LEVEL OF KNOWLEDGE "CERDIK" PROGRAMS ON BLOOD PRESSURE IN HYPERTENSION PATIENTS

Nita Arisanti Yulanda[1*], Uray Weza Azalia Dika Putri[2], Mita[3]

[1-3]Nursing Program, Faculty Of Medicine, Universitas Tanjungpura

Email Korespondensi: nita.arisantiyulanda@ners.untan.ac.id

Disubmit: 16 Mei 2024 Diterima: 23 November 2024 Diterbitkan: 01 Desember 2024
Doi: https://doi.org/10.33024/mahesa.v4i12.15242

ABSTRACT

Hypertension is one of the leading causes of death. This disease has taken millions of lives and is a covert killer. The rise in hypertension rates is mainly in developing countries such as Indonesia. Indonesia faces 63 million documented cases of hypertension, causing 427,218 deaths each year and ranked third among the ten most common diseases in West Kalimantan, in the city of Pontianak. Bad lifestyle is one of the factors causing hypertension. In order to address the prevalence of hypertension, the Indonesian government has proposed the implementation of CERDIK programmes. However, a gap has been found between the programmes implemented and the trend of increasing prevalence. This study is to find out the relationship of blood pressure of hypertensive patients with the level of knowledge of patients about the CERDIK program at the Clinic of Neurology of RSUD Dr. Soedarso Pontianak. The design of this study was a quantitative writing design that uses cross-sectional methodology. The random sample sampling consisted of 58 respondents, determined using Spearman's rho hypothesis test. Based on the writing findings, the majority of participants (36.2%) belonged to early geriatric demographics (age 46-55), with a female majority (81%). 48.3% of respondents had a high school education or higher, and 34.5% were employed as housewives. The proportion of participants with a satisfactory level of knowledge reached 81% of the total sample. Nearly half of respondents (47%) had normal high blood pressure and grade 1 hypertension. This research suggests that there is no statistically significant correlation between the blood pressure of hypertensive patients and their level of knowledge of the CERDIK program.

Keywords: "CERDIK Program", "Hypertension", "Knowledge".

INTRODUCTION

Hypertension is diagnosed when the patient's systolic blood pressure exceeds 140 mmHg and the diastolic blood pressure falls below 90mmHg, both of which are outside the expected normal range of blood pressure values (Ansar J, Dwinata I, 2019).

This invisible disease with the naked eye has taken millions of lives all over the world. The American Health Association (AHA) has established that hypertension is responsible for the deaths of 10.4 million people worldwide (Unger et al., 2020). According to the World Health Organization (WHO), cardiovascular disease (CVD) contributed to more than two million deaths in the United States in 2019,

with hypertension contributing to over fifty percent of CVD-related deaths (Campbell et al., 2022)

One of the developing countries whose prevalence is increasing is Indonesia. The prevalence of hypertension in Indonesia is estimated to affect 63 million people with a death toll of 427,218 (Statistik, 2018)

Hypertension ranks top three of the top ten diseases in West Kalimantan, in Pontianak City, according to Basic Health Research Results 2018 (Kementrian Kesehatan RI, 2018). With 158,809 cases registered in 2019, hypertension is the second most common disease in Pontianak (Dinkes Pontianak, 2019). As is well known, fifty percent of all patients in Indonesia are unaware that they suffer from hypertension, which is now a disease that increasingly affects adults. As a result, early prevention and blood pressure management are not carried out. This leads to the development of severe hypertension in patients due to lack of awareness and avoidance of risk factors (Efendi et al., 2022). Lifestyle is one of the risk factors for hypertension.

There is a significant correlation between public awareness of the CERDIK program and attitude towards prevention of recurrent strokes, based on the findings of Ekawati et al., (2021) on the effectiveness of CERDIK programmes in preventing recurring strokes.

