

ANALYSIS OF FACTORS AFFECTING TREATMENT COMPLIANCE IN ELDERLY WITH HYPERTENSION

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Abstract. Background Hypertension may be a clutter of the blood circulation framework which comes about in an increment in blood weight over the ordinary esteem or blood weight $\geq 140/90$ mmHg. Based on data from WHO in 2018 shows that almost 1.3 billion people in the world have hypertension. Hypertension is additionally a genuine therapeutic condition and can increment the chance of heart, brain, kidney, and other diseases. Hypertension frequently causes complications such as stroke (36%), heart infection (54%), and kidney disappointment (32%). Compliance in treatment can be interpreted as patient behavior that obeys all advice and instructions recommended by medical personnel, such as doctors and pharmacists regarding everything that must be done to achieve treatment goals. Compliance with taking medication is the main requirement for successful treatment of hypertension. Methods The type of research used in this study is Explanatory Research. Statistical tests use the Chi-Square test. Multivariate analysis. The comes about of this consideration show that the factors related to adherence to treatment in elderly hypertensive patients are instruction, information, state of mind, accessibility of reserves, accessibility of transportation, family back, and bolstering of well-being specialists. Two factors that impact adherence to hypertension treatment within the elderly are family back (p-value = 0.004), and health worker support (p-value = 0.007). Conclusion There's an impact between family bolster and health worker support on adherence to treatment in elderly hypertension at Gribig Health Center

Keywords: Hypertension, Elderly, Factors, medication adherence

INTRODUCTION

Hypertension may be a clutter of the blood circulation framework which comes about in an increment in blood weight over the typical esteem or blood weight $\geq 140/90$ mmHg (Indonesian Ministry of Health, 2019). Tall blood weight or hypertension is an increment in blood weight within the courses, where hyper means excessive and pressure implies weight or pressure, so hypertension may be a clutter of the circulatory framework that causes an increment in blood weight over normal values (Musakkar, 2020). Based on data from WHO in 2018 it appears that nearly 1.3 billion individuals within the world have hypertension. Hypertension is additionally a genuine therapeutic condition and can increment the chance of heart, brain, kidney, and other illnesses. Hypertension frequently causes complications such as stroke (36%), heart illness (54%), and kidney disappointment (32%) (Health Research and Development, 2018). Hypertension is the main cause of premature death worldwide, estimated to cause 9.4 million deaths, which is around 23.7% of all deaths and is the largest percentage (Indonesian Ministry of Health, 2019).

The World Wellbeing Organization (WHO) recorded in 2015 at slightest 839 million cases of hypertension, evaluated to be 1.15 billion in 2025 or around 29% of the full world populace where sufferers are more in ladies (30%) than men (90 %). Roughly 80% increment in cases of hypertension happens primarily in creating nations (WHO, 2015) Results of Basic Health Research 2018 The prevalence of hypertension in Indonesia is based on the results of measurements in residents aged ≥ 18 years aged 35-44 years of 31.6% (Indonesian Ministry of Health, 2018). Data from the Central Java Provincial Health Office in 2017 recorded 1,153,371 people or 12.53% were diagnosed with hypertension. Based on gender, the percentage for women is 13.10%, and for men is 13.16% (Central Java Health Office, 2017). The predominance of hypertension in Indonesia based on blood weight estimations in individuals matured 18 a long time and over in several ranges has come to 31.7 % of the overall grown-up populace. The predominance of basic hypertension cases in Central Java Territory in 2011 was

1.96% (Central Java Health Office, 2016).

