RESEARCH ARTICLES

Access to Health Services Affects the Level of Adherence to Taking Medication for Hypertensive Patients At Puskesmas Medan Area Selatan Year 2024

Izzahdinillah[1], Pinta Pudiyanti Siregar[2]

[1]Faculty of Medicine,Universitas Muhammadiyah Sumatera Utara, Jalan Gedung Arca Nomor 53, Kota Medan, Sumatera Utara 20217
[2]Department of Public Health, Fakultas Kedokteran Universitas Muhammadiyah Sumatera Utara, Jalan Gedung Arca Nomor 53, Kota Medan, Sumatera Utara 20217

Corresponding Email: izzahdinillah0205@gmail.com
pinta.pudiyanti@umsu.ac.id

Abstract: Hypertension is known as *a silent disease.* Compliance of patients with hypertension is essential because hypertension must always be controlled. Access to healthcare is one of the reasons for this non-compliance. This study aims to determine the influence of access to health services on the level of medication adherence of hypertensive patients in Puskesmas Medan Area Selatan. This type of research is descriptive analytics with *a cross-sectional* design. The research subjects used were 98 hypertension patients in Puskesmas Medan Area Selatan who met the inclusion and exclusion criteria. Sampling is based on *purposive sampling* and is carried out by Chi-Square Test. The results of the Chi-Square Test obtained a value *of P* value = 0.001 (*P<0.05*) which means that access to health services has a significant influence on the level of medication adherence of hypertension patients in Puskesmas Medan Area Selatan. Access to health services has a significant influence on the level of medication adherence in hypertensive patients, where the easier it is to access health services, the more compliant patients will be to take medication.

Keywords: Access to healthcare, drug consumption compliance

INTRODUCTION

Hypertension is one of the most common cardiovascular diseases and is widely found in the community, often referred to as a "*silent disease*". Menurut *World Health Organization* (WHO), The number of hypertension sufferers worldwide reaches around 1.13 billion and continues to increase every year. Data from Basic Health Research (RISKESDAS) (2018) shows that the prevalence of hypertension in the population aged 18 years and above is 34.1%, with the highest prevalence in South Kalimantan (44.1%) and the lowest in Papua (22.2%). In North Sumatra, the prevalence of hypertension reached 29.19%. The age group of 31-44 years experienced hypertension by 31.6%, the age group of 45-54 years by

38

45.3%, and the age group of 55-64 years by 55.2%.[1,2,3]

Treatment adherence is the main key to the success of patient therapy. *The World Health Organization* (WHO) notes that about 50%-70% of patients do not comply with prescribed anti-hypertensive medications. Low adherence rates are influenced by a variety of factors, including treatment and disease characteristics such as therapy complexity, disease duration, and service methods; intra-personal factors such as age, gender, self-esteem, discipline, stress, depression, and alcohol consumption; inter-personal factors such as the quality of relationships with health care providers and family support; as well as environmental factors such as environmental systems and high-risk situations. Poor adherence to anti-hypertensive therapy can hinder the achievement of effective blood pressure control and is often associated with increased hospitalization costs as well as the risk of heart complications.[4,5,7,8,9]

Health services play an important role in the prevention of cardiovascular diseases, especially primary health services. Health services, in which there are health workers including nurses, educators or health extension workers, have an important role in providing education and motivation about the importance of compliance with control, digestion of treatment and patient care efforts and can increase awareness of compliance with health controls, to reduce the prevalence of complications following the targeted treatment goals.[36]

However, limited access to health services, health workers including nurses, and the breadth of work coverage in health centres with difficult road access are also inhibiting factors in achieving successful hypertension management.[37] Ease of access can increase patient compliance in undergoing treatment. The greater the distance between the patient's home and the health care facility and the difficulty in transportation, the more it will have an impact on the level of treatment adherence.[1,6]

