



EMPOWERMENT OF HEALTH CADRES IN BLOOD PRESSURE CONTROL BEHAVIOR OF HYPERTENSION PATIENTS

Rizki Amalia Nabila¹, Lisma Ningsih^{1*}, Wisuda Andeka M¹, Demsa Simbolon²

¹Department of Health Promotion, Poltekkes Kemenkes Bengkulu, Bengkulu, Indonesia

²Department of Nutrition, Poltekkes Kemenkes Bengkulu, Bengkulu, Indonesia

*lisma@poltekkesbengkulu.ac.id

Abstract

There is still a lot of hypertension data in Bengkulu city, there are 599 hypertension patients, one of which is at the Jembatan Kecil Health Center 2023. There are still many respondents who have not controlled blood pressure in their daily lives and there is still a lack of blood pressure control behavior in hypertension patients in the Puskesmas Jembatan Kecil area of Bengkulu City. This study aims to determine the effect of health cadre empowerment on blood pressure control behavior in patients with hypertension in the area of Puskesmas Jembatan Kecil, Bengkulu City. This research is a quantitative study with a pre-experiment research design with a one group pretest-posttest design. The population in this study were hypertension patients in the Jembatan Kecil Health Center area of Bengkulu City with 37 respondents. Data analysis used on knowledge, attitudes and actions is the Wilcoxon test. The results of this study obtained an increase in knowledge from the initial pretest value (47.57) and posttest to (89.19), attitudes from the initial pretest value (26.54) and posttest to (38.27), actions from the initial pretest value (12.73) posttest to (19.27) with a very good category. Test calculations on knowledge, attitude and action variables through the Wilcoxon signed rank test. Empowerment of health cadres on blood pressure control behavior in hypertension patients in the Jembatan Kecil Puskesmas Region, Bengkulu City It is hoped that the empowerment of health cadres will become a learning method to convey information about blood pressure control in hypertension patients.

Keywords: empowerment, cadres, blood pressure, behavior

INTRODUCTION

Hypertension is a condition in which blood pressure increases above the normal threshold of 120/80 mmHg. According to the World Health Organization (WHO), the blood pressure limit, which is still considered normal, is less than 130/85 mmHg. If your blood pressure exceeds 140/90 mmHg, it is considered hypertension (the limit is adults over 18 years of age). This fatal disease is often called the silent killer because it shows no symptoms or is hidden (Kemenkes RI) 2020)

Presented at the 4th
Bengkulu International
Conference on Health
(B-ICON),
Bengkulu-Indonesia,
September 24-26th, 2024

Published:
December 31st, 2024
Copyright © 2024 by
authors.
ISSN: 2986-027X

The leading cause of cardiovascular disease (CVD), which accounts for 18.6 million deaths annually, is hypertension. not to mention the dangers of CVD. According to Schutte AE, et al. (2021), mortality makes up one-third of all non-communicable disease-related deaths. World Health Organization (WHO) 2020 data shows that worldwide around 972 million people or (26.4%) people worldwide suffer from hypertension, this figure is likely to increase (29.2%) in 2025. Of the 972 million people with hypertension, 333 million are in developed countries and the remaining 639 are in developing countries, including Indonesia

Basic Health Research 2018 the incidence rate of hypertension in Bengkulu Province is in 26th place with (28.14%). The highest incidence rate of hypertension is in Lebong district with a prevalence (34.67%) followed by Kepahiang (4.36%), North Bengkulu (31.07%), Rejang Lebong (30.71%), Central Bengkulu (26.09%) while for Bengkulu city it is in 9th place with a prevalence (24.10%), the lowest data is in South Bengkulu (21.62%) (Andri,et.al, 2023).