The experts identified a gap between the prevalence of hypertension and the CERDIK program, as shown by the description above. More specifically, the CERDIK program was launched in 2015 with the aim of reducing hypertension, however, the prevalence of high blood pressure continues to rise every year to this day. Therefore, investigating the relationship between hypertensive patients' blood pressure and their level of knowledge of the Smart Program has become interesting to researchers.

LIBRARY STUDY

Hypertension

Hypertension is defined as blood pressure that exceeds a certain threshold: systolic blood pressure should be equal to or greater than 140 mmHg, and diastolic blood pressures should be equivalent to or larger than 90 mmHg(Campbell et al., 2022).

Hypertension Classification

Several sources classify hypertension by calculating systolic and diastolic values in accordance with the European Society of Hypertension-European Society of Cardiology (ESH-ESC) 2018 guidelines for classification of hypertensive diseases (Mancia et al., 2018).

Table 1. Classification of hypertension based on ESH-ESC 2018

Category	TD Systolic	TD Diastolic
Optimal	<120	<80
Normal	120-129	80-84
Normal High	130-139	85-89
Grade 1 hypertension	140-159	90-99
Grade 2 hypertension	160-179	100-109
Grade 1 hypertension	>180	110
Isolated systolic hypertension	>140	<90

Signs and Symptoms of Hypertension

Here are the indications and manifestations of hypertension according to Ekasari et al., (2021):

1. Headache.
   The most common symptom of hypertension is a headache. These complaints are mostly experienced by individuals who are undergoing a crisis phase, which is characterized by blood pressure of 180/120 mmHg or more.
2. Lack of vision.
   One possible complication is hypertensive retinopathy, which affects vision. The blood vessels of the eye can break in response to an increase in blood pressure, causing a sudden and severe decrease in visual acuity.
3. Nausea and vomiting are clinical manifestations of hypertension that may arise as a result of increased blood pressure in the brain. Someone suffering from cerebral bleeding may experience a sudden regurgitation episode.
4. Breast discomfort.
   Patients with hypertension may come with symptoms including chest pain. This condition occurs as a result of a blockage of blood vessels inside the heart muscle.
5. Stain in the eye due to blood.
   The medical term for red lesions on the cornea is subconjunctival bleeding. This particular manifestation is often seen in patients diagnosed with hypertension.
6. The redness of the face is caused by an increase in blood pressure which causes the blood vessels in the face to expand more than usual.
7. Floating.
   Difficulty walking, sudden loss of balance or coordination, and dizziness are indicators of stroke.

Extremely high blood pressure in the body can cause it. Bleeding is accompanied by additional symptoms of hypertension, including vertigo, headache, and chest pain. Visit the emergency room immediately; this is a critical medical situation.

Etiology of Hypertension

Hypertension is a condition in which systolic, diastolic, or both blood pressure is elevated (Setiadi & Halim, 2018). According to the cause of hypertension is divided into two:

1. Essential hypertension
   Essential hypertension occurs because of genetic factors, this type of hypertensive occurs in 90% of people with high blood pressure..
2. Secondary Hypertension
   Secondary hypertension is caused by concomitant diseases (such as: chronic kidney disease, pheochromocytoma, thyroid disease, etc.), medications (corticosteroids, amphetamines, etc.) or food (sodium/salt).

Hypertension Risk Factors

Hypertension risk factors are divided into 2, namely:

1. **Initially, the risk factors cannot be changed**
   Age and gender
   Women tend to have a 0.4 times higher risk of developing hypertension than men. This is because women have menopause periods so that as they age, the levels of estrogen decrease. The decrease in estrogen levels is followed by HDL (High Density Lipoprotein) which serves to maintain blood vessel health (Falah, 2019).

Family History

Individuals born to families with hypertension are 2 to 5 times more likely to develop hypertension. This is closely related to increased intracellular sodium levels and low potassium levels in the blood. In addition, 70-80% of cases of essential hypertension have a family history of hypertension (L.O et al., 2020).

