



## Factors Associated with the Incidence of Hypertension in Productive Age (15-64 Years) in Andalas Village, Padang City in 2023

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### Abstract

Non-communicable diseases are quite a big health problem, one of which is hypertension. In 2021, the prevalence of hypertension in Indonesia will be 34.1%. In 2022 the city of Padang will occupy 2nd position at 22.4%. Of the 23 health centers in Padang City, hypertension in the productive age group was highest at Andalas Health Center at 30.2%. This study aims to determine the factors associated with the incidence of hypertension in productive age (15-64 years) in Andalas Village in 2023. The research method used is quantitative with a cross sectional study design. The research was conducted in March-August 2023. Data collection was carried out on 25 July-5 August 2023 with a population of all productive ages in Andalas Village of 252 people. A sample of 72 respondents used the simple random sampling method. Data was collected through questionnaires with interviews. Univariate and bivariate data analysis using the Chi-Square test. The research results showed that 58.3% of respondents had hypertension, 73.6% of respondents had no smoking behavior, 58.3% of respondents had light physical activity, and 55.6% of respondents were stressed. The results of statistical tests show that there is a relationship between physical activity ( $p = 0.015$ ) and stress levels ( $p = 0.045$ ) with the incidence of hypertension in productive age. Meanwhile, smoking behavior has no significant relationship with the incidence of hypertension in productive age in Andalas Village ( $p = 0.752$ ). Physical activity and stress levels are among the factors that influence the incidence of hypertension in productive age. It is hoped that the Andalas Community Health Center staff can reduce the number of cases of hypertension by increasing physical activity such as holding gymnastics activities and providing education through counseling to manage stress well.

**Keywords :** Physical Activity, Incidence Of Hypertension, Smoking Behavior, Stress Level

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### INTRODUCTION

Hypertension is a condition where a person has systolic blood pressure  $\geq 140$  mmHg and diastolic pressure  $\geq 90$  mmHg. High blood pressure or hypertension is often referred to as a silent killer, because it is one of the deadliest diseases with 70% of people with hypertension not knowing and feeling the symptoms first as a warning (Sumartini et al., 2019).

The problem of hypertension is a health challenge not only in Indonesia but almost all over the world. An estimated 1.28% of adults aged 30-79 years worldwide suffer from hypertension, two-thirds of whom live in low- and middle-income countries. Based on WHO data related to the prevalence of hypertension, globally the prevalence of hypertension is 22% of the total world population, while for the prevalence of

hypertension based on WHO regions, the African region is the region with the highest prevalence of hypertension with a percentage of 27%, followed by the Eastern Mediterranean with a prevalence of hypertension of 26% and Southeast Asia is in third place with a percentage of 25%. WHO has a target of reducing the prevalence of hypertension by 33% by 2030 (WHO, 2021).

The prevalence of hypertension in Indonesia ranks 5th with the highest measurement results in South Kalimantan (44.1%), while the lowest in Papua is (22.2%). Hypertension occurs in the age group 31-44 years (31.6%), age 45-54 years (45.3%), age 55-64 years (55.2%). Of the 34.1% of people with hypertension, only 8.8% of people diagnosed with hypertension, as many as 13.3% of people diagnosed with hypertension do not take medicine regularly. This shows that there are still many people with hypertension who have not received the treatment they should get (Riskasdas, 2018).

The prevalence of hypertension in West Sumatra out of 36,038 people aged  $\geq 15$  years who took blood pressure measurements, 21,878 people were served with a diagnosis of hypertension, amounting to 60.7%. Most sufferers are women, namely 13,729 people and men as many as 21,878 people. Health services for people with hypertension according to standards are secondary prevention efforts in their work areas within one year (Padang City Health Office, 2020).

Based on data on the prevalence of hypertension in West Sumatra, there are more than 60.7% or around 21,878 out of 36,038 people diagnosed with hypertension. One of the highest number of people with hypertension in Padang City is in the Pauh Health Center with a total of 2,934 people (Padang City Health Office, 2021).

Of the 165,555 people aged  $\geq 15$  years in Padang City in 2022, 37,011 people were served with a diagnosis of hypertension, 22.4%. Most sufferers are women, namely 21,748 people and men as many as 15,263 people. Based on Padang city data, the Andalas Health Center is ranked first in hypertension cases (Padang City Health Office, 2022).