Hypertension will cause harm to several imperative organs, hence it is exceptionally critical to check blood weight from a youthful age, and on the off chance that hypertension is found, it must be checked routinely and the blood weight is controlled to the suggested level, by progressing awful living propensities and with pharmaceutical. Agreeing to the Division of Wellbeing and Human Benes, hypertension is found mostly in the population aged over 65 years with a percentage of 60-70%. The normal sort of hypertension regularly found within the elderly is Disconnected Systolic Hypertension, in which the systolic weight is tall (over 140 mmHg), but the diastolic weight remains ordinary (below 90 mmHg). The elderly are frequently influenced by hypertension due to firmness within the supply routes so blood weight tends to extend. Expanding age in old age causes a diminish within the flexibility of fringe blood vessels which can increment fringe vascular resistance which in turn will increment the event of systolic hypertension. Different physiological changes happen in various organs of the body, particularly the circulatory framework, one of which is solidness within the supply routes so that blood pressure tends to extend, in expansion to mental well-being such as the capacity to think, for example, remembering begins to decline and affects adherence to taking medication in the elderly compared to young people (Huriah *et al.*, 2019).

Compliance in treatment can be interpreted as patient behavior that obeys all advice and instructions recommended by medical personnel, such as doctors and pharmacists regarding everything that must be done to achieve treatment goals. Compliance with taking medication is the main condition for achieving successful treatment (Saragi, 2011).

The controlled blood pressure of hypertensive patients shows the success of therapy. This must also be supported by the patient's knowledge and understanding of the disease. The more the patient understands the disease, the more concerned the patient will be in maintaining a lifestyle, taking the medication regularly, and the level of patient compliance will also increase (Sinuraya *et al.*, 2017) Controlled patient blood pressure can occur when the patient is able to take antihypertensive drugs obediently so that the risk of damage to organs such as the heart, kidneys and brain can be decreased. These complications occur because people with hypertension do not take adequate treatment related to their disease (Ministry of Health, 2018). According to (Harahap, 2019), in arrange to be able to control blood weight within the long term, taking antihypertensive drugs must be done submissively. Antihypertensive drugs are not as they were able to control blood weight, as of now antihypertensive drugs too play a part in diminishing the chance of creating cardiovascular complications. Compliance with the treatment of hypertensive patients is critical since hypertension may be a illness that cannot be cured but must continuously be controlled or controlled so that complications don't happen which can lead to passing.

METHODS

The type of research used in this study is Explanatory Research, namely research that explains the relationship between the variables in the study through hypothesis testing. This study uses a quantitative approach (Arikunto, 2006) This study uses probability sampling with a simple random sampling technique (Nursalam, 2011) This method is carried out by randomly taking members of the population to be used as research subjects. The number of samples was 123 elderly hypertensive patients. The Gribig health center area covers 6 areas, so the size of the population in this study was calculated using a formula to get a proportional sample from each place in the health center area.

RESULTS AND DISCUSSION

Table 1. Respondent characteristics of elderly patients with hypertension in the region Gribig Community Health Centre

Characteristics	f	%
Age		
Early Seniors (46-65 years)	101	82.1
Late Seniors (≥ 65 years)	22	17.9
Education		
Senior High School	96	78,1
Bachelor	27	21,9
gender		
Women	31	25,2
Man	92	74,8

Table 2. Relationship between age, education, gender, knowledge, attitudes, transportation, availability of funds, family support and support Health workers with adherence to treatment of elderly hypertensive patients work area of the Gribig Health Center

Variable	Compliance with Hypertension Treatment				Total		Statistical Test Results
	Not Obedient		Obedient		f	%	
	f	%	f	%			
Age of Respondents							
Early seniors	1	50	11	50	22	100	p = 0,004
Late Seniors	27	31.2	74	69.8	101	100	
Education							
Bachelor	15	55.6	12	44.4	27	100	p = 0,004
Senior High School	23	24	73	76	96	100	
Gender							
Women	15	48,4	16	51,6	31	100	p = 0,004
Man	23	25	63	75	92	100	
Knowledge							
Not good	3	7.9	21	24.7	24	100	p = 0,049
good	35	92.1	64	75.3	99	100	
Attitude							
Not good	21	55.3	26	30.6	47	100	p = 0.016
good	17	44.7	59	69.4	76	100	
Transportation							
Not enough	14	36.8	11	12.9	25	100	p = 0,05
enough	24	63.2	74	87.1	98	100	
Availability of Funds							
Not enough	10	26.3	11	11,8	21	100	p = 0.045
enough	28	63.7	74	88.2	102	100	
Family support							
No Support	13	34.2	13	15.3	26	100	p = 0.000
Support	25	65.8	72	84.7	97	100	
Health worker support							
No Support	26	68.4	27	30.6	53	100	p = 0.000
Support	12	31.6	58	69.4	70	100	