Winda A. and Diana L. Ramatillah (2020) conducted a study on the evaluation of the level of compliance with the use of antihypertensive drugs in hypertensive patients using the MMAS-8 questionnaire in Penang, Malaysia. The results of the study conducted with the MMAS-8 method showed that as many as 36 patients or 63.2% of the total 57 patients, had a low level of compliance. The results of the study also showed that one of the main problems related to the level of compliance of hypertension patients in using anti-hypertension on the Malaysian island of Penang was that many respondents forgot to take their medication and forgot to bring their medicine when travelling to Winda A. and Diana L. Ramatillah (2020) conducted a study on the evaluation of compliance with the use of antihypertensive drugs in hypertensive patients in Penang, Malaysia, using the MMAS-8 questionnaire. This study found that out of a total of 57 patients, as many as 36 patients or 63.2% showed a low level of compliance. In addition, the study identified that one of the main problems related to hypertensive patients' compliance in taking anti-hypertension in Penang is that many respondents often forget to take their medication and carry it with them when travelling.[7]

Research on Community Perspectives on Access to Health Services in Malang Regency conducted by Hario Megatsari, et al. (2018), resulted in the conclusion that people still feel a lack of accessibility to existing health services, especially inadequate infrastructure and facilities. In addition, the shortcomings that exist are in social access caused by unfriendly service by officers.[17]

Based on the explanation above, the author is interested in conducting a study entitled "The Effect of Access to Health Services on the Level of Adherence to Taking Medication for Hypertension Patients at the Medan South Area Health Center".

Hypothesis

In this study, the hypothesis tested is as follows:

Ho: There was no effect between access to health services and medication adherence of hypertensive patients at the Medan South Area Health Center.

Ha: There is an effect between access to health services and adherence to medication for hypertension patients at the Medan South Area Health Center.

METHOD

This type of study uses descriptive analytics with *a cross-sectional* research design to test how hypertensive patients adhere to the treatment regimen about the ease of access to health services at the Medan South Area Health Center. The choice of location at the Medan South Area Health Center was motivated by the fact that research had never been conducted on the impact of health service accessibility on the treatment compliance of hypertension patients. This research was conducted from June 2023 to March 2024.

The population in this study is hypertension patients at the Medan Health Center in the South Area. The sample size in this study is 98 people based on *purposive sampling*. The inclusion criteria for this study are as follows:

Patients diagnosed with Hypertension before the study was conducted

a. Outpatient Hypertension Patients
b. Hypertension Patients Who Can Read and Write
c. Hypertension Patients with Full Consciousness
d. Hypertension patients who are present and willing to be responders

The exclusion criteria of this study are:

a. Hypertension patients with hearing and vision problems

Sampling in this study was carried out using *the purposive sampling* method where sampling was taken using certain considerations following the inclusion and exclusion criteria.

The basis of the data collection method of this study is to provide questions through questionnaires given to selected samples about identity (age, gender, occupation, last education, income, distance from home to the health centre, respondent status, type of oral antihypertensive treatment, and length of treatment) and medication adherence based on the *Morisky Medication Adherence Scale* (MMAS) questionnaire where there are 8 questions. Where question number 1-7 there are two categories of answer responses, namely "yes" and "no", while for question number 8 there are 5 categories of answer responses, namely "never",

"occasionally", "sometimes", "usually", and "all the time". Questions in numbers 1,2,3,4,6, and 7 are worth 1 if answered "no" and 0 if answered "yes", and question number 5 is worth 1 if answered "yes", and 0 if answered "no". As for question number 8, if you choose point a, the value is 1 and if you choose b/c/d/e, the value is 0.

Respondents were also given questions about access to health services which contained 10 questions with four categories of answers, namely 4 (strongly agree), 3 (agree), 2 (disagree), and 1 (strongly disagree). The total number of points is 40 points. To determine the ease or difficulty of accessing health services, a calculation will be carried out from the total of all respondents' answers, after which a value or average calculation will be carried out. So if the points obtained are above the *mean* value, it means that access to health services is good, while if the points obtained are below *the mean* value, it means that access to health services is not good. The given question item has met the validity ($r = 0.849$) and reliability ($r = 0.724$).