According to the Andalas Puskesmas data, the Puskesmas working area is in 7 villages, namely Sawahan Village, Jati Baru, Jati, East Sawahan, Simpang Haru, Andalas, and Ganting Parak Gadang. Based on data obtained in the Puskesmas Working Area, in 2021 the number of people with hypertension in productive age (16-64 years) was 896 people and in 2022 the number of people with hypertension in productive age (17-64 years) was 880 people. Based on data obtained from 7 urban villages in the Puskesmas Working Area, the highest urban village is Andalas Village with 262 people (Puskesmas Andalas Padang, 2022).

Based on the concept that the increasing knowledge of patients about hypertension will encourage a person to behave better in controlling hypertension so that their blood pressure remains under control. Smoking triggers the heart to work faster so that blood circulation flows faster and there is a narrowing of blood vessels and the role of carbon monoxide which can replace oxygen in the blood and force the heart to meet the body's oxygen needs. Lack of physical activity can increase the risk of suffering from hypertension because it increases the risk of being overweight. Inactive people also tend to have a higher heart rate frequency so that the heart muscle has to work harder with each contraction. High blood pressure or hypertension can be caused by stress suffered by individuals, because the reaction to stress impulses is that their blood pressure increases. In addition, generally individuals who experience stress have difficulty sleeping, so it will have an impact on their blood pressure which tends to be high (Mayasari et al., 2019).

Research conducted by Mayasari, Agung Waluyo, Wati Jumaiyah, Rohman Azzam (2019) in the Bonegunu Health Center Work Area of North Buton Regency with a total sample of 134, found that p value = 0.000 for poor knowledge 83%, p value = 0.001 for lack of physical activity 75.4%, p value = 0.002 for non-compliant diet 71.2%, p value = 0.002 for lack of health facilities 69.7%, p value = 0.000 for consuming alcohol 40.9%, and p value = 0.000 stress 76.2%. Based

on research, it was found that there was a relationship between knowledge, physical activity, diet, alcohol consumption, stress and health facilities with the incidence of hypertension (Mayasari et al., 2019).

Another study conducted by Erma Kasumayanti, Nia Aprilla, Maharani (2021) in the Kuok UPTD Puskesmas Work Area with a sample of 104 people of productive age, obtained a family history of 74.4% with  $p$  value = 0.000, stress level 74.2% with  $p$  value = 0.000, and lifestyle 53.65 with  $p$  value = 0.000. Based on research, it was found that there was a relationship between family history, stress level, and lifestyle with the incidence of hypertension (Erma, 2021).

Based on an initial survey conducted on March 27 to March 30, 2023 to productive age from the age of 30-55, 10 respondents were found in Andalas Village, Puskesmas Working Area. Respondents of productive age who smoke 4 people (40%), who have light physical activity 5 people (50%), and stress levels 4 people (40%).

Based on the background described, it is necessary to conduct research to determine the factors associated with the incidence of hypertension in productive age (15-64 years) in Andalas Village, Padang City in 2023.

## **METHODS**

This study is a quantitative study. This study uses the Cross Sectional method to see the relationship of Independent variables (smoking behavior, physical activity and stress levels) with Dependent variables (incidence of hypertension in productive age) measured at the same time. This research was conducted in Andalas Village, Padang City in March - August 2023. Data collection using questionnaires was carried out on July 25-August 5, 2023. The population in this study were all productive age in Andalas Village, Padang City as many as 252 people, with a sample of 72 people. The sampling method used is Simple Random Sampling. Data analysis performed was univariate by looking at frequency

distribution and bivariate analysis with Chi-square statistical test.

## **RESULTS AND DISCUSSION**

Based on the results of research that has been obtained through filling out questionnaires and interviews on Factors Associated with the Incidence of Hypertension at Productive Age (15-64 years) in Andalas Village, Padang City in 2023.

Based on table 1, it is known that of the 72 respondents in Andalas Village, Padang City who experienced hypertension as many as 42 (58.3%). Based on table 2, it is known that of the 72 respondents in Andalas Village, Padang City who did not have smoking behavior were 53 (73.6%). Based on table 3, it is known that of the 72 respondents in Andalas Village, Padang City who had mild physical activity as many as 42 (58.3%). Based on table 4, it is known that out of 72 respondents in Andalas Village, Padang City who experienced stress as many as 40 (55.6%).