Based on data from the Bengkulu City Health Service in 2022, the prevalence of hypertension was 36,404, with hypertension occurring more in men, namely 18,224 sufferers, while in women there were 18,180 sufferers (Ministry of Health, 2022). According to the Bengkulu City Riskesdas, the prevalence at the Jembatan Kecil Health Center for experiencing high levels of hypertension in 2022 is 2,961 people with coverage receiving health services of (39.5%) (Bengkulu City Health Service, 2022)

Based on data from the Jembatan Kecil Community Health Center from January to December 2023, there were 599.0 patients who visited the Community Health Center and measured blood pressure, 2,064 patients who were recorded, for those who suffered from hypertension in the period from January to December 2023, 599.0 people (29.0%). This illustrates the high incidence of hypertension in the working area of the Jembatan Kecil Health Center (PKM, 2023)

Hypertension often causes dangerous conditions because its existence is often not realized and often does not cause significant complaints, until one day complications occur in the heart, brain, kidneys, eyes, blood vessels, or other vital organs. However, hypertension is strongly influenced by the food consumed by the community. A healthy lifestyle and a healthy diet are the right choices to keep yourself free from hypertension. Everything is done continuously, not temporarily. Once we let our guard down by following a healthy lifestyle, we will certainly be susceptible to hypertension and other diseases. (Badjo S., et al 2020) Hypertension rarely causes symptoms so many do not realize they have hypertension, many people in the young age range are unaware so they do not make efforts to treat it. This condition needs more attention, because hypertension can cause various chronic diseases such as stroke, heart failure and even result in death. It is known that there are 2 factors that influence the occurrence of hypertension, the first is an unchangeable factor, namely age, gender and genetic (heredity). The second is factors that cannot be changed, namely obesity, smoking, lack of physical

activity, excessive salt consumption, dyslipidemia, excessive alcohol consumption, stress and sugar intake (Ekarini, et al 2020).

Blood pressure should be managed for all hypertension individuals so that there is no longer a noticeable increase in readings. Not every high blood pressure sufferer, nevertheless, is able to manage their condition. This is a result of variations in the knowledge and attitudes of hypertension patients on disease control (Uguy et al., 2019).

The role of the cadre in the management of hypertension can be used to control hypertension; in particular, promoting healthy lifestyle choices and enhancing health is essential to reduce the severity and risk of hypertension. Findings indicate that the participation of health cadres favors and statistically significantly influences hypertension control behaviors (Setiyaningsih & Ningsih 2019).. According to Health Material, hypertension is a very dangerous disease, because there are no typical symptoms or signs as an early warning. Most people feel healthy and energetic despite being hypertension. This situation is of course very dangerous, which can cause sudden death in people. Hypertension and its complications can be prevented by living a healthy lifestyle and controlling risk factors, by maintaining a normal body weight. Manage your diet, by consuming low-salt and low-fat foods and increasing consumption of vegetables and fruits. Do exercise regularly. Manage stress and emotions, stop smoking, avoid drinking alcohol, and check blood pressure regularly (Haldi et al., 2020).

MATERIALS AND METHODS

This type of research is a type of Quantitative research with pre-experiment design, with the research design used, namely one group pretest-posttest design. The population was all hypertension patients in the Jembatan Kecil Health Center of Bengkulu City with a population of 599 people, a sample of 37 hypertension patients with random sampling technique. This research instrument is a questionnaire. The research stages were 6 inclusive health cadres who were active, able to explain information and willing to become educators after the selection of health cadres, then conducted health cadre training on blood pressure control in hypertension patients for 2 times in 1 week. Data analysis with Wilcoxon Signed rank test.

RESULTS AND DISCUSSION

Results

Table 1: Characteristics of health cadres by age, gender and education level

| Variable | Frequency (f) | Percentage (%) |
|------------------------------|---------------|----------------|
| Age | | |
| 18-40 year (Early adulthood) | 3 | 50,0% |

| | | |
|----------------------------------|---|-------|
| 41-60 year (Middle adulthood) | 3 | 50.0% |
| Jobs | | |
| Housewife | 3 | 50,0% |
| Merchant | 3 | 50,0% |
| Education level of cadres | | |
| Junior High School/ Equivalent | 2 | 33,3% |
| High School / Equivalent | 4 | 66,7% |

Table 1 shows that there is no difference in the age of health cadres based on the category of early and middle adulthood, most health cadres have no difference in the occupation of housewives and traders, and most (66.7%) health cadres have a high school education.