2. Modifiable risk factors

a. Advantages of salt diet
Consuming foods that have high sodium content can cause vasoconstriction in the blood vessels, making the heart work harder and quickly increasing blood pressure (Aristi et al., 2020).

b. Low potassium diet
Potassium plays an important role in fluid, electrolyte and acid-base balance. Potassium in the blood causes peripheral vasodilation thereby increasing cardiac output. Potassium can regulate peripheral and central nerves which affect blood pressure (Rohatin & Prayuda, 2020)

c. Obesity
Obesity can trigger an increase in insulin, thereby stimulating an increase in pulse rate and vasoconstriction, apart from that, insulin also has the effect of stimulating salt retention in the kidneys. Obesity also activates the Renin Angiotensin Aldosterone System (RAAS) system which causes vasoconstriction and fluid retention which causes hypertension (Alfalah et al., 2022).

d. Physical Activity
Blood pressure can be lowered through increasing physical activity, activity of the appropriate intensity and type, and activity of sufficient duration. This is because physical activity can strengthen the heart muscle and peripheral resistance, thereby preventing hypertension (L.O et al., 2020)

e. Alcohol
Alcohol causes blood acidity to increase, so the blood becomes thicker and the heart's workload increases. Additionally, it can increase cortisol levels in the blood, leading to increased RAAS activity. (Syahrir et al., 2021)

f. Smoking
Cigarettes contain toxic chemicals that damage the endothelial lining of arteries, leading to the development of arteriosclerosis and high blood pressure (Syahrir et al., 2021)

Management of Hypertension
Knowledge

The term "know" comes from the word "know" in the Big Indonesian Dictionary which means to understand by observing (observing, experiencing, etc.), understanding, and knowing. Additionally, knowledge can be defined as everything that a person has learned through experience (Darsini et al., 2019).

Knowledge level

1. Know

Gaining knowledge What is meant by "knowledge" is subject matter that has been researched previously. During this phase, the person stores the information he has obtained. Nursing students who describe the phases of grief and school-age children who can identify the pillars of faith are two examples.

2. Understanding
   The stage at which an individual can accurately describe an object and interpret the material is referred to as comprehension. Contingencies, forecasts, and the like relating to the subject under investigation.
3. Implementation
   Application refers to the phase where the acquired knowledge can be implemented in practical and real-life scenarios.
4. Analysis
   An individual's ability to differentiate a substance or entity into its parts, while maintaining their relationships, such as the ability to differentiate, classify, and so on.
5. Synthesis (Synthesis)
   In the synthesis stage, components are combined into a new whole. In addition, the ability to produce new formulations from previously existing formulations is the definition of synthesis.
6. Evaluation (Evaluation)
   The ability to justify or assess a substance or object is evaluation. The evaluative process relies on self-defined standards.

Factors influencing knowledge

Understanding is influenced by many factors, including:

1. Age
   Increasing age affects the level of maturity of thinking and working in individuals. Age influences comprehension and thinking patterns. This also affects a person's cognitive abilities (Widyaningrum et al., 2021).
2. Education
   The acquisition of knowledge becomes more easily achieved by individuals with higher levels of education, thereby increasing the sharpness of their experience. Someone who has strong reasoning power is also highly educated (Masfi & Arifin, 2022)
3. Information sources and mass media
   Knowledge will be influenced by the information a person has. A person's knowledge can be expanded even though they do not have formal education if they are exposed to credible information through various media (Masfi & Arifin, 2022)
4. Economic and socio-cultural factors
   A person's knowledge is influenced by social culture. A person experiences a learning process and acquires knowledge as a result of relationships in which he interacts with other people while acquiring a culture. The provision of facilities necessary for certain activities depends on a person's socio-economic status; thus, knowledge is influenced by socio-economic status (Maulidza et al., 2022)
5. Ecosystem
   The environment is a variable that has an impact on individual knowledge. An individual is initially shaped by his environment, from which he can gain both positive and negative knowledge, depending on group dynamics. A person will gain experience in their environment which will shape their way of thinking (Masfi & Arifin, 2022).