### **Incidence of Hypertension in Andalas Village, Padang City in 2023**

Based on the results of the study, it was found that 42 (58.3%) respondents experienced hypertension in Andalas Village, Padang City in 2023. This is in line with research conducted by (Erma, 2021) in the Kuok UPTD Puskesmas Work Area showing that many productive ages experience hypertension (65.4%). Meanwhile, research (Fitriyani & Wuni, 2020) in Kemingking Village in Muaro Jambi Regency showed that 59.6% of respondents experienced hypertension.

Hypertension or high blood pressure is a condition where systolic blood pressure  $\geq$  140 mmHg and or diastolic blood pressure  $\geq$  90 mmHg. Blood pressure or hypertension is an increase in blood pressure in the arteries. In general, hypertension is an asymptomatic condition, where abnormally high pressure in the arteries leads to an increased risk of aneurysm, heart failure, heart attack and kidney damage. In checking blood pressure, two numbers will be

obtained, the higher number is obtained when the heart contracts (systolic), the lower number is obtained when it relaxes (diastolic) (P2PTMkemenkes, 2021).

**Table 1. Frequency Distribution of Respondents Based on the Incidence of Hypertension at Productive Age in Andalas Village, Padang City in 2023**

<b>Incidence of Hypertension</b>	<b>f</b>	<b>%</b>
Hypertension	42	58,3
No Hypertension	30	41,7
<b>Total</b>	<b>72</b>	<b>100</b>

**Table 2. Frequency Distribution of Respondents Based on Smoking Behavior at Productive Age in Andalas Village, Padang City in 2023**

<b>Smoking Behavior</b>	<b>f</b>	<b>%</b>
Smoking	19	26,4
No Smoking	53	73,6
<b>Total</b>	<b>72</b>	<b>100</b>

**Table 3. Frequency Distribution of Respondents Based on Physical Activity at Productive Age in Andalas Village, Padang City in 2023**

<b>Physical Activity</b>	<b>f</b>	<b>%</b>
Lightweight	42	58,3
Medium	30	41,7
<b>Total</b>	<b>72</b>	<b>100</b>

**Table 4. Frequency Distribution of Respondents Based on Stress Level at Productive Age in Andalas Village, Padang City in 2023**

<b>Stress Level</b>	<b>f</b>	<b>%</b>
Stress	40	55,6
No Stress	32	44,4
<b>Total</b>	<b>72</b>	<b>100</b>

Hypertension is a disease caused by the interaction of various risk factors experienced by a person. Factors that influence the occurrence of hypertension are divided into two groups, namely uncontrollable risk factors such as age, gender, and family history. While controllable risk factors such as smoking behavior, physical activity, and stress levels (P2PTMkemenkes, 2019).

Based on the results of the study seen from the characteristics of gender, respondents who experienced the most hypertension were found in female respondents as many as 32 people. Based on age characteristics, respondents who experienced the most hypertension were found in respondents aged 56 - 64 years as many as 27

people. As age increases, a person's risk of developing hypertension increases.

According to the assumptions of researchers in Andalas Village, Padang City in 2023, the high incidence of hypertension in productive age is caused by a poor lifestyle. This is because people are less motivated in implementing a healthy lifestyle in their daily lives. People are more inclined to practical things that have an effect on health. It is expected that health center officers to further optimize counseling at a productive age regarding hypertension and conduct educational demonstrations about the dangers of hypertension for health, especially productive age.

### **Smoking Behavior in Andalas Village, Padang City in 2023**

Based on the results of the study, it is known that productive age in Andalas Village, Padang City in 2023 does not have smoking behavior, namely 53 (73.6%) respondents. This research is in line with the results of research conducted by (Efriandi, 2022) in the Jekan Raya Health Center Work Area showing that productive age does not have a smoking behavior of 74.1%. Meanwhile, according to (Fitriyani & Wuni, 2020) in Kemingking Village in Muaro Jambi Regency, it shows that productive age does not have a smoking behavior of 63.4%.

Nicotine in cigarette content can increase adrenaline which makes the frequency of heart rate and heart contractions increase, causing blood pressure to increase. Nicotine and carbon monoxide smoked through cigarettes that enter the bloodstream can damage the endothelial layer of arterial blood vessels, which can lead to the process of atherosclerosis and high blood pressure. Nicotine contained in cigarettes can affect a person's blood pressure, either through the formation of atherosclerotic plaques, the direct effect of nicotine on the release of the hormones epinephrine and norepinephrine or through the effect of CO in increasing red blood cells. A person is said not to smoke if they have never smoked at most 1 cigarette per day for 1 year. A

person is said to smoke if they smoke at least 1 cigarette per day for at least 1 year (Muafiah, 2019).