Table 2: Characteristics of Respondents Based on Age, Gender and Occupation

| Variable | Frequency (f) | Percentage (%) |
|-------------------------------|---------------|----------------|
| Age | | |
| 30-40 | 6 | 16,2% |
| 41-50 | 11 | 29.9% |
| 51-60 | 13 | 34,2% |
| >60 | 7 | 18,4% |
| Gender | | |
| Male | 12 | 31,6% |
| Female | 25 | 65,8% |
| Jobs | | |
| Not Working | 10 | 26,3% |
| Labor | 11 | 28,9% |
| Merchant | 12 | 31,6% |
| Civil Servant/National Police | 3 | 7,9% |
| Farmers | 1 | 2,6% |

Based on tabel 2, it was found that almost half (34.2%) of the respondents were 51-60 years old, most (65.8%) of the respondents were female, and almost half (31.6%) of the respondents worked as traders.

Table 3: Knowledge, Attitudes and Actions Before and After Empowerment of Health Cadres on Blood Pressure Control for Patients with Hypertension

| Variable | Before | After | Δ Mean | p value |
|-----------|--------------------|-------------------|---------------|---------|
| | Mean \pm SD | Mean \pm SD | | |
| Knowledge | 47,57 \pm 10,905 | 89,19 \pm 8,293 | 41,62 | 0,0000 |
| Attitude | 26,54 \pm 1,677 | 38,27 \pm 1,071 | 11,73 | 0,0001 |
| Action | 12,73 \pm 1,071 | 19,27 \pm 871 | 6,54 | 0,0001 |

Table 3 shows an increase in the average knowledge score after empowering health cadres to control blood pressure from 4.76 to 8.92. The lowest score before empowering health cadres was 30 and the

highest score was 70, and after empowering health cadres the lowest score was 80 and the highest score was 100.

The results also found that the average attitude score before empowering health cadres to control blood pressure was 26.65. After empowerment, the average attitude increased to 38.27. The lowest score before the empowerment of health cadres was 20, and the highest score was 29, and after the empowerment of health cadres the lowest score was 36 and the highest score was 40.

The average action score before empowering health cadres to control blood pressure was 12.73. After empowerment the average action increased to 19.27. The lowest score before empowering health cadres was 10 and the highest score was 14, and after empowering health cadres the lowest score was 16 and the highest score was 20.

Shows that the mean difference value of knowledge is 41.62 and p value of 0.000, the difference value of attitude is 11.73 with a p value of 0.0001, and the mean difference value of behavior is 6.54 with a pvalue of 0.0001, meaning that there is an effect of health cadre empowerment on blood pressure control behavior in patients with hypertension in the Working Area of Jembatan Kecil Health Center, Bengkulu City.

Discussion

Characteristics of health cadres

Qualities of cadres the majority of health cadres (66.7%) have completed high school, and there are no disparities in the age distribution of health cadres between the early and middle adulthood categories or between the labor of housewives and traders. In addition to Sulistiyanto et al.'s research from 2023, the study's findings demonstrated that all health cadres held the view that an individual's age of thinking influenced their attitudes and conduct. Executive Qualities There are no variations in the occupations of housewives and traders, nor in the ages of health executives based on the early and middle age groups; nearly (66.7%) of health executives have a high school degree. In conjunction with Sulistiyanto et al.'s study from 2023, the study's findings demonstrated that all health executives are members of a generational mindset that shapes people's views and actions.

Several previous studies have also reported that most health cadres have a high school education. The educational background of health cadres is related to their ability to internalize information received in the learning process. Health cadres who have a good educational background are expected to be able to carry out their duties and responsibilities of some health cadres in the community, especially health problems in their respective areas of residence Martha et al (2020). Education can influence a person's

behavior and readily plays a role in the implementation of health programs. Educated people are receptive to information and have better knowledge. Cadres with higher education are more receptive to ideas, concepts, ideas, and materials in posyandu activities (Banowati 2018).

Respondent Characteristics

According to the study's analysis of answer characteristics, most respondents are between the ages of 51 and 60, are female, and are merchants. Research on hypothesis knowledge has revealed, according to Agyeibaffour et al. (2018), that women, those under 35, and those with formal education have superior knowledge of hypotheses.