CERDIK Program

The government initiative known as CERDIK aims to regulate non-communicable diseases. Through behavioral modification, non-communicable diseases can be avoided or treated. The promotion of the application of CERDIK for the

prevention of non-communicable diseases is being carried out by the Ministry of Health. Standards of health examination, smoking cessation, physical activity (exercise),ining a balanced diet, adequate rest, and stress management are abbreviated as CERDIK:

1. Regular Health Checks
   Routine health checks serve as a useful tool to strengthen an individual's awareness of their overall health condition. Early reduction of hypertension risk factors can be done in this way. Routine health checks can be carried out at least once a year. Some of the most frequently performed tests include the following:.
   a) Blood pressure monitoring is one method for identifying the risk of hypertension, stroke and heart attack at an early stage. The general test reading range is 140/90 mmHg or less.
   b) Blood glucose checking shows the concentration of glucose in the blood. The results help in the identification of diabetes complications. Normal test results are indicated by blood sugar levels below 100.
   c) Check your abdominal circumference, as excessive amounts of adipose tissue can cause severe health complications including diabetes, heart attack, and stroke. The safe abdominal circumference limits for men and women are 90 cm and 80 cm respectively.
   d) The composition of total cholesterol usually consists of dietary lipid triglycerides, LDL (bad cholesterol), and HDL (good cholesterol) present in the bloodstream. The ideal LDL cholesterol category is less than 100.
2. Get Rid of Cigarette Smoke
   Tobacco smoke causes hypertension due to the toxins it contains, especially nicotine, which stimulates the sympathetic nervous system and causes the heart to beat faster, resulting in narrowing of blood vessels and increased blood circulation. Carbon monoxide, which forces the heart to meet the body's oxygen needs, also contributes to hypertension (Umbas et al., 2019).
3. Regular physical activity
   Engaging in physical activity contributes to a variety of physiological benefits, including weight maintenance, improved overall health, and most significantly, increased insulin sensitivity, which allows for more precise regulation of blood glucose levels.
   Daily activities that can be done to carry out physical activity include walking, gardening, sweeping the floor, going up and down stairs, and carrying supplies. Apart from that, push-ups, light jogging, playing ball, gymnastics, tennis and yoga are options that can be done. Appropriate physical activity is performed in segments lasting no more than 30 minutes, three to five times a week.
4. Balanced diet
   A balanced diet is a diet that consumes five portions of fruit and vegetables every day. Compliance with recommendations for sugar, salt and fat (GGL) intake includes the following:
   a) Sugar consumption should not exceed four tablespoons per individual per day.
   b) Limit daily salt intake to one teaspoon per individual.

c) No more than five tablespoons of fat or oil per person per day

5. Enough rest
   According to needs, adults are recommended to sleep 7-8 hours per day.
6. Manage Stress
   Stress is the psychological tension that a person often experiences when faced with difficulties in life. Relaxing, conversing with others, engaging in recreational activities, taking part in family-oriented activities, acting according to one's abilities and interests, adopting a positive and thoughtful mindset, maintaining a structured and organized lifestyle, and making plans What is important for the future is all of the above. effective stress management methods.

RESEARCH METHODS

This writing uses cross-sectional designs and is quantitative. Polytechnic Neurology Hospital Hypertension Patient Dr. Soedarso Pontianak is the entire population of this writing. A total of 58 respondents were samples of this writing, selected using the Accidental Sampling technique that belongs to the category of non-probability sampling methods. On 17-30 May 2023, this writing was done at RSUD Polytechnic Neurology Dr. Soedarso Pontianak.

This writing uses the questionnaire as an analysis tool. The questionnaires contain demographic information such as age, gender, education, employment, and blood pressure data of respondents. In addition, a questionnaire consisting of 12 items was used to assess the level of knowledge of participants about the CERDIC program. Assessments were made using the Guttman scale, and three categories were identified: adequate (56–75%), inadequate (less than 56%), and adequate (76–100%) (Nursalam, 2008).