Based on the results of the study seen from the characteristics of gender, respondents who had the most smoking behavior were found in the male gender as many as 19 people. This is because respondents have difficulty stopping smoking. Judging from the answers to the questionnaire questions, the average respondent was able to smoke 1 pack per day and judging from the length of time, the average respondent had more than 10 years of smoking behavior.

According to the assumption of researchers in Andalas Village, Padang City in 2023, more respondents do not have smoking behavior because the average is found to be female, so it is only found in men who have smoking behavior. Not only that, some respondents already know the dangers or effects of smoking and some have felt pain such as shortness of breath, so only some are still applying smoking behavior, especially in male respondents. It is expected that health center officers conduct counseling in buildings and outside buildings regarding the dangers of smoking at productive ages, the need for continuous and planned education about the effects caused by smoking to productive ages, and policies that contain sanctions against KTR violations are needed.

### **Physical Activity in Andalas Village, Padang City in 2023**

Based on the results of the study, it was found that productive age in Andalas Village, Padang City in 2023 had mild physical activity as many as 42 (58.3%) respondents. This research is in line with research (Mayasari et al., 2019) in the Bonegunu Health Center Work Area of North Buton Regency which was found to have 75.4% light activity. Meanwhile, according to research (Herawati, 2020) in Secapah Sengkubang Village, Mempawah Hilir Health Center Working Area, it was found that light physical activity was 98.1%.

Physical activity is any movement of the body that results in skeletal muscle work and

increases energy expenditure. Regular physical activity is proven to help prevent and manage non-communicable diseases (NCDs) such as heart disease, stroke, diabetes and some cancers. It also helps prevent hypertension, maintain a healthy weight and can improve mental health, quality of life and well-being (P2PTMkemenkes, 2019).

People who lack physical activity tend to have high cardiac output. The higher the cardiac output, the greater the oxygen required by body cells. Lack of physical activity causes a lack of energy burning by the body so that excess energy in the body will be stored in the form of fat in the body. Excessive storage will result in hypertension. Lack of physical activity increases the risk of suffering from high blood pressure (Damanik, 2020).

Based on the results of the study seen from the characteristics of gender, respondents who had mild physical activity were mostly found to be female as many as 32 people. This is due to the average respondent as a housewife.

According to the researcher's assumption, the number of productive ages who do light physical activity in Kelurahan Andalas Kota Padang in 2023 at a productive age this happens because many productive ages are not aware that the importance of maintaining physical activity such as exercise, there are other activities, and some are old so they are not strong enough to do more physical activity. It is hoped that health center officers can apply the importance of physical activity by making joint sports activities not only done if there are activities, but need to be done routinely every week and conduct counseling at a productive age about the importance of physical activity for health.

### **Stress Level in Andalas Village, Padang City in 2023**

Based on the results of the study, it was found that productive age in Andalas Village, Padang City in 2023 experienced stress as many as 40 (55.6%) respondents. This research is in line

with research (Mayasari et al., 2019) in the Bonegunu Health Center Work Area of North Buton Regency found to have a stress level of 64.8%. Meanwhile, according to research (Jingga, 2022) at the Andalas Health Center, it was found to have a stress level of 60.6%.

When a person experiences stress, the hormone adrenaline will be released and will then increase blood pressure through arterial contraction (vasoconstriction) and increased heart rate. If the stress continues, blood pressure will remain high so that the person will develop hypertension (Sugiarti et al., 2021).

Based on the results of the study seen from the characteristics of gender, respondents who experienced the most stress were found in the female gender as many as 29 respondents. Judging from the answers to the questionnaire, the respondents were angry because something was unexpected by 54.2%, unable to control important things by 55.6%, feeling difficulties that accumulated so that they were unable to overcome them by 61.1%.

According to the assumptions of researchers, the number of productive age people who experience stress in Kelurahan Andalas Kota Padang in 2023 is due to the fact that there are some people who have little rest time, feel irritable and easily upset, see an unsettled home situation and some people find it difficult to sleep, especially at night they mostly say that when they wake up they cannot sleep again because of the problems they think about so they think harder and cause stress. It is hoped that health center workers can increase understanding at productive age about how to reduce stress levels, always think positively and routinely do sports activities so that the mind becomes calm.