Sari's research (2023) with the results of research on age characteristics, most of them (45.3%) have an age of 56-65 years, most of the respondents are female, the characteristics of respondents' education are mostly junior high school, most of the respondents do not have a job. Age has an important role in increasing a person's knowledge for healthy living behavior. Age in older people will experience a decrease in both physical and mental aspects if the more mature a person's age, a person will act, so that he chooses to be obedient in managing a healthy lifestyle in order to avoid health problems and be productive Fatimah et al (2023). Women often suffer from high blood pressure Blood pressure in women, especially systolic, increases with age. From the age of 55 women have an increased risk of developing high blood pressure (Yunus 2021)

There is a notable correlation between gender and both the incidence and severity of hypertension, with women experiencing hypertension at a higher rate. Siwi et al. (2020). This might happen because, following a mini-house, older women are more susceptible to developing hypertension, which is influenced by the hormone estrogen. But women's blood pressure keeps rising after menopause, which normally occurs after age 50, and by the time they are 75 years old, women are more likely than males to have high blood pressure. (2019, Riama).

People who have a job also have more burden on their minds than those who do not have a job. Stressful events related to work obligations are very likely to be experienced by them (Apriliyani et al 2019). The results are in accordance with RISKESDAS in 2018 that the highest prevalence of hypertension based on the number of doctors was found in respondents who did not work compared to respondents who worked (Al-Rasyid., et al 2022). The highest risk of hypertension is found in people who do not work. A person with light physical activity can lead to overweight or obese nutritional status. Any movement of the body will increase energy expenditure and excess weight also increases heart rate and insulin levels in the blood.

Knowledge of Hypertension Patients About Blood Pressure Control in the Small Bridge Health Center Area, Bengkulu City

The respondents' level of understanding can be observed prior to the commencement of the kader-dayaan exercise. They have a rather low level of understanding, which improves once assistance is provided. This is explained by the knowledge retention rate prior to completing the pemberdayaan 4,76 and the actual pemberdayaan 8,92. This indicates that there are differences in education prior to and according to the distribution of kader.

In Oktaviana's research (2023), the results of increasing knowledge before the intervention were 6.12 and after the intervention was given 7.36, which means that there was an increase in knowledge before and after the intervention. Patient knowledge about hypertension also affects patient compliance in taking medication. According to Daeli's research (2020) states that if the respondent's knowledge about hypertension is good, the better the efforts made by the respondent to prevent and control their hypertension. Individual knowledge about hypertension helps in controlling hypertension because with this knowledge people with hypertension will often visit doctors and be obedient in treatment and blood pressure control. Because respondents understand it well, public knowledge about hypertension influences behaviors that control blood pressure as a preventive measure against hypertension. Keep your weight up, exercise regularly, and eat fruits and vegetables to lower your blood pressure

The patient's perception and understanding of hypertension plays an important role in controlling blood pressure. Patients with personal knowledge of hypertension are more likely to maintain medication and visit a doctor regularly (Priyanto et al 2021). Culture-based health education leads to improved knowledge. Underutilized cultural concepts are seen as obstacles to improved health in medicine. As a result, over time, the concept of culture has evolved into one that seeks to use to better understand the behavior and knowledge of public health (Siregar D, 2021)

Attitudes of Hypertension Patients About Blood Pressure Control in the Small Bridge Health Center Area, Bengkulu City

The attitude of respondents can be seen before the module empowerment is given to have a poor level of attitude and after empowerment it becomes good. This is indicated by the results of the average attitude before the intervention 26.5 and after the intervention 38.27. This proves that education is different before and after cadre empowerment is given.