The RSUD Health Writing Ethics Committee Dr. Soedarso Pontianak who has given the authorization of this writing on May 2, 2023 has issued a certificate of ethical qualification with number 47/RSUD/KEPK/V/2023.The analysis process is conducted in two stages, namely univariate analysis to determine the percentage and frequency of data and bivariate analytics using Spearman's Rho Correlation Test.

RESULTS AND DISCUSSION

The results of the writing carried out at the Dr Soedarso Hospital Pontianak Neurological Polytechnic on 17 – 30 May 2023. The following data on the characteristics of respondents consists of age, gender, education and occupation.

Table 2. Distribution of Respondent Characteristics (n = 58)

Characteristics	Frequency	Percentage (%)
Age		
26-35 Years	1	1,7
36-45 Years	4	6,9
46-55 Years	21	36,2
56-65 Years	20	34,5
> 65 years	12	20,7
Gender		

Man	22	37,9
Woman	36	62,1
Educational History		
Elementary school	2	3,4
Junior High School	12	20,7
Senior high school	28	48,3
College	16	27,6
Work		
Doesn't work	6	10,3
House wife	20	34,5
Civil servants	14	24,1
Self-employed	15	25,9
Others	3	5,2
Total	**58**	**100 %**

From the writing results, it was found that most of the respondents' age range was in the early elderly stage, namely 46-55 years (36.2%), namely 21 people. And based on the table above, most of the respondents were female with a total of 36 people (62.1%), namely 36 people. Almost half of the respondents listed high school as their final education, namely 28 people (48.3%). From the resulting data, it can be seen that almost half of the respondents work as housewives (34.5%), namely 20 people.

Table 3. Cross tabulation of knowledge level and blood pressure (n = 58)

Knowledge level	Blood pressure		
	Normal	Normal High	Grade 1 Hypertension
Good	3	24	20
Enough	0	3	7
Less	0	0	1
Total	**3**	**27**	**28**
%	**5.18**	**46.55**	**48.27**
P- Value	**0,60**		

Based on the findings of data analysis, Spearman's rho correlation analysis showed a p value of 0.60 between the level of knowledge of the CERDIK program and the blood pressure of hypertensive patients. This suggests that the relationship between the two variables is not statistically significant because the p value is greater than 0.05. As a result, the hypothesis is invalid, as there is no statistically significant correlation between the blood pressure of hypertensive patients and their level of knowledge of the CERDIK program.

Based on the writing findings involving 58 participants, of those surveyed, twenty-one people had hypertension level 1, twenty four people had high normal blood pressure (BP), and forty-seven people had sufficient knowledge. Then out of ten respondents who had enough knowledge, most (n=7) had blood pressure in the hypertensive group at level 1. A statistical test using Spearman's rho produced a p value of 0.60 ($p>0.05$), rejecting the zero hypothesis that there was a significant relationship between the blood pressure of a hypertensive

patient and his level of knowledge of the CERDIK program.

Consistent with the findings of Widayati et al., (2020) on the level of knowledge and application of healthy lifestyles in adults living in rural Yogyakarta, the results of this writing support the conclusion. They concluded that there was no relationship between the variable level of knowledge and a healthy lifestyle. At the same time equipping hypertensive patients with knowledge of the CERDIK program can enhance their understanding of how to regulate blood pressure through the implementation of a healthy lifestyle. But the CERDIK program has to be implemented in practice.

One component of a healthy lifestyle according to CERDIK's program is a routine health check-up. Medical examinations play an important role in the timely detection of disease; therefore, individuals aged 40 and over are advised to undergo routine examinations to deal with and prevent the occurrence of any abnormalities that may be detected (Nurhayati & Cahyati, 2016).

According to (Darussalam and Warseno (2019), individuals whose blood pressure is not monitored regularly have a 5.339 times higher risk of developing uncontrolled hypertension than those whose pressure is monitored on a regular basis.