### **The Relationship between Smoking Behavior and the Incidence of Hypertension at Productive Age in Andalas Village, Padang City in 2023**

**Table 5. Relationship between Smoking Behavior and the Incidence of Hypertension at Productive Age in Andalas Village, Padang City in 2023**

Smoking Behavior	Incidence of Hypertension				Total		P - value
	Hypertension		No Hypertension		f	%	
	f	%	f	%			
Smoking	10	52,6	9	47,4	19	100	P = 0,752
No Smoking	32	60,4	21	39,6	53	100	
<b>Total</b>	<b>42</b>	<b>58,3</b>	<b>30</b>	<b>41,7</b>	<b>72</b>	<b>100</b>	

**Table 6. Relationship between Physical Activity and the Incidence of Hypertension at Productive Age in Andalas Village, Padang City in 2023**

Physical Activity	Incidence of Hypertension				Total		P - value
	Hypertension		No Hypertension		f	%	
	f	%	f	%			
Lightweight	30	71,4	12	28,6	42	100	P = 0,015
Medium	12	40	18	60	30	100	
<b>Total</b>	<b>42</b>	<b>58,3</b>	<b>30</b>	<b>41,7</b>	<b>72</b>	<b>100</b>	

**Table 7. Relationship between Stress Level and Hypertension Incidence at Productive Age in Andalas Village, Padang City in 2023**

Stress Level	Incidence of Hypertension				Total		P - value
	Hypertension		No Hypertension		f	%	
	f	%	f	%			
Stress	28	70	12	30	40	100	P = 0,045
No Stres	14	43,8	18	56,2	32	100	
<b>Total</b>	<b>42</b>	<b>58,3</b>	<b>30</b>	<b>41,7</b>	<b>72</b>	<b>100</b>	

Based on the results of the study, it can be seen that the incidence of hypertension was found more in respondents who did not apply smoking behavior as many as 32 (60.4%) compared to respondents who applied smoking behavior as many as 10 (52.6%). The statistical test results show a p value = 0.752 ( $p < 0.05$ ), which means that there is no significant relationship between the relationship between smoking behavior and the incidence of hypertension in productive age in Andalas Village, Padang City in 2023.

The results of this study are in line with research (Efriandi, 2022) where the results of the study obtained a p value = 0.643 which means that there is no relationship between smoking behavior and the incidence of hypertension in

productive age in the Jekan Jaya Health Center Working Area. Meanwhile, according to the results of research (Jingga, 2022), the p value = 0.772 is obtained, which means that there is no relationship between smoking status and the incidence of hypertension in productive age in the Andalas Health Center Working Area.

According to (Muafiah, 2019) the type of smoker can be divided into 2, namely non-smoking, if people who have never smoked at most 1 cigarette per day for 1 year and smoking, if people who smoke at least 1 cigarette per day for at least 1 year. The relationship between smoking and hypertension is nicotine which causes an increase in blood pressure because nicotine in cigarettes is absorbed by small blood

vessels in the lungs so that it is circulated by blood vessels to the brain, the brain will react to nicotine by signaling the adrenal glands so that they can release epinephrine (adrenaline).

According to the assumptions of researchers smoking behavior at productive age in Andalas Village, Padang City in 2023 researchers found more female respondents, so only men were found to have smoking behavior. It is hoped that health center personnel can conduct health promotion regarding smoking to productive age who still apply smoking behavior so as to reduce the incidence of hypertension in productive age.

### **The Relationship between Physical Activity and the Incidence of Hypertension at Productive Age in Andalas Village, Padang City in 2023**

Based on the results of the study, it can be seen that the incidence of hypertension was found more in respondents who had mild physical activity as many as 30 (71.4%) respondents compared to respondents who had moderate physical activity as many as 12 (40%). The results of this statistical test show a p value = 0.015 ( $p < 0.05$ ) which means that there is a significant relationship between the relationship between physical activity and the incidence of hypertension in productive age in Andalas Village, Padang City in 2023.

The results of this study are in line with Sherly's research (2023) where the results of the study obtained a p value = 0.021 which means that there is a relationship between physical activity and the incidence of hypertension in the Garuda Health Center Working Area of Pekanbaru City. Likewise, with research (Musfirah & Hartati, 2021) where the results of the study obtained p value = 0.026 which means that there is a significant relationship between physical activity and the incidence of hypertension at the North Polong Bangkeng Health Center.

Physical activity is any movement of the body that results in skeletal muscle work and increases energy expenditure. Regular physical

activity is proven to help prevent and manage non-communicable diseases (NCDs) such as heart disease, stroke, diabetes and some cancers. It also helps prevent hypertension, maintain a healthy weight and can improve mental health, quality of life and well-being (P2PTMkemenkes, 2019).