Reinforced by research by Simanjuntak et al (2022), it is known that many respondents have a moderate attitude towards blood pressure control, there is a significant relationship between the attitude of respondents and efforts to control blood pressure of hypertension patients. Maintaining a healthy lifestyle

can substantially reduce the chances of blood pressure elevation. A healthy lifestyle that is recommended for the treatment of hypertension includes eating nutritious foods, not smoking, exercising, managing stress, not consuming alcohol, and regular blood pressure control. Attitude is a person's reaction or response that is still closed to a stimulus or object. The manifestation of attitude cannot be directly seen, but only interpreted first from closed behavior (Usman,Budi & Sari, 2020)

The results of research conducted by Suryarinilsih (2019) state that to control hypertension in addition to a healthy diet we must also adopt a healthy lifestyle, one of which is doing regular exercise. If you have tested positive for hypertension, choose a light exercise such as walking, cycling and running. Do it for 30 minutes to 45 minutes a day 3 times a week. Therefore, those suffering from hypertension are expected to familiarize themselves with regular exercise, because with regular exercise blood pressure can be controlled. A person's attitude towards hypertension includes aspects of belief, emotional response and tendency to act, which encourages prevention efforts with a focus on regulating diet, regularly checking blood pressure. (Masi, S et al 2020). And doing exercise, the encouragement or stimulation received will encourage respondents to have positive intentions and take preventive measures Wahyudi, D. T (2019).

Actions of Hypertension Patients About Blood Pressure Control in the Small Bridge Health Center Area Bengkulu City

Respondents' actions can be seen before the module empowerment has a level of behavior that is less and after empowerment it becomes good. This is indicated by the average results of behavior before empowerment 12.73 and after empowerment 19.27. this proves that education is different before and after empowerment of cadres.

Along with Mastuti's research (2023), the mean behavior before intervention was 6.15 and after intervention was 8.47, where there was an increase in behavior before and after intervention. To prevent mortality and morbidity due to complications associated with achieving and maintaining blood pressure below 140/90 mmHg. Control of hypertension is done by self-management or lifestyle changes such as diet, adequate rest, exercise and regular medication consumption. hypertension disease cannot be cured but controlled. It can be said that efforts to control hypertension, especially with self-management of hypertension patients Suryarinlisih (2019).

The Effect of Health Cadre Empowerment on Blood Pressure Control Behavior in Hypertension Patients in the Small Bridge Health Center Area, Bengkulu City

In carrying out their roles and responsibilities as cadres, hypertension cadres are given cadre skills training on how to measure and read blood pressure using a digital blood pressure device. Based on the cadre training activities carried out, it is known that the cadre's skills in delivering information and

measuring blood pressure to the community have been completed. This is due to the high knowledge of cadres related to hypertension so that it is easy to convey and educate related to hypertension. Training is a process of learning certain knowledge and skills as well as attitudes in order to become more skilled and able to carry out their responsibilities as cadres properly and in accordance with standards Asri dkk (2020)

The result of the activities carried out is that there is an increase in knowledge in cadres and families. Educational activities can increase knowledge in the target of educational activities Community service activities that have been carried out are providing training to cadres and families on hypertension management The result of the activities carried out was an increase in knowledge in cadres and families. Educational activities can increase knowledge in the target of educational activities Desnita et al (2020). Modules are printed educational materials that can be used as intermediaries or to facilitate activities in order to achieve the goal of providing counselling independently and not relying on health workers (Wahyuntari&Ismarwati, 2020).

In disease and health problem surveillance, the cadre's duties include monitoring, documenting and locating symptoms and health problems, as well as reporting and carrying out basic prevention and treatment measures (Setiyaningsih 2019). The gradual and consistent dissemination of health information through cadres leads to greater knowledge of the community, which facilitates the acceptance of health information. Because health executives come from the community, they can become more aware of the customs and characteristics of the community. (Rofif et al., 2017)

CONCLUSION

Based on the results of the study, it shows that there is an effect of Health Cadres empowerment on blood pressure control behavior in hypertension patients in the Working Area of Jembatan Kecil Health Center, Bengkulu City.

Declaration of Interest Statement

The authors declare that they have no conflict of interest.