Table 3. Results of Intermediate Multivariate Logistic Regression Test (Enter Method). Independent Variables With Bound Variables

independent variable	B	S.E	Wald	df	Sig.	Exp(B)
Family support	1,285	0,447	8,952	1	0,004	3,613
Health worker support	1,209	0,450	7.235	1	0,007	3.351

The results of the analysis of family support variables show the value of $\text{Exp (B)} = 3.613$ and $p = 0.004$ ($p < \alpha 0.05$). This shows that family support that does not support hypertension treatment has a risk of non-adherence of 3.613 times greater than family support that supports hypertension treatment. This shows that one of the efforts to create an attitude of adherent sufferers in treatment is to have family support. This is because the family is the closest individual to the sufferer. Not only providing verbal support, but the family must also be able to provide support in the form of attitude.

The results of the analysis of family support variables show the value of $\text{Exp (B)} = 3.351$ and $p = 0.007$ ($p < \alpha 0.05$). This shows that the support of health center staff who do not support hypertension treatment has a risk of non-adherence of 3.351 times greater than the support of health center staff who support hypertension treatment. This shows that the support of health workers in the form of education can increase the knowledge of hypertensive sufferers about their disease, such as the importance of taking regular medication to avoid complications.

Knowledge

At the knowledge level, respondents with a good level of information who adhered to treatment had a greater proportion than respondents with low knowledge who adhered to treatment. Factual comes about utilizing chi-square (coherence adjustment) appears esteem of $\chi^2 = 3.716$ with $p = 0.044$, it can be concluded that there's a noteworthy relationship between information and compliance in hypertension treatment. So it can be concluded that the higher the level of information, the more disciple to treatment.

The level of information is one of the components that can influence a person's adherence to treatment. A high level of knowledge will indicate that a person already knows, understands, and understands the intent of the treatment they are undergoing (Notoatmodja, 2012). The consequences confirmed that the extent of know-how had an impact on medication adherence. By having enough know-how approximately the disease, respondents can be endorsed to conform with the remedy they may be undergoing. The consequences of this examination are in keeping with the consequences of studies carried out by (Pratiwi D, 2011), who obtained results where there was a relationship between a person's knowledge and their attitude towards the treatment being undertaken. The consequences of Rogers' studies said that know-how or cognition is a vital area for the formation of one's actions. Behavior primarily based totally on superb know-how and attitudes can be lasting.

Attitude

Based on the effects of the have a look it became determined that the respondents with an awful mindset obeyed have been 30.6% much less than the respondents who had a terrific mindset who obeyed through 69.4%. The statistical effects of the usage of chi-square (continuity correction) confirmed a fee of $\chi^2 = 5.767$ with $p = 0.016$, so it may be concluded that there may be sizable dating between mindset and adherence in treatment. The effects of this have a look at are consistent with Green's conduct which states that a person's conduct is prompted by a person's mindset. Good perceptions and good attitudes can support adherence to taking antihypertensive medication (Wahyudi, Ratnawati, and Made, 2018). Understanding hypertension will lead to behaviors and attitudes in treatment that have been recommended by doctors, this is because patients who experience hypertension will worry about complications. So that patients become obedient to treatment and apply what doctors have suggested and recommended (Indahwati, 2007). A good attitude towards patients is caused by the patient's need or desire for greater recovery (Said, 2016)

Transportation Availability

Statistical outcomes the use of the chi-square (continuity correction) display a value of χ^2

= 7.846 with $p = 0.005$, it could be concluded that there may be a significant dating among the availability of transportation and compliance in hypertension treatment. From the results of the Chi-square statistical test, it was found that there was a significant relationship between transportation and the level of patient compliance in taking antihypertensive medication. This is not in line with the opinion put forward by Green and Andersen in theory which states that transportation is a supporting factor for utilizing health services, the availability of transportation facilities will provide convenience in obtaining health services. This raises that there is a willingness to utilize health services because of the need for health services which is addressed by the existence of pain both physical and psychological that is felt for healing efforts. Rapport in Ismawati argues that the utilization of well-being administrations is affected by needs, the utilization that is obtained when utilizing health services, and the affordability of access to these services. Typically in line with the inquiry by (Kartikasari, Sarwani, and Pramutama, 2022) that transportation is the regularity of treatment in patients who are funded by health insurance. This does not agree with Philip in 1997 who quoted from the revelation in 2003 that transportation is one of the factors related to the regularity of treatment.

Availability of Funds

Based on the research results, it is known that respondents who do not comply with the availability of insufficient funds are 26.3% smaller than the respondents who have sufficient funds who are not compliant 63.7%. Respondents who comply with the availability of insufficient funds are 11.8% smaller than the respondents who comply with the availability of sufficient funds, who are 88.2%. Statistical results using chi-square (continuity correction) show a value of $\chi^2 = 3.085$ with $p = 0.049$, it can be concluded that there's a critical relationship between the accessibility of stores and adherence to hypertension treatment.

Based on the comes about of the Chi-square factual test, it was found that there was a critical relationship between the social accessibility of stores and the level of understanding adherence to taking antihypertensive pharmaceuticals. Usually in line with Emiliana *et al.*, 2021 research with a sample of 104 people, showing that there was no noteworthy relationship between family salary and hypertension among the elderly with a p-value of 0.286. This research is not by research conducted by (Pujiyanto, 2008) at the Beji Health Center in Depok City which states that the availability of funds affects adherence to taking antihypertensive medication. This is due to the relationship between low availability of funds and non-compliance reported in several studies. Decreased adherence due to socio-economic consequences because someone with low economic status requires a long time to wait before and during treatment at the clinic, while those with high socioeconomic status do not need to wait long for treatment.

Family support

Measurable comes about utilizing chi-square (continuity correction) showing a value of $\chi^2 = 15.119$ with $p = 0.000$. It can be concluded that there's a noteworthy relationship between family bolster and adherence in treating hypertension with the elderly.

Family support is one of the assistance provided by family members with hypertension which will have an impact on physical and psychological comfort while undergoing treatment. The family back is required by individuals with hypertension since somebody who is debilitated certainly needs consideration from the family. (Puspita, Oktaviarini and Dyah Puspita Santik, 2017). The presence of family back could be a figure that bolsters adherence to taking antihypertensive medication in individuals with hypertension. Family support is a factor that supports adherence to antihypertensive medication in people with hypertension. Family support is not only in the form of support from the family but can also be provided by close relatives. Family support can be in the form of financial and physical support, where families can remind

them to take antihypertensive drugs, provide information regarding reasons for taking drugs, and provide transportation services to access health services and funds to buy drugs (Septy Megawatie 2021).

In contrast to the research conducted by (Dina Widowati, and Edi Purwanto, 2018) that families do not always provide family support, this is because families are too busy so they do not remind patients to always take their antihypertensive medication, families also rarely give appreciation to patients who have taken medication so that the patient becomes non-compliant. about conducted by (Nuratiqa *et al.*, 2020), entitled factors related to Me to taking anti-hypertensive Medication, the results of the study showed a relationship between family support and adherence to taking anti-hypertensive medication (p-value 0.021).