In his study, AL-Kahil et al., (2020) investigated the correlation between knowledge and health checks in residents of Riyadh, Saudi Arabia, aged 36 and over. The researchers found that although public awareness of routine health checks was quite large, the actual incidence was relatively low. This is because the conduct of health checks can be hampered by various factors, including distance to health facilities, facilities and means, as well as behavior and attitudes (Halimsetiono, 2021).

Such obstacles are factors that cannot be controlled in this writing. It appears in the writing results that are targeted in the knowledge level questionnaire of the CERDIK program the first, second, and third statements about routine health checks almost all respondents answered correctly but there was a gap between knowledge and blood pressure. Most TD respondents were in the category of high blood pressure level 1 and high normal.

The author assumes that individuals who have a high level of knowledge do not always show good health control behavior. It can be caused by external factors such as accessibility to health facilities, or internal factors like low self-awareness of respondents which impedes the conduct of routine health checks even though they are very well informed. Therefore, it is necessary to increase sufferers' self-awareness about their illness so that they are able to carry out good self-care

CONCLUSION

After investigating the relationship between hypertensive patients' blood pressure and their level of knowledge regarding the CERDIK program, the following findings were obtained:

a. One third of respondents, or 36.2 percent, were in the early retirement age group (46-55 years), and 81 percent were women. As many as 44.3 percent of respondents had a high school diploma or higher, and 34.5 percent of respondents worked as housewives.
b. With a fairly large level of knowledge, 81% of respondents or

almost the entire sample have knowledge.

c. About half of the participants, or 47%, continued to have blood pressure that was in the high normal range or level 1 hypertension.
d. In hypertensive patients, there is no significant relationship between the level of knowledge of the CERDIK program and blood pressure.

Suggestion

Based on the conclusions presented, several recommendations were obtained for several parties:

a. For Nurses
   This writing has the potential to provide valuable insight for nurses at RSUD Dr. Soedarso who can inform their efforts in educating hypertension patients about the CERDIK program and become an example for others to emulate in their daily lives.
b. For Students
   This writing can be a reference source in the field of nursing, especially the method of preventing recurrent hypertension using CERDIK.
c. For Society
   Researchers hope that people can apply the CERDIK program in their daily lives to avoid non-communicable diseases, especially hypertension.
d. For Further Researchers
   The researcher recommends that future researchers study the CERDIK program more deeply, especially the implementation of CERDIK behavior and its relationship to blood pressure control attitudes.

REFERENCE

Al-Kahil, A. B., Khawaja, R. A., Kadri, A. Y., Abbarh,Mbbs, S. M., Alakhras, J. T., & Jaganathan, P. P. (2020). Knowledge And Practices Toward Routine Medical Checkup Among Middle-Aged And Elderly People Of Riyadh. *Journal Of Patient Experience*, *7*(6), 1310–1315. Https://Doi.Org/10.1177/2374373519851003

Alfalah, N. J., Hasni, D., Febrianto, B. Y., & Warlem, N. (2022). Hubungan Obesitas Dengan Kejadian Hipertensi Pada Perempuan Minangkabau. *Poltekita : Jurnal Ilmu Kesehatan*, *15*(4), 360–364. Https://Doi.Org/10.33860/Jik.V15i4.823

Ansar J, Dwinata I, M. A. (2019). Determinan Kejadian Hipertensi Pada Pengunjung Posbindu Di Wilayah Kerja Puskesmas Ballaparang Kota Makassar. *Jurnal Nasional Ilmu Kesehatan*, *1*(3), 28–35.