The data obtained will be analyzed by several methods, including univariate analysis to determine the frequency distribution and distribution of respondent characteristics, as well as bivariate analysis with the Chi-Square test. The testing criteria in this study are if the *value of P<0.05 means that Ho is rejected and if Ho>0.05 then Ho is accepted.*

RESULT
Univariate Analysis

The following are the results of a univariate analysis that presents the characteristics of respondents based on gender, age, occupation, last education, and patient category in respondents at the Medan Arean Selatan Health Center using the *Morisky Medication Adherence Scale* (MMAS) method and health service access questionnaires. The distribution of respondent characteristics is presented in Table 1.

Based on Table 1, it is known that the majority of respondents are women, as many as 55 (56.1%). Based on age, the majority of respondents (38.8%) are 55-65 years old. Based on their work, the majority of respondents were housewives as many as 36 people (36.7%). Based on the last education, the majority of respondents (60.2%) took the last level of high school education. Based on the table above, it is also known that all respondents are BPJS participants with the majority of monotherapy treatment as many as 93 people (94.1%). Most respondents (79.6%) do not have a family background with a job in the health sector. Based on the distance from home to health services, the majority of respondents 46 (46.9%) need to travel a distance of 200-1000 meters. Based on the length of time suffering from Hypertension, the majority of respondents suffered from Hypertension <5 years as many as 88 people (89.8%).

Table 1 Distribution of respondent characteristics

Characteristics Respondent	Category	N	(%)
Gender	Man	43	43.9
	Woman	55	56.1
	Total	**98**	**100.0**
Age	<55 Year	29	29.6
	55-65 Year	38	38.8
	>65 Year	31	31.6
	Total	**98**	**100.0**

Employment Status	Housewives	36	36.7
	Self-employed	29	29.6
	Official Private	8	8.2
	Civil servant	4	4.1
	Others	21	21.4
	Total	**98**	**100.0**
Last Education	No School	0	0.0
	Primary School	6	6.1
	Intermediate School	20	20.4
	Elementary School	59	60.2
	College	13	13.3
	Total	**98**	**100.0**
Payment for Treatment	BPJS	98	100.0
	Pay Independently	0	0.0
	Total	**98**	**100.0**
Type of Treatment (anti-oral hypertension)	1 Type of Drug	93	94.9
	CombinationCombination	5	5.1
	Total	**98**	**100.0**
Family Background Working in the Health Field	Yes	20	20.4
	No	78	79.6
	Total	**98**	**100.0**
Distance Access	<200 Metre	32	32.7
	200-1000 Metre	46	46.9
	>1000 Metre	20	20.4
	Total	**98**	**100.0**
Treatment Time	<5 Year	88	89.8
	>5 Year	10	10.2
	Total	**98**	**100.0**

Bivariate Analysis (Access Control of Hypertensive Patients in Puskesmas Medan Area Selatan)

Bivariate analysis is carried out on data that are considered to have a relationship with each other. This method is useful for determining the relationship between variables. In this case, access to health services is an independent variable (independent variable) and the level of drug consumption compliance is a dependent variable (bound variable) in this study. The results of bivariate analysis with Chi-Square are presented in Table 2.

Based on Table 2, It can be seen that most of the respondents as many as 56 people (57.1%) are Hypertension patients in Puskesmas Medan Area Selatan easy access to health services. Meanwhile, as many as 42 people (42.9%) experienced difficulties in accessing health services in Puskesmas Medan Area Selatan.

Table 2. Bivariate analysis

Access	Compliance		Total
	Non-Compliance	Obedient	
Difficult	25 (25,6%)	17 (17,3%)	**42 (42,9%)**
Easy	3 (3%)	53 (54,1%)	**56 (57,1%)**
Total	**28 (28,6%)**	**70(71,4%)**	**98 (100%)**

Bivariate Analysis (Compliance Level of Hypertensive Patients at the Medan Health Center in the Southern Area)

Based on Table 2, it is known that the majority of respondents, namely 70 respondents (71.4%) are hypertension patients in Puskesmas Medan Area Selatan Comply with the regular consumption of medication. Meanwhile, as many as 28 respondents (28.6%) did not comply in terms of taking medication regularly.