Regular physical activity or light to moderate exercise that is routine and regular and sustainable is one of the most important things that can be done easily to obtain various health benefits. One of the causes of NCDs, especially hypertension, is the lack of physical activity which is categorized as sufficient if someone does physical exercise for 30 minutes every day or at least 3-5 days a week (P2PTMkemenkes, 2019).

According to the researcher's assumption, physical activity in Kelurahan Andalas Kota Padang in 2023 is still said to be lacking because there are still many respondents who have light physical activity due to laziness to move, do not take the time to exercise, and only do daily activities at home. For respondents who find it difficult to do strenuous physical activity, there are some respondents who are elderly so they are unable to do more physical activity. If physical activity is less, there will be a risk of hypertension, on the other hand, if more physical activity is done, the risk of hypertension will be less. People should do physical activity 3-5 days a week with a minimum of 30 minutes every day, this is done in order to reduce blood pressure. It is hoped that health center officers can promote morning gymnastics activities carried out at the health center and conduct health promotion regarding good physical activity so as to reduce the incidence of hypertension in productive age.

### **Relationship between Stress Level and Hypertension Incidence at Productive Age in Andalas Village, Padang City in 2023**

Based on the results of the study, it can be seen that the incidence of hypertension was found more in respondents who experienced stress levels as many as 28 (70.0%) respondents compared to respondents who did not experience stress levels as many as 14 (43.8%). The results of this

statistical test show a p value = 0.045 ( $p < 0.05$ ) which means that there is a significant relationship between the relationship between stress levels and the incidence of hypertension in productive age in Andalas Village, Padang City in 2023.

The results of this study are also in line with research (Oktaviani et al., 2022) where the results of the study obtained a p value = 0.037 which means that there is a significant relationship between stress levels and the incidence of hypertension in productive age in the Ngemplak Simongan Semarang Health Center Working Area. Likewise with research (Pebriyani et al., 2022) where the results of the study obtained a p value = 0.046 which means there is a significant relationship between stress levels and the incidence of hypertension in productive age at the Kedaton Bandar Lampung Health Center.

Stress can be divided into 2 levels, namely stress and non-stress. Stress is said if a state of distress both physically and psychologically decreases. Non-stress, the opposite of stress produces a healthy, positive and constructive individual response. When a person experiences stress, the hormone adrenaline will be released and will then increase blood pressure through arterial contraction (vasoconstriction) and increased heart rate. If the stress continues, blood pressure will remain high so that the person will experience hypertension (Sugiarti et al., 2021).

According to the researcher's assumption, the level of stress in Kelurahan Andalas Kota Padang in 2023 is still not good because there are still people who are easily angry, easily annoyed, lack of rest and difficulty sleeping, the emergence of thoughts that can cause stress, especially when the night wakes up unable to sleep again because of thinking about problems. It is known that stress factors such as lack of sleep can trigger high blood pressure. If the community can deal with their stress properly, health will be maintained, on the other hand, if the community cannot deal with their stress and it lasts for a long time, it will cause health problems, especially in the incidence of hypertension. It is hoped that health center

officers can increase understanding to productive age about how to reduce stress levels, always think positively and routinely carry out sports activities so as to reduce cases of hypertension in productive age.

## CONCLUSIONS

Based on the results obtained about the factors associated with the incidence of hypertension in productive age in Andalas Village, Padang City in 2023, conclusions can be drawn including: A total of 42 (58.3%) respondents experienced hypertension in Andalas Village, Padang City in 2023. A total of 53 (73.6%) respondents who did not have smoking behavior in Andalas Village, Padang City in 2023. A total of 42 (58.3%) respondents had light physical activity in Kelurahan Andalas Kota Padang in 2023. A total of 40 (55.6%) respondents who experienced stress in Andalas Village, Padang City in 2023. There is no relationship between smoking behavior and the incidence of hypertension in productive age in Andalas Village, Padang City in 2023 with a p value = 0.752 ( $p < 0.05$ ). There is a relationship between physical activity and the incidence of hypertension in productive age in Andalas Village, Padang City in 2023 with a p value = 0.015 ( $p < 0.05$ ). There is a relationship between stress level and the incidence of hypertension in productive age in Andalas Village, Padang City in 2023 with a p value = 0.045 ( $p < 0.05$ ).

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