Health Officer Support

Based on the research results, it is known that the respondents who support non-compliant officers are 68.4% greater than those who support non-compliant officers who are 31.6%. Respondents who support officers who do not support compliance are 30.6% smaller than the respondents who support officers who support compliance by 69.4%. Statistical results using chi-square (continuity correction) show a value of $\chi^2 = 13.891$ with $p = 0.000$, it can be concluded that there is a significant relationship between the support of Public health center staff and adherence to hypertension treatment According to (Ria Wulandari, 2019), that a good relationship between patients and health workers can support medication adherence, so that patients have confidence in taking medication. The low role of health workers tends to make patients disobedient (Pratiwi and Perwitasari, 2017). Wellbeing counseling is an instructive action carried out by spreading messages, and ingrains certainty, so that individuals are aware, know, and understand, but are too willing and able to form proposals. that must do with well-being. Health workers who provide the best service for patients will have a positive impact on patient compliance.

The Impact of Free Factors With Subordinate Factors

The impact of compliance with the treatment of hypertension among the elderly was carried out by multivariate examination utilizing a calculated relapse test. The results of the analysis of family support variables show the value of $\text{Exp (B)} = 3.613$ and $p = 0.004$ ($p < \alpha 0.05$). This shows that patients who receive family support are more likely to comply with treatment by 3.613 times compared to respondents who don't receive family back. This appears that one of the endeavors to make a state of mind of disciple sufferers in treatment is to have a family. This is because the family is the closest individual to the sufferer. Not only providing verbal support, but the family must also be able to provide support in the form of attitude. For example, the family helps sufferers to reach a health service.

The results of the analysis of health worker support variables showed the value of $\text{Exp (B)} = 3.351$ and $p = 0.007$ ($p < \alpha 0.05$). This shows that patients who receive the support of staff have a likelihood of complying with treatment by 3.351 times compared to respondents who don't get bolstered by well-being laborers. This shows that the back of well-being specialists within the frame of instruction can increment the information of hypertensive sufferers almost their infection, such as the significance of taking customary pharmaceuticals to dodge complications. This can also be used as a motivation for sufferers to pay more attention to their health. With a good attitude and support from health workers, people with hypertension are expected to be able to improve their adherence to treatment.

CONCLUSION

1. The results showed several factors or variables related to medication adherence in elderly hypertensive patients at Public health center Gribig namely education $p = 0.004$,

information $p = 0.044$, state of mind $p = 0.016$, availability of funds $p = 0.049$, availability of transportation $p = 0.005$, p family bolster = 0.000, and support for health workers $p = 0.000$

2. Two factors impact adherence to hypertension treatment within the elderly at Public health center Gribig, namely family support variable (p -value = 0.004), health worker support variable (p -value = 0.007)

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1. For the Gribig Community Health Center

Make programmed policy steps in reducing cases of hypertension. The various ways that can be taken are as follows:

- a. Collect information on the number of elderly individuals within the working zone of the Gribig Wellbeing Center, Kudus Rule.
- b. Monitor the number of elderly visits who come to check their health
- c. Utilize every opportunity in the ward to provide group counseling at Integrated Healthcare Center, social gathering, recitation, home visits, and mass counseling (loudspeakers, posters, banners, or leaflets) about the importance of preventing hypertension, especially demonstrations on limiting the use of table salt, MSG, foods containing high sodium levels such as salted fish, canned food and others. Can replace it with the consumption of regular fish or freshwater fish that is low in salt (eg catfish), nuts such as tempeh, tofu and increase consumption of vegetables (eg clear vegetables, spinach, cucumber) and fruit (eg pawpaw, banana).
- d. Advise the elderly to control their blood pressure at the health center at least once every three to 12 months, provide motivation or support to sufferers, and consult them to stick to a low salt diet regularly and consume fruits and vegetables daily.
- e. Health cadres make domestic visits, particularly for elderly individuals with hypertension who don't come to control their blood weight at the Public health center At the same time to monitor whether the low salt diet is still being done or not.