Bivariate Analysis (The Relationship Between Control Access of Hypertensive Patients and the Level of Adherence to Taking Medication of Hypertensive

42

Patients in Puskesmas Medan Area Selatan)

Based on Table 2, of the 56 people (57.1%) who consider health services in Puskesmas Medan Area Selatan easily accessible, 53 people (54.1.9%) of them are compliant with taking medication, and 3 other people (3%) are not compliant with taking medication. Meanwhile, of the 42 respondents (42.9%) who had difficulty accessing health services at the Medan South Area Health Center, as many as 25.6% of the others did not comply with taking medicine, while 17 people (17.3%) were compliant with taking medicine.

Based on the test results, a Sig. A value of $0.001 < alpha$ (5%) was obtained, so it can be concluded that access to health services has a significant influence on the level of patient medication adherence. Based on Table 2, it can be interpreted that most respondents who have easy access to health services are compliant to take medicine. Meanwhile, the majority of respondents who have difficulty accessing health services do not comply with taking medicine. So, the influence between access to health services and the level of drug consumption compliance is linearly positive. This means that the easier it is to access health services, the more compliant respondents will be to take medicine.

DISCUSSION

Health services are efforts made by an organization, either individually or in groups, to maintain and improve health, prevent and cure diseases and recover individuals, groups and/or communities. Healthcare affordability is defined as how easily a person can get healthcare.[13]

Muhlis & Prameswari (2020), stated that the availability of health facilities such as clinics, health centres, and hospitals, as well as the availability of medical personnel and necessary drugs, is called medical accessibility. Optimal health services can only be achieved if people have access to health services. Accessibility to health services can be measured by looking at how many resources are allocated to Muhlis & Prameswari (2020) explained that medical accessibility includes the availability of health facilities such as clinics, health centres, and hospitals, as well as medical personnel and medicines needed. Optimal health services can only be realized if the community has adequate access to services by assessing the amount of resources allocated for those services.[11]

The results of this study showed that 53 people (54.1%) respondents could easily reach health services and comply with treatment, while 17 people (17.3%) respondents had difficulty reaching health services and did not comply with treatment. As a result, the results of the analysis show that access to health services at the Medan South Area Health Center has a positive and significant impact on the treatment compliance of hypertension patients.

The results of the Chi-Square test showed that there was an effect between access to health services and the level of treatment compliance in hypertensive patients at the Medan South Area Health Center (p=0.001<0.05). These results are in line with previous research conducted by Karim, Dewi, and Hijriyati (2022) at Pasar Rebo Hospital Jakarta which showed that patients who have easier access to health services will be more

compliant in undergoing treatment. Treatment fulfilment becomes worse if patients live farther from health services and transportation.[12,14]

This research is also supported by previous research conducted by Yulianus *et al.* (2022), the results showed that 71.4% of respondents had poor health service coverage, more were non-compliant in taking medication and 73.3% of respondents with good health service coverage would be more dominant in taking medication. However, this is not in line with the research conducted by Listi Sintiadewi Dolo *et al*. (2021) The results of the study showed that there was no influence between affordability of access to health services and adherence to treatment for hypertension patients.[13,15]

Compliance is very important for people with hypertension because of its great potential for hypertension control. If hypertensive patients are not disciplined while taking medication, it is non-compliance, which will have an impact on the patient's condition which worsens and causes complications. These complications are caused by uncontrolled blood pressure, causing prolonged and severe hypertension.[10,15]

Supporting factors that affect the fulfilment of treatment include the availability of health facilities and the ease of access to these facilities. The results of the study can be interpreted that most people have better access to health services compared to respondents who do not have access. This is because good health services are available to everyone.[12]

CONCLUSION

Based on the study on the Effect of Access to Health Services on the Level of Adherence to Taking Medication for Hypertensive Patients at the Medan South Area Health Center, it can be concluded that there is a significant influence between the level of access to health services and the level of medication adherence of hypertensive patients, where the easier it is to access health services, the more compliant the respondents will be to take medication.

REFERENCES

1. Alam RI, Jama F. Analisis Faