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Dominant Factors of Adherence to Taking Medicine in Elderly Hypertensive Patients

Herlina Herlina[1], Retno Mardhiati[2], Rismawati Pangestika[3]

[1,2,3)] Public Health Study Program, Faculty of Health Sciences, Universitas Muhammadiyah Prof. Dr. HAMKA

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Correspondence:
retno_ma@uhamka.ac.id

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Abstract

Background: Adherence to taking medication is a prerequisite for hypertension treatment to be more effective and most likely to cure patients in controlling hypertension so that complications and death do not occur

Objective: The objective of this study is to discover the dominant factors of elderly hypertension patients' conformity to medication at the Jatinegara District Health Center

Methods: It is a quantitative study with Cross Sectional approach. It involved 200 respondents, as the sample was taken using a quota sampling technique.

Results: Univariate results showed that 25% of elderly hypertensive patients did not adhere to medication. In bivariate analysis, it was found that family support, self-efficacy, motivation, and health workers' roles were related (p-value <0.05) to adherence to hypertension medication consumption. Meanwhile, no relation (p-value 0.05) existed between age, knowledge, attitude, access to healthcare facilities, and JKN participation variables. The dominant variable observed from the multivariate result was the interaction of attitudes and self-efficacy (OR: 23,943).

Conclusion: Based on multivariate analysis, it was found that the influential factors were self-efficacy and attitudes.

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INTRODUCTION

Hypertension is a condition in which a person's blood pressure is above normal, namely ≥140 and ≤90 mmHg of systolic and diastolic blood pressure, respectively, for a two-day measurement. For those with no other disease, the normal blood pressure is <140 mmHg for systolic and <90 mmHg for diastolic blood pressure. Meanwhile, those who suffer from diabetes and kidney failure should have <140 mmHg for systolic and <85 mmHg for diastolic blood pressure to be considered as having normal blood pressure.[5]

Hypertension is a public health threat because it can cause illness and complications such as stroke, coronary heart disease, atrial fibrillation, heart failure, cerebrovascular disease, peripheral arterial disease, kidney failure, and even death. [2,6] Most people with hypertension are unaware of their condition as there are usually no warning signs or symptoms. For that characteristic, "Silent Killer" is commonly used to refer to hypertension. Hypertension can be detected by checking blood pressure regularly because many people still do not realize that they have hypertension or are at risk of hypertension.[5]

Based on the 2018 Riskesdas, hypertension prevalence among the population aged ≥18 years was 34.1% higher than in 2013 25.8%. South Kalimantan had the highest hypertension prevalence, reaching 44.1%. Hypertension in the elderly group 55-64 y.o was 55.2%, 65-74 y.o was 63.2%, and 75+ y.o was 69.5%. People who suffer from hypertension by 45.6% do not routinely take medication.[15]

Based on the 2018 DKI Jakarta Province Riskesdas Report, measurements in the population aged ≥18 years in DKI Jakarta Province showed that hypertension prevalence reached 33.43%. The proportion of taking antihypertensive drugs regularly in the population aged ≥18 years with hypertension is 59.91% taking medicine regularly, 26.57% not taking medicine regularly, and 13.52% not taking medicine. At the same time, the measurement of the population age of ≥18 years in East Jakarta found that the prevalence of hypertension reached 35.45%. The proportion of taking medication for hypertension sufferers in East Jakarta found that there were 27.49% not taking medication regularly and 14.56% not taking medication.[16]

Hypertension at the Jatinegara District Health Center in the elderly age group on September 2021, there were 1351 elderly hypertension patients. Based on the results of interviews with doctors on 16 November 2021 at the Jatinegara Subdistrict Health Center, 20% of hypertension patients who visited the Geriatric Clinic it was found they were still not compliant with taking antihypertensive medication because the patient felt healthy and had no blood pressure control and returned to the health district center. Management and control of hypertension can be done by complying with and taking antihypertensive drugs regularly and changing lifestyles to become healthier. The effectiveness of hypertension treatment is still not sufficient. The main factor is adherence to antihypertensive drugs, which is still low.[14] The consequences occur if a hypertensive patient does not comply with antihypertensive drugs; the treatment will take longer and make the patient feel bored.[24]