2. For Local Communities

- a. Reduce the salt content contained in cooking recipes. For example, a recipe says that you add one teaspoon of salt, so you can reduce it to half or a quarter.
- b. Follow the information that has been given during nutrition consultations or counseling by health workers about recommended or prohibited food ingredients, such as reducing consumption of preserved foods
- c. Check each ready-to-eat food for its nutritional value so that you can consider buying food products that are low in sodium.
- d. Replace salt with natural seasonings such as onions, chilies, or other spices.
- e. Reducing the purchase of food sources of sodium.

3. For Other Researchers

Other analysts are anticipated to include other factors which will be related to the rate of hypertension that were not included in this study. Using better research designs such as cohort studies, or with larger sample sizes, psychiatric stress events are investigated in a more in-depth way

REFERENCES

- Arikunto, S. (2006) *Prosedur Penelitian, Suatu Pendekatan Praktik*. Jakarta, Rinneka Cipta.
- Dina Widowati, Edi Purwanto, N. N. (2018) 'Hubungan Dukungan Keluarga Dengan Kepatuhan Minum Obat Pada Lansia Hipertensi Di Posyandu Lansia Puskesmas Lempake Samarinda Dina', pp. 1–10.
- Dinas provinsi Jawa tengah (2016) 'Profil Kesehatan Provinsi Jawa Tengah 2016',

- 3511351(24).
- Dinkes Jateng (2017) *Profil Kesehatan Provinsi Jawa Tengah*.
- Emiliana, N. et al. (2021) 'Analisis Kepatuhan Kontrol Berobat Pasien Hipertensi Rawat Jalan pada Pengunjung Puskesmas Pisangan Tahun 2019', *Jurnal Kajian dan Pengembangan Kesehatan Masyarakat*, 1(2), pp. 119–132.
- Harahap, A. C. (2019) 'Character Building Pendidikan Karakter', *Al-Irsyad: Jurnal Pendidikan dan Konseling*, 9(No 1), pp. 1–11.
- Huriah, T. et al. (2019) *Faktor Yang Berhubungan Dengan Kepatuhan Pengobatan Hipertensi Pada Lansia : A Literature Review (Factors Associated With Adherence Toward The Treatment of Hypertension in The Elderly : A Literature Review) Mahasiswa Magister Keperawatan Program Pascasa*.
- Indahwati, R. (2007) 'Hubungan Antara Illness Perception Dengan Kepatuhan Minum Obat Pada Pasien Hipertensi', *Pembagian Harta Waris Dalam Adat Tionghoa Di Kecamatan Ilir Timur I Kota Palembang*, 1(14 June 2007), pp. 1–13. Available at: <https://core.ac.uk/download/pdf/11715904.pdf>.
- Kartikasari, Sarwani, D. R. S. and Pramatama, S. (2022) 'Faktor-Faktor yang Mempengaruhi Tingkat Kepatuhan Pengobatan pada Pasien Hipertensi di Berbagai Wilayah Indonesia', *Jurnal Pendidikan Tambusai*, 6(2614–3097), pp. 11665–11676.
- Kemendes RI (2016) 'Situasi Lanjut Usia (Lansia) di Indonesia', *Infodatin Pusat Data dan Informasi Kementerian Kesehatan Republik Indonesia*, (ISSN 2442-7659).
- Kemendes RI (2019) 'Buku Pedoman Penyakit Tidak Menular', *Kementerian Kesehatan RI*, p. 101. Available at: http://p2ptm.kemkes.go.id/uploads/VHcrbkVobjRzUDN3UCs4eUJ0dVBndz09/2019/03/Buku_Pedoman_Manajemen_PTM.pdf.
- Litbangkes, B. (2018) *Laporan Nasional Risetdas 2018*. Jakarta: KEMENTERIAN KESEHATAN REPUBLIK INDONESIA.
- Musakkar, T. D. (2020) *Promosi kesehatan*.
- Notoatmodjo, S. (2012) *Konsep Perilaku dan Perilaku Kesehatan*. Jakarta : Reneka cipta.
- Nuratiga, Nuratiga, Risnah, H. (2021) 'Faktor-Faktor Yang Memengaruhi Kepatuhan Minum Obat Antihipertensi Pada Penderita Hipertensi: Literature Review Septy', pp. 1–5.
- Nuratiqa, N. et al. (2020) 'Faktor Yang Berhubungan Dengan Kepatuhan Minum Obat Anti Hipertensi', *BIMIKI (Berkala Ilmiah Mahasiswa Ilmu Keperawatan Indonesia)*, 8(1), pp. 16–24. doi: 10.53345/bimiki.v8i1.122.
- Nursalam (2011) *Konsep dan Penerapan Metodologi Penelitian Ilmu Keperawatan*. 2nd ed. Salemba Medika, jakarta.
- Pratiwi D, 2011 (2011) 'Pengaruh Konseling Obat Terhadap Kepatuhan Pasien Hipertensi Di Poliklinik Khusus Rsup Dr. M. Djamil Padang', pp. 1–34. Available at: <http://www.ainfo.inia.uy/digital/bitstream/item/7130/1/LUZARDO-BUIATRIA-2017.pdf>.
- Pratiwi, R. I. and Perwitasari, M. (2017) 'Analisis Faktor-Faktor Yang Mempengaruhi Kepatuhan Pasien Hipertensi Dalam Penggunaan Obat di RSUD Kardinah', *2nd Seminar Nasional IPTEK Terapan (SENIT)*, pp. 204–208.
- Pujiyanto, P. (2008) 'Faktor Sosio Ekonomi yang Mempengaruhi Kepatuhan Minum Obat Antihipertensi', *Kesmas: National Public Health Journal*, 3(3), p. 139. doi: 10.21109/kesmas.v3i3.228.
- Puspita, E., Oktaviarini, E. and Dyah Puspita Santik, Y. (2017) 'Peran Keluarga Dan Petugas Kesehatan Dalam Kepatuhan Pengobatan penderita Hipertensi Di Puskesmas Gunungpati Kota Semarang', *J. Kesehat. Easy. Indones*, 12(2), pp. 25–32.
- Ria Wulandari, S. P. (2019) 'Hubungan Pengetahuan, Dukungan Keluarga, Dan Peran Petugas Kesehatan Dengan Kepatuhan Penderita Hipertensi Dalam Menjalani Pengobatan Ria',