Aristi, D. L. A., Rasni, H., Susumaningrum, L. A., Susanto, T., & Siswoyo, S. (2020). Hubungan Konsumsi Makanan Tinggi Natrium Dengan Kejadian Hipertensi Pada Buruh Tani Di Wilayah Kerja Puskesmas Panti Kabupaten Jember. *Buletin Penelitian Sistem Kesehatan*, *23*(1), 53–60. Https://Doi.Org/10.22435/Hsr.V23i1.2741

Campbell, N. R. C., Paccot Burnens, M., Whelton, P. K., Angell, S. Y., Jaffe, M. G., Cohn, J., Espinosa Brito, A., Irazola, V., Brettler, J. W., Roccella, E. J., Maldonado Figueredo, J. I., Rosende, A., & Ordunez, P. (2022). 2021 World Health Organization Guideline On Pharmacological Treatment Of Hypertension: Policy Implications For The Region Of

The Americas. *The Lancet Regional Health - Americas*, *9*, 100219. Https://Doi.Org/10.1016/J.Lana.2022.100219

Darsini, D., Fahrurrozi, F., & Cahyono, E. A. (2019). Pengetahuan; Artikel Review. *Jurnal Keperawatan*, *12*(1), 13.

Darussalam, M., & Warseno, A. (2019). Faktor Yang Berhubungan Dengan Pasien Hipertensi Tidak Terkontrol Di Puskesmas. *Jurnal Keperawatan Klinis Dan Komunitas*, *1*(2), 72. Https://Doi.Org/10.22146/Jkkk.49111

Dinkes Pontianak. (2019). *Profil Kesehatan Kota Pontianak 2019*.

Efendi, Z., Adha, D., & Febriyanti, F. (2022). Hubungan Gaya Hidup Dan Pola Makan Terhadap Kejadian Hipertensi Selama Masa New Normal Ditengah Pandemi Covid 19. *Menara Medika*, *4*(2), 165–172. Https://Doi.Org/10.31869/Mm.V4i2.3034

Ekasari, M. F., Suryati, E. S., Badriah, S., Narendra, S. R., & Amini, F. I. (2021). Kenali Penyebab, Tanda Gejala Dan Penangannya. *Hipertensi*, 28.

Ekawati, F. A., Carolina, Y., Sampe, S. A., & Ganut, S. F. (2021). The Efektivitas Perilaku Cerdik Dan Patuh Untuk Mencegah Stroke Berulang. *Jurnal Ilmiah Kesehatan Sandi Husada*, *10*(1), 118–126. Https://Doi.Org/10.35816/Jiskh.V10i1.530

Falah, M. (2019). Hubungan Jenis Kelamin Dengan Angka Kejadian Hipertensi Pada Masyarakat Di Kelurahan Tamansari Kota Tasikmalaya. *Jurnal Keperawatan & Kebidanan Stikes Mitra Kencana Tasikmalaya*, *3*(1), 88.

Halimsetiono, E. (2021). Pelayanan Kesehatan Pada Warga Lanjut Usia. *Jurnal Kesehatan Dan Kedokteran*, *3*(1), 64–70. Https://Doi.Org/10.24123/Kesdok.V3i1.4067

Kementrian Kesehatan Ri. (2017). *Data Dan Informasi Profil Kesehatan Indonesia*.

L.O, E. S., Widyarni, A., & Azizah, A. (2020). Analisis Hubungan Riwayat Keluarga Dan Aktivitas Fisik Dengan Kejadian Hipertensi Di Kelurahan Indrasari Kabupaten Banjar. *Jurnal Ilmiah Universitas Batanghari Jambi*, *20*(3), 1043. Https://Doi.Org/10.33087/Jiubj.V20i3.1094

Mancia, G., De Backer, G., Dominiczak, A., Cifkova, R., Fagard, R., Germano, G., Grassi, G., Heagerty, A. M., Kjeldsen, S. E., Laurent, S., Narkiewicz, K., Ruilope, L., Rynkiewicz, A., Schmieder, R. E., Boudier, H. A. J. S., & Zanchetti, A. (2018). 2018 Guidelines For The Management Of Arterial Hypertension: The Task Force For The Management Of Arterial Hypertension Of The European Society Of Hypertension (Esh) And Of The European Society Of Cardiology (Esc). *Journal Of Hypertension*, *25*(6), 3021–3104. Https://Doi.Org/10.1097/Hjh.0b013e3281fc975a

Masfi, A., & Arifin, M. (2022). Hubungan Media Informasi, Pengetahuan, Pendidikan, Pengalaman Dengan Tingkat Kecemasan Masyarakat Dimasa Pandemi Covid 19. *Jurnal Keperawatan Muhammadiyah*, *7*(2), 207–211.