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Some studies found that age, knowledge, attitude, motivation, self-efficacy, health faci-lity access, and health workers' role are significantly related to medication adhe-rence.[17,18,25,26,28]

Therefore, this study aimed to determine the dominant factors related to medication adherence of elderly hypertensive patients at the Jatinegara District Health Center, East Jakarta. This research can be used to increase the understanding of factors associated with medication compliance for elderly hypertensive patients, who are expected to be obedient in taking the medication regularly to control their blood pressure so that the disease does not get worse.

METHODS

The method is Quantitative research with an analytical design through Cross Sectional approach. Data was sourced from primary data, and data collection was done using interviews through questionnaires. This study used variate, bivariate, and multivariate analyses with several tests. Chi-Square was used for bivariate analysis, while the Multiple Logistics Regression test was used for multivariate analysis. The dependent variable in this study was conformity to medication for elderly patients with hypertension, whereas age, knowledge, attitude, self-efficacy, JKN participation, health care facilities access, family support, motivation, and health work-ers' role were the independent variables.

RESULTS

Table 1 displays the result of the univariate analysis. It shows that respondents are more obedient to taking hypertension medication by 75%, aged 60-74 years by 76%, low knowledge by 63.5%, negative attitude by 73%, low self-efficacy by 69.5 %, JKN participation has health insurance in the form of BPJS by 90.5%, access to health service facilities is less easy by 66%, low family support by 54%, low motivation by 64% and lack of health services.

The bivariate analysis of Chi-Square test results is presented in Table 2. There are four related variables and five unrelated variables. The related variables are self-efficacy, family support, motivation, and health workers' role. Age, attitude, knowledge, access to healthcare facilities, and JKN participation were unrelated variables.

The initial model of the multiple logistic regression test results in Table 3. shows that seven variables have (P-value ≥0.05), namely age (P-value =0.090), Knowledge (P-value =0.491), Attitude (P-value =0.420), Self-Efficacy (P-value =0.316), Access to Health Service Facilities (P-value =0.499), JKN participation (P-value =0.152) and the role of health workers (P-value =0.099) While the other two variables have P-value <0.05, namely family support (P-value =0.005) and motivation (P-value =0.038).

The results of the multivariate analysis in the final model in Table 4 indicate that family support (0.002) and motivation (0.032) are related to adherence to hypertension medication. The OR value, or the most dominant, is seen from the exp value (B). The most dominant variable is family support, where the family support variable has a 3.760 times greater effect for hypertensive patients to comply with hypertension medication.

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Table 1. Univariate Analysis Frequency Distribution

Variable		N	%
Medication Adherence	Obey	150	75%
	Not Obey	50	25%
Age	Young Elderly (60-74 years)	158	76%
	Elderly (75-90 years)	52	24%
Knowledge	High	73	36.5%
	Low	127	63.5%
Attitude	Positive	54	27%
	Negative	146	73%
Self-Efficacy	High	61	30.5%
	Low	139	69.5%
JKN Participation (BPJS)	Yes	181	90.5%
	No	19	9.5%
Access to Healthcare Facilities	Easy	68	34%
	Not Easy	132	66%
Family Support	High	92	46%
	Low	108	54%
Motivation	High	72	36%
	Low	108	64%
Role of Health Workers	Exist	85	42,5%
	Not Exist	115	57,5%