REFERENCES

- Agyei-baffour, P., Tetteh, G., Quansah, D. Y., Boateng, D., & Boateng, D. (2018). *Prevalence and knowledge of hypertension among people living in rural communities in Ghana : a mixed method study*. 18(4), 931–941.
- Al Rasyid, N. H. S., Febriani, N., Nurdin, O. F. T., et al., (2022). Gambaran Tingkat Kepatuhan Minum Obat Pasien Hipertensi Di Puskesmas Lempake Samarinda. *Jurnal Kedokteran Mulawarman*, 9(2), 55-63.

- Asri., Sigit, M., Uswatul, K. (2020). Pengaruh pelatihan kader posbindu terhadap perilaku deteksi dini hipertensi pada usia dewasa. *Jurnal Kesehatan Panrita Husada*. 5(1). 43-52.
- Banowati, L. (2018). *Hubungan karakteristik kader dengan kehadiran dalam pengelolaan posyandu*. 1179–1189.
- Dan, P., Tentang, S., Pengendalian, D., & Darah, T. (2019). *Pengetahuan Dan Sikap Tentang Hipertensi Dengan Pengendalian Tekanan Darah*. 01(01), 10–17.
- Daeli, F. S. (2017). Hubungan tingkat pengetahuan dan sikap pasien hipertensi dengan upaya pengendalian hipertensi di Uptd Puskesmas Kecamatan Gunungsitoli Selatan Kota Gunungsitoli tahun 2017 (Doctoral dissertation)
- Di, H., & Ngemplak, P. (2024). *IJOH: Indonesian Journal of Public Health*. 2(2), 187–197.
- Ekarini, N. L. P., Wahyuni, J. D., & Sulistyowati, D. (2020). Faktor - Faktor Yang Berhubungan Dengan Hipertensi Pada Usia Dewasa. *Jkep*, 5(1), 61–73. <https://doi.org/10.32668/jkep.v5i1.357>
- fatimah, n., & hermawati, h. (2024). gambaran upaya pengendalian pada penderita hipertensi di puskesmas tasikmadu. *indonesian journal of public health*, 2(1), 121-132.
- Guna, S. D., Keperawatan, F., Riau, U., Sari, P. U., & Diri, M. (2024). *Kurangnya Manajemen Perawatan Diri Dan*. 10(1), 77–81.
- Hipertensi, M. P. (2023). *Jurnal Keperawatan*. 15, 69–76.
- Journal, I., & Medical, O. (2019). *IJMS – Indonesian Journal On Medical Science – Volume 6 No. 1 – Januari 2019*. 6(1), 79–85.
- Kemendes RI. (2020). Pusat Data dan Informasi Kementerian Kesehatan RI: Hipertensi. Infodatin
- Kepatuhan, T., Obat, M., Hipertensi, P., Adipinasthika, S., Chintya, S., & Paramita, S. (2022). *Di Puskesmas Lempake Samarinda Hawassa Referral Hospital di Kota Hawassa*. 9(September), 55–63.
- Level, C., Of, E., Use, T. H. E., & Antihypertension, O. F. (2020). *Pada Pasien Hipertensi Menggunakan Kuesioner Mmas-8 Di Penang Malaysia Compliance Level Evaluation Of The Use Of Antihypertension In Hypertension Patients Using Mmas-8 Questionnaire In Penang*. 5(1), 23–33.
- Martha, E., Nadira, N. A., Sudiarti, T., Mayangsari, A. P., Enjaini, E. F., Ryanthi, T. P., Bangun, D. E., Indonesia, K. U., & Depok, K. (2020). *The Empowerment Of Cadres And Medicasters In The Early Stunting is often not considered a serious problem December 2019*, 153–161. <https://doi.org/10.20473/ijph.v1i5il.2020.153-161>
- Masi, S., Georgiopoulos, G., Chiriaco, M., Grassi, G., Seravalle, G., Savoia, C., & Volpe, M. (2019). *The importance of endothelial dysfunction in resistance artery remodelling and cardiovascular risk*. 39(0). <https://doi.org/10.1093/cvr/cvz096>
- Mastuti, S., Ulfa, L., & Nugraha, S. (2023). Efektivitas Media Audio Visual dalam Perilaku Pencegahan Hipertensi pada Pekerja Sektor Swasta. *Jurnal Ilmu Kesehatan Masyarakat*, 12(03), 253-258.
- Oktaviana. (2023). Pengaruh Edukasi Terhadap Pengetahuan Pasien Hipertensi. *Jurnal Penelitian*