Maulidza, R. R., Amin, F. A.,

Khairunnisa, N., & Aceh, U. M. (2022). *Hubungan Tingkat Pengatahuan Sosial Budaya Dengan Pemberian Asi Eksklusif Pada Bayi 7-12 Bulan Diwilayah Kerja Puskesmas Sukajaya Kecamatan Sukajaya Kota Sabang Tahun 2021*. *1*, 54–68.

Nurhayati, S., & Cahyati, W. H. (2016). Hubungan Antara Status Medical Check Up Terhadap Kejadian Disabilitas Fisik Pada Lansia Di Kecamatan Punung Kabupaten Pacitan. *Unnes Journal Of Public Health*, *5*(1), 84. Https://Doi.Org/10.15294/Ujph.V5i1.9710

Nursalam. (2008). *Konsep Dan Penerapan Metodologi Penelitian Ilmu Keperawatan*. Salemba Medika.

Rohatin, A., & Prayuda, C. W. (2020). Hubungan Asupan Natrium, Kalium Dengan Hipertensi Pada Lansia Di Poliklinik Penyakit Dalam. *Jurnal Fakultas Ilmu Kesehatan*, *1*(1), 10–14. Atinrohatin@Gmail.Com%0acahyaniwp@Gmail.Com

Setiadi, A. P., & Halim, S. V. (2018). *Penyakit Kardiovaskular : Seri Pengobatan Rasional* (I). Graha Ilmu.

Statistik, B. P. (2018). Prevalensi Tekanan Darah Tinggi Menurut Provinsi 2013-2018. In *Badan Pusat Statistik*. Https://Www.Bps.Go.Id/Indicator/30/1480/1/Prevalensi-Tekanan-Darah-Tinggi-Menurut-Provinsi.Html

Syahrir, M., Sabilu, Y., & Salma, W. O. (2021). Hubungan Merokok Dan Konsumsi Alkoholdengan Kejadianpenyakit Hipertensi Pada Masyarakat Wilayah Pesisir. *Jurnal Nursing Update*, *12*(3), 27–35.

Umbas, I. M., Tuda, J., & Numansyah, M. (2019). Hubungan Antara Merokok Dengan Hipertensi Di Puskesmas Kawangkoan. *Jurnal Keperawatan*, *7*(1). Https://Doi.Org/10.35790/Jkp.V7i1.24334

Unger, T., Borghi, C., Charchar, F., Khan, N. A., Poulter, N. R., Prabhakaran, D., Ramirez, A., Schlaich, M., Stergiou, G. S., Tomaszewski, M., Wainford, R. D., Williams, B., & Schutte, A. E. (2020). *Clinical Practice Guidelines 2020 International Society Of Hypertension Global Hypertension Practice Guidelines International Society Of Hypertension*. 1334–1357. Https://Doi.Org/10.1161/Hypertensionaha.120.15026

Widayati, A., Fenty, F., Linawati, Y., & Christasani, P. D. (2020). Pengetahuan Dan Profil Gaya Hidup Sehat Pada Orang Dewasa Di Pedesaan Di Daerah Istimewa Yogyakarta. *Indonesian Journal Of Clinical Pharmacy*, *9*(2), 118. Https://Doi.Org/10.15416/Ijcp.2020.9.2.118

Widyaningrum, E. A., Wika Admaja, W., Winduhani Astuti, L., & Masyriqoh, B. (2021). Pengaruh Usia Dan Jenis Kelamin Terhadap Pengetahuan Serta Perilaku Penggunaan Suplemen Di Masa Pandemi Pada Mahasiswa Iik Bhakti Wiyata. *Majalah Farmasetika*, *6*(Suppl 1), 49. Https://Doi.Org/10.24198/Mfarmasetika.V6i0.36675