Table 2. Bivariate Analysis

Variable		Obey		Not Obey		OR (CI 95% Lower – Upper)	*P-value*
		N	%	N	%		
Age	Young Elderly (60-74 years)	110	72.4	42	27.6	0.868 (0.740-1.019)	0.181
	Elderly (75-90 Years)	40	83.3	8	16.7		
Knowledge	High	61	83.6	12	16.4	1.192 (1.024-1.389)	0.051
	Low	89	70.1	38	29.9		
Attitude	Positive	44	81.5	10	18.5	1.122 (0.955-1.319)	0.270
	Negative	106	72.6	40	27.4		
Self-Efficacy	High	55	90.2	6	9.8	1.319	0.002

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	Low	95	68.3	44	31.7	(1.147-1.518)	
JKN Participation	Yes	132	72.9	49	27.1	1.156 (0.991-1.350)	0.121
	No	18	94.7	1	5.3		
Access to Healthcare Facilities	Easy	56	82.4	12	17.6	0.770 (0.670-0.884)	0.070
	Not Easy	94	71.2	38	28.8		
Family Support	High	80	87	12	13	1.342 (1.143-1.574)	0.001
	Low	70	64.8	38	35.2		
Motivation	High	61	84.7	11	15.3	1.218 (1.048-1.417)	0.027
	Low	89	69.5	39	30.5		
Role of Health Workers	Role	71	83.5	14	16.5	1.216 (1,041-1.420)	0,026
	Not Role	79	68.7	36	31.3		

Source: Primer, 2022

Table 3. Initial Model of Multiple Logistics Regression Test Results

Variable	B	SE	Wald	df	Sig	OR
Age	-0.801	0.472	2.878	1	0.090	0.449
Knowledge	0.291	0.422	0.475	1	0.491	1.337
Attitude	-0.392	0.485	0.651	1	0.420	0.676
Self-Efficacy	0.559	0.558	1.005	1	0.316	1.750
Access to Healthcare Facilities	0.284	0.421	0.457	1	0.499	1.329
JKN participation	-1.631	1.138	2.053	1	0.152	0.196
Family support	1.223	0.436	8.016	1	0.005	3.432
Motivation	0.872	0.420	4.303	1	0.038	2.391
Role of Health Workers	0.672	0.407	2.723	1	0.099	1.959

Source: Primer, 2022

Table 4. Multivariate Final Model

Variable	*P-value*	OR
Attitude	0.495	0.725
Self-Efficacy	0.105	2.306
JKN participation	0,.97	0.157
Family support	0.002	3.760
Motivation	0.032	2.407

Source: Primer, 2022

The results of the interaction test are in Table 5. show that there are ten pairs of variables in the interaction model. After the interaction test, one interacting variable (P-value <0.05), namely attitude with self-efficacy, entered the final model. Other interaction variables were excluded from the model because they had a p-value ≥ 0.05.

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Table 5. Interaction

Variable	*P-value*	Information
Attitude	1	Enter the Final Model
Self-Efficacy	0.999	Enter the Final Model
JKN participation	0.999	Enter the Final Model
Family support	0.999	Enter the Final Model
Motivation	0.999	Enter the Final Model
Attitude with Self Efficacy	0.016	Enter the Final Model
Attitude with JKN Participation	1	Removed from Model
Attitude with Family Support	0.322	Removed from Model
Attitude with Motivation	0.363	Removed from Model
Self-Efficacy with JKN Participation	0.999	Removed from Model
Self-Efficacy with Family Support	0.968	Removed from Model
Self-Efficacy with Motivation	0.998	Removed from Model
JKN Participation with Family Support	0.999	Removed from Model
JKN Participation with Motivation	0.999	Removed from Model
Family Support with Motivation	0.998	Removed from Model

Source: Primer, 2022

Table 6. Final Model After Interaction Test

Variable	*P-value*	OR
Attitude	0.004	0.002
Self-Efficacy	0.016	0.013
JKN participation	0.131	0.176
Family support	0.007	3.236
Motivation	0.011	2.925
Attitude with Self Efficacy	0.005	23.943

Source: Primer, 2022

The results of the multivariate analysis in the last model after the interaction test was carried out in Table 6 showed that the related factors of the compliance to taking hypertension medication were attitudes (0.004), self-efficacy (0.016), family support (0.007), motivation (0.011) and attitudes with self-efficacy (0.005). The OR value, or the most dominant, is seen from the exp value (B). The most dominant variables are attitude and self-efficacy, where attitude and self-efficacy have an effect of 23.943 times greater for hypertensive patients to comply with hypertension medication.

DISCUSSION

Univariate results in this study found that respondents who are obedient in taking anti-hypertensive drugs are (75%) while respondents who are not compliant in taking anti-hypertensive drugs are (25%). This result is presumable because respondents have low knowledge of (63.5%), negative attitude (73%),

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low self-efficacy of (69.5%), low family support (54%), low motivation (64%), and the role of health workers is low (57.5%). This study used direct interviews with elderly hypertensive patients in questionnaire sheets because most elderly patients had difficulty reading the questionnaires themselves, so direct interviews were conducted with respondents.

More hypertensive patients are obedient in taking medication, 69.2% are obedient, and 31.8% are non-adherent in taking antihypertensive drugs.[8]

The prevalence in this study is inversely proportional, which found that 39% of hypertensive patients were obedient to taking hypertension drugs while 61% of hypertensive patients were not compliant in taking hypertension drugs regularly.[25]

Regarding the age variable, no significant relation was found between age and compliance with hypertension medication consumption. This finding aligns with several studies' results about age variable relation to medication consumption obedience[30,31] although another study[18] found such significant relation.

In their old age, people will usually comply with every recommendation from a doctor or other health worker without considering various reasons because elderly hypertensive patients are encouraged to recover. Usually, elderly patients have only a few activities. Thus, they are more likely to be compliant to take medication regularly. Moreover, with the PROLANIS program (Chronic disease management program) found in various health centers, those who want to take medication no longer have to worry about the cost.

No significant relationship was shown between the knowledge variable and taking hypertension medication adherence (p-value≥ 0.05). There was no difference in probability between knowledge and adherence to hypertension medication (p-value≥ 0.05).[27] In contrast, the knowledge variable was significantly related to adherence to medication in elderly hypertensive patients.[13]

Knowledge of hypertensive patients will allow the expected compliance behavior also to increase. In this study, it is known that the knowledge of elderly hypertensive patients regarding hypertension is still low. An inadequate understanding of hypertension risk factors and lifestyle modification might cause it.

This study found that attitude was not significantly related to hypertension medication compliance (p-value≥ 0.05) which conforms to other studies' findings that showed no significant relation between attitude and patients' obedience in consuming amlodipine medication (p-value≥ 0.05).[10] Nevertheless, other studies found a significant relation between those two variables (p-value < 0.05).[26]

In the description above, the researcher suspects that a lack of desire can usually cause someone with a negative attitude or need from the sufferer to achieve a goal, namely, to recover from his illness. Because if someone has a positive attitude, they will be more aware of their health to achieve healing.

The self-efficacy variable showed a significant relationship between self-efficacy and adherence to taking hypertension medication. With a Prevalence Ratio (PR) value of 1.319 (95% CI 1.147-1.518), respondents with high levels of self-efficacy are 1.319 times more likely to be

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obedient in taking hypertension medication than respondents with low self-efficacy.

A significant difference was found in the proportion of adherence to hypertension medication based on self-efficacy (p-value <0.05).[30,31] This result is unlike the other research that found no relation between self-efficacy and hypertension medication compliance (p-value ≥0.05).[3]

Self-efficacy will encourage a person to believe in the treatment being undertaken. This belief will motivate and increase one's hope to achieve healing which can encourage a person to behave obediently in taking hypertension medication regularly. A person's encouragement to recover can take the form of compliance with medication and changing lifestyles. Lifestyles that support the reduction of hypertension include increasing the consumption of vegetables and fruit, exercising regularly, avoiding the consumption of high-fat foods, and avoiding stress.[19] Antioxidants in fruit and vegetables can support lowering blood pressure with an anti-blood clotting mechanism and remove plaque buildup in blood vessels.[21]

Heart disease can be prevented by the mechanism of action of their bioactive substance, namely lowering the level of blood cholesterol, blood clot prevention, and plaque prevention in the blood vessel.

This study found that the access to health facility variable was not significantly related to hypertension medication consumption adherence (p-value ≥0.05). This result is similar to other studies that found no relation between those two variables (p-value ≥0.05).[25,30] Nonetheless, it contrasts with the other study that found a difference in probability between the affordability of access to health services and medication consumption compliance (p-value <0.05).[20]

Field research resulted that affordability to access health services had no relation to conformity with medication for hypertension. This result is because hypertensive patients who have less easy access to health services feel bored, so they will come for treatment if they feel a complaint.

In the JKN participation variable, JKN participation was not significantly related to adherence to hypertension medication consumption (p-value≥ 0.05). No significant difference between observed between the health insurance participation variable and medication consumption for patients with hypertension (p-value ≥0.05). Similarly, another study also found that the health insurance participation variable was not significantly related to taking medication compliance (p-value ≥0.05).[11] One study, on the contrary, found a significant relation between the two mentioned variables (p-value <0.05).[7]

It is assumed that the participation of health insurance in the form of BPJS plays an essential role as a compliance factor for treating hypertension patients. With health insurance, patients feel financially secure regarding the medication cost. Hence, they are more likely to be obedient than patients without health insurance. The longer the treatment must be taken, the higher the cost of treatment that the patient must pay, especially for patients who do not have health insurance.

The family support variable was significantly related to medication consumption compli-

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ance for hypertension (p-value < 0.05). A prevalence Ratio value (PR) of 1.342 (95% CI 1.143-1.574) means that respondents with high family support are 1.342 times more likely to be obedient in taking hypertension drugs than those with low family support.

Likewise, several studies discovered that the family support variable significantly relates to antihypertensive medication consumption obedience (p-value <0.05).[1,25] Emotional support and appreciation help hypertensive patients to live their lives well. This treatment differs from other research that found no significant relationship between both variables (p-value ≥0.05).[12]

Based on the description above, the researcher believes that support given by family will significantly affect elderly hypertensive patients who live with their families to comply with medication. This result means that the greater the family support, the more compliant the hypertensive patient takes antihypertensive drugs regularly.

The motivation variable shows a significant relationship between motivation and adherence to taking hypertension medication with the value (p-value <0,05) Prevalence Ratio (PR) of 1.218 (95% CI, 1.048-1.417). This result means that respondents with high motivation are 1.218 times more likely to be obedient in taking medication than respondents with low motivation.

The motivation variable was also related to hypertension patients' adherence to medication in some other studies (p-value <0.05).[12,24] This differs from another research that found no relation between those two variables (p-value≥ 0.05).[11]

In this study, the researchers concluded that the higher the motivation of elderly hypertensive patients, the more they are to comply with taking antihypertensive drugs. On the other hand, the lower the motivation of the hypertensive patient, the lower the patient's adherence to regularly taking antihypertensive drugs.

This study revealed that the health worker's role was significantly related to adherence to taking hypertension medication (p-value < 0.05). Prevalence Ratio (PR) value 2.272 (95% CI 1.592-3.243), This means that respondents who choose the role of health workers who play a role have 1.216 times more likely to be obedient in taking hypertension medication compared to respondents who choose the role of health workers who have less role.

In other studies, the health worker role variable was also significantly related to the obedience in consuming medicine for hypertension patients (p-value < 0.05).[23] It is in contrast to other studies whose finding was health worker's role variable has no significant relation to the elderly patients' adherence to taking antihypertensive drugs.[9,11]

In this study, it is inferred that the high role of health workers is not a benchmark for the compliance or non-compliance of patients with hypertension to take medication. On the other hand, the low health worker low will significantly affect hypertension elderly patients' conformity to take medication for hypertension regularly. However, other factors, such as education, also contribute to a person's compliance. Although not necessarily respondents with higher education have high compliance in taking drugs regularly, it is also possible for respondents with low education to

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have high compliance in taking drugs regularly, as well as a person's knowledge of hypertension.