- Perawat Profesional, 5(1), 153–158.
- Ovid, P. C., & Ndonga, D. I. I. (2020). *P c -19 i. 11(2)*, 258–264.
- Priyanto, A., & Abdillah, A. (2021) " Pengaruh Pendidikan Kesehatan Tentang Hipertensi Terhadap Tingkat Pengetahuan Hipertensi Dengan Menggunakan Media Poster Dan Audiovisual Pada Pasien Hipertensi," Tersedia pada : <https://doi.org/10.36089/nu.v12i3.128>. "Jurnal Ilmiah Ilmu Keperawatan, 4(1),
- Puskesmas, K., & Palu, K. (2023). *Karakteristik demografi penderita hipertensi di wilayah kerja puskesmas kawatuna palu tahun 2022*. 5(April), 40–44.
- Riamah. (2019). Faktor-Faktor Penyebab Terjadinya Hipertensi Pada Lansia Di UPT PPSW Khusus Khotimah. *Menara Ilmu*, 13(5), 106–113.
- Rofif, R. F., Rasni, H., & Sulistyorini, L. (2016). *Pengaruh Pendidikan Perawatan Bayi Baru Lahir dengan Metode Syndicate Group terhadap Pengetahuan Kader Posyandu di Desa Sumberdanti Wilayah Kerja Puskesmas Sukowono Kabupaten Jember*. 4(3), 555–562
- Setiyaningsih, R., & Ningsih, S. (2019). Pengaruh motivasi, dukungan keluarga dan peran kader terhadap perilaku pengendalian hipertensi. *Indonesian Journal On Medical Science*, 6(1)..
- Schutte AE, Et Al. 2021. "Hypertension in Low- and Middle-Income Countries". *Circ Res*. 128(7), 808-826
- Siregar, D. (2021). *Efektivitas edukasi hipertensi terhadap tingkat pengetahuan lansia penderita hipertensi di wilayah kerja puskesmas hutaimbaru*.
- Siwi, A. S., Irawan, D., & Susanto, A. (2020). Analisis faktor-faktor yang memengaruhi kejadian hipertensi. *Journal of Bionursing*, 2(3), 164–166
- Suryariningsih, Y. (2019). Penatalaksanaan Diet Dan Olahraga Dengan Pengendalian Hipertensi Pada Klien Hipertensi. *Menara Ilmu: Jurnal Penelitian dan Kajian Ilmiah*, 13(9).
- Sulistiyanto, A. D., Jauhar, M., Lestari, D. T., Rahmawati, A. M., Suwandi, E. W., Kartikasari, F., & Puspatri, E. (2023). Analisis Faktor-Faktor Yang Mempengaruhi Keterampilan Kader Kesehatan Dalam Deteksi Dini Sunting Berbasis Masyarakat Pada Kader Kesehatan. *Jurnal Ilmu Keperawatan dan Kebidanan*, 14(2), 425-436.
- W. Apriliyani and D. L. Ramatillah, "Evaluasi Tingkat Kepatuhan Penggunaan Antihipertensi pada Pasien Hipertensi Menggunakan Kuesioner MMAS-8 di Penang Malaysia," *Soc. Clin. Pharm. Indones. J.*, vol. 5, no. 1, pp. 23–33, 2020
- Wahyuntari, E. (2020). *Pembentukan Prambanan kader kesehatan posyandu remaja Bokoharjo. 1(1)*, 14–18.
- Wahyudi, D. T. (2019). sikap dan perceived threat terhadap perilaku pencegahan hipertensi. *Journal of Borneo Holistic Health*, 2(1), 118-124.
- Yunus, M., Aditya, I. W. C., & Eksa, D. R. (2021). Hubungan usia dan jenis kelamin dengan kejadian hipertensi di puskesmas haji pemanggilan kecamatan anak tuha kab. Lampung Tengah. *Jurnal Ilmu kedokteran dan kesehatan*, 8(3), 229-239.