- 4, pp. 340–352.
- Riskesdes kemenkes RI, 2018 (2018) ‘Laporan_Nasional_RKD2018_FINAL.pdf’, *Badan Penelitian dan Pengembangan Kesehatan*, p. 674. Available at: http://labdata.litbang.kemkes.go.id/images/download/laporan/RKD/2018/Laporan_Nasional_RKD2018_FINAL.pdf.
- Said, M. I. (2016) ‘Hubungan Pengetahuan Dan Sikap Terhadap Kepatuhan Minum Obat Pada Pasien Hipertensi Dipoli Klinik Rsu Uki Tahun 2016’, *Kesehatan Komunitas*, 8(1). Available <http://ojs.abdinusantara.ac.id/index.php/kesehatankomunitas/article/view/241>.
- Saragi (2011) *Panduan Penggunaan Obat*. Jakarta.
- Sinuraya, R. K. *et al.* (2017) ‘Assessment of Knowledge on Hypertension among Hypertensive Patients in Bandung City: A Preliminary Study’, *Indonesian Journal of Clinical Pharmacy*, 6(4), pp. 290–297. doi 10.15416/ijcp.2017.6.4.290.
- Wahyudi, C. T., Ratnawati, D. and Made, S. A. (2018) ‘The effect of demographic, psychosocial and long-suffering primary hypertension on compliance with antihypertension medicine treatment’, *Jurnal JKFT: Universitas Muhammadiyah Tangerang*, 2(2), pp. 14–28.
- WHO. *Global Status Report On Noncommunicable Diseases, Switzerland : WHO Press*. 1st end (2015).