In this study, the dominant variable is the interaction attitude variable and self-efficacy, where this variable has a 23.943 times greater effect for obedient hypertensive patients in taking hypertension medication regularly.

The dominant variable, namely the attitude variable, has a 9.88 times greater effect on adherence to antihypertensive drugs. Hypertensive patients with a positive attitude can determine the appropriate lifestyle to motivate compliance in taking hypertension drugs.[22]

The dominant variable was self-efficacy, which had a 0.997 times greater effect on medication adherence in hypertension patients. Self-efficacy means that a person thinks he/she has the power to do what he/she wants. Therefore, people with high perceived self-efficacy can motivate themselves cognitively to take action to achieve their goals. Self-efficacy always has something to do with behavioral choices, motivation, and individual determination in dealing with every problem.[4]

CONCLUSION

To sum it up, self-efficacy (P-value =0.002), family support (P-value =0.001), motivation (P-value =0.027), and health workers' role (P-value =0.026) have a significant relation to obedience to taking medication. Moreover, there was no significant relation between the remaining variables, namely, age (P-value =0.181), knowledge (P-value =0.051), attitudes (P-value =0.181), access to healthcare facilities (P-value =0.121), JKN participation (P-value = 0.070), the conformity to hypertension medication consumption. Continuous health education is needed through media containing information about hypertension management in the examination room to increase hypertensive patients' knowledge about hypertension. This health education should be given to people with hypertension and their families and close people with it so they can participate in reminding and motivating people.

REFERENCES

1. Adikusuma, W., Qiyaam, N., & Yuliana, F. (2015). Kepatuhan Penggunaan Obat Antihipertensi di Puskesmas Pagesangan Mataram. *Pharmascience*, *2*(2), 56–62.
2. Agustina, S., Sari, S. M., & Savita, R. (2014). Faktor-Faktor yang Berhubungan dengan Hipertensi Pada Lansia di Atas Umur 65 Tahun. *Jurnal Kesehatan Komunitas*, *2*(04), 180–186.
3. Ariesti, E. S. E. D. T. K. K. M., & Pradikatama, Y. (2018). Hubungan Self Efficacy Dengan Tingkat Kepatuhan Kota Malang. *Jurnal Keperawatan Malang*, *3*, 39–44.
4. Cristina, Y. W., Humairo, M. V., & Siyoto, S. (2021). *The Multivariate Analysis Of Health Determinants On Compliance With Drug Drinking In Hypertension Patients At Pratama Mitra Clinic 02*. *3*(1), 291–299.
5. Doroszko, A., Janus, A., Szahidewicz-Krupska, E., Mazur, G., & Derkacz, A. (2016). Resistant hypertension. *Advances in Clinical and Experimental Medicine*, *25*(1), 173–183. https://doi.org/10.17219/acem/58998
6. Drozdz, D., & Kawecka-Jaszcz, K. (2014). Cardiovascular changes during chronic hypertensive states. *Pediatric Nephrology (Berlin, Germany)*, *29*(9), 1507–1516.

