase blood pressure at any time. The hormone adrenaline will increase when we are stressed, and it can cause the heart to pump blood faster so that blood pressure increases. If the stress lasts long enough, the body will try to make adjustments so that organic abnormalities or pathological changes occur. Symptoms that will appear are hypertension or ulcer disease. Stress can increase blood pressure for a while and when the stress is gone blood pressure can be normal again

Based on the above theory can be concluded that the age and physical stress had no effect on blood pressure changes in patients with *preoperative.* So that the researcher can conclude that there is a correspondence between the theory and the research results.

CONCLUSION

1. Knowing the frequency distribution of the age of the patient *pre* operation in hospitals Ciawi Bogor District 2019 of 30 respondents showed that respondents with late adult age criteria as much as 11 respondents (36.7%).
2. Knowing the frequency distribution of physical stress on the patient *pre* operation in hospitals Ciawi Bogor District 2019 of 30 respondents showed that respondents with physical stress weight categories were 13 respondents (43.3%).
3. Knowing the frequency distribution of blood pressure changes in patients *pre* operation in hospitals Ciawi Bogor District 2019 of 30 respondents showed that respondents with changes in high blood pressure (hypertension) were 19 respondents (63.3%).
4. It is known that there is a relationship between age and changes in blood pressure from 30 respondents in the late elderly category with changes in high blood

pressure (hypertension) as many as 10 respondents (33.3%) The results of statistical tests obtained are *ρvalue* = 0,000 which means *α* (<0.05) so there is a relationship the Age of Change of Blood pressure in Patients *Pre* Operation in hospitals Ciawi Bogor Regency Year 2019.

5. It is known that there is a relationship between physical stress and changes in blood pressure from 30 respondents in the category of severe physical stress with changes in hypertension blood pressure as many as 13 respondents (43.3%). Statistical test results obtained *ρvalue* = 0.000, which means *α* (<0.05) so that there is a relationship between the Physical Stress Blood Pressure Changes InPatients *Pre* Surgeryin hospitals Ciawi Bogor Regency Year 2019.
6. Knowledgeable no relationship between age and physical stress to changes in blood pressure in patients with *preoperative* in hospitals Ciawi Bogor regency in 2019 the results obtained values *OR Exp* (B) the age variable is 0.613 and the value of *OR Exp*(B)variable physical stress is 4,941,413,871.162 . From the analysis and physical stress with *OR Exp* (B) is 4,941,413,871.162 have a higher chance for a change in blood pressure in patients with *preoperative* in Ciawi Bogor District Hospital in 2019.

SUGGESTION

1. For hospital
   Expect to increase nursing services and conduct checking blood pressure for patients who will face actions *preoperative*
2. For Educational Institutions
   As a developer of science and readings from reference subjects of nursing and KDM particularly associated with blood pressure in patients with preoperative.

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