https://doi.org/10.1007/s00467-013-2614-5

7. Emiliana, N., Fauziah, M., Hasanah, I., & Fadlilah, D. R. (2021). Analisis Kepatuhan Kontrol Berobat Pasien Hipertensi Rawat Jalan Pada Pengunjung Puskesmas Pisangan Tahun 2019. *Jurnal Kajian Dan Pengembangan Kesehatan Masyarakat*, *1*, 224–232.
8. Fadhilah, S. N., Rohita, T., & Milah, A. S. (2020). Hubungan Dukungan Keluarga Dengan Kepatuhan Minum Obat Pada Penderita Hipertensi Di Wilayah Kerja Puskesmas Pamarican Ciamis. *Jurnal Ilmiah Manuntung*, *1*, 62–67. http://repository.unigal.ac.id/handle/123456789/787
9. Fitriananci, D., Suryani, L., & Obat, K. M. (2022). *Analsisis Kepatuhan Minum Obat Pada Lansia Hipertensi di Puskesmas Pengandonan Kota Pagar Alam*. *5*(1). https://doi.org/10.32524/jksp.v5i1.396
10. Haldi, T., Pristianty, L., & Hidayati, I. R. (2020). Hubungan Pengetahuan Dan Sikap Pasien Hipertensi Terhadap Kepatuhan Penggunaan Obat Amlodipin Di Puskesmas Arjuno Kota Malang. *Jurnal Farmasi Komunitas*, *8*(1), 27. https://doi.org/10.20473/jfk.v8i1.22277
11. Handayani, S., Nurhaini, R., & Aprilia, T. J. (2019). Faktor-faktor yang mempengaruhi kepatuhan pasien dalam mengkonsumsi obat antihipertensi di Puskesmas Jatinom. *Jurnal Ilmu Farmasi*, *10*(2), 39–44.
12. Hanum, S., Puetri, N. R., Marlinda, & Yasir. (2019). Hubungan Antara Pengetahuan, Motivasi, Dan Dukungan Keluarga Dengan Kepatuhan Minum Obat Pada Penderita Hipertensi Di Puskesmas Peukan Bada Kabupaten Aceh Besar. In *JKT* (Vol. 10, Issue 1).
13. Indriana, N., & Swandari, M. T. K. (2021). Hubungan Tingkat Pengetahuan Dengan Kepatuhan Minum Obat Pada Pasien Hipertensi Di Rumah Sakit X Cilacap. *Jurnal Ilmiah JOPHUS : Journal Of Pharmacy UMUS*, *2*(01). https://doi.org/10.46772/jophus.v2i01.266
14. Jankowska-Polańska, B., Uchmanowicz, I., Dudek, K., & Mazur, G. (2016). Relationship between patients' knowledge and medication adherence among patients with hypertension. *Patient Preference and Adherence*, *10*, 2437–2447. https://doi.org/10.2147/PPA.S117269
15. Kemenkes. (2018a). Hasil Riset Kesehatan Dasar Tahun 2018. In *Kementrian Kesehatan RI*.
16. Kemenkes. (2018b). Riskesdas DKI Jakarta 2018. In *Laporan Provinsi DKI Jakarta*. www.litbang.kemkes.go.id%0A
17. Kendu, Y. M., Qodir, A., & Apryanto, F. (2021). *Hubungan Self-Efficacy Dengan Tingkat Kepatuhan Minum Obat*. *2*, 13–21.
18. Kionowati, Mediastani, E., & Septiyana, R. (2018). Hubungan Karakteristik Pasien Hipertensi terhadap Kepatuhan Minum Obat di Dokter Keluarga Kabupaten Kendal. *Jurnal Farmasetis*, *7*(1), 6–11.
19. Lakhsmi, B., & Mardhiati, R. (2017). Faktor Risiko Penyakit Hipertensi pada Usia Produktif. *ARKAVI (Arsip Kardiovaskular Indonesia)*, *2*(1), 105–115.
20. Makatindu, M. G., Nurmansyah, M., & Bidjuni, H. (2021). Identifikasi Faktor Pendukung Yang Berhubungan Dengan Kepatuhan Minum Obat Pada Penderita Hipertensi Di Puskesmas Tatelu Kabupaten Minahasa Utara. *Concept and Communication*, *9*(1),19-26. https://doi.org/10.15797/concom.2019..23.009
21. Mardhiati. (2016). Delima, Apel, Tomat, dan Penyakit Jantung. 1(1): 1-9. *ARKAVI (Arsip Kardiovaskular Indonesia)*, *1*(1), 1–9.
22. Mekonnen, H. S., Gebrie, M. H., Eyasu, K. H., & Gelagay, A. A. (2017). Drug adherence for antihypertensive medications and its determinants among adult hypertensive patients attending in chronic

e-ISSN 2774-2318
p-ISSN 2407-0505

clinics of referral hospitals in Northwest Ethiopia. *BMC Pharmacology and Toxicology*, *18*(1), 1–10. https://doi.org/10.1186/s40360-017-0134-9

23. Muthmainnah, Kunoli, F. J., & Nurjanah. (2019). Hubungan Peran Keluarga Dan Peran Tenaga Kesehatan Dalam Kepatuhan Pengobatan Penderita Hipertensi Di Wilayah Kerja Puskesmas Sangurara Kota Palu. *Jurnal Kolaboratif Sains*, *1*(1), 156–166. http://jurnal.unismuhpalu.ac.id/index.php/jom/article/view/784
24. Nuratiqa, N., Risnah, R., Hafid, M. A., Paharani, A., & Irwan, M. (2020). Faktor Yang Berhubungan Dengan Kepatuhan Minum Obat Anti Hipertensi. *BIMIKI (Berkala Ilmiah Mahasiswa Ilmu Keperawatan Indonesia)*, *8*(1), 16–24. https://doi.org/10.53345/bimiki.v8i1.122
25. Pratiwi, R. I. (2017). Analisis Faktor-Faktor Yang Mempengaruhi Kepatuhan Pasien Hipertensi Dalam Penggunaan Obat di RSUD Kardinah. *Seminar IPTEK Terapan*, *2*(3), 15–17.
26. Rahayu Khairiah, & Sipayung, T. U. (2018). Hubungan Pengetahuan Dan Sikap Terhadap Kepatuhan Minum Obat Pada Pasien Hipertensi. *Jurnal Antara Kebidanan*, *1*(4), 197-206. http://ojs.abdinusantara.ac.id/index.php/antarakebidanan/article/view/25
27. Realita Nurhanani, 2020. (2020). Hubungan Faktor Pengetahuan Dengan Tingkat Kepatuhan Minum Obat Antihipertensi (Studi Pada Pasien Hipertensi Essential di Wilayah Kerja Puskesmas Bandarharjo Kota Semarang). *Jurnal Kesehatan Masyarakat (e-Journal)*, *8*(1), 114–121.
28. Rusida, E. R., Adhani, R., & Panghiyangani, R. (2017). Pengaruh Tingkat Pengetahuan, Motivasi dan Faktor Obat Terhadap Kepatuhan Minum Obat Pasien Hipertensi di Puskesmas Kota Banjarbaru Tahun 2017. *Jurnal Pharmascience*, *4*(2). https://doi.org/10.20527/jps.v4i2.5766
29. Sari, D. P., & Listya, M. T. (2016). Pengaruh Keikutsertaan Pasien pada Program Jaminan Kesehatan terhadap Keberhasilan Kontrol Tekanan Darah pada Penderita Hipertensi. *EJournal Kedokteran Indonesia*, *4*(2), 125–129. https://doi.org/10.23886/ejki.4.6289.125-29
30. Sukma. (2018). Faktor Faktor Yang Berhubungan Dengan Kepatuhan Pasien Hipertensi Dalam Melakukan Terapi Di Puskesmas Pandanaran Kota Semarang. *Jurnal Kesehatan Masyarakat (e-Journal)*, *6*(5), 687–695.
31. Sukmaningsih, A. K., Putra, G. N. W., Sujadi, H., & Ridayanti, P. W. (2020). Hubungan Self Efficacy Dengan Kepatuhan Minum Obat Pada Penderita Hipertensi Di Wilayah Kerja Puskesmas Tejakula 1. *MIDWINERSLION : Jurnal Kesehatan STIKes Buleleng*, *5*(2), 286. https://doi.org/10.52073/midwinerslion.v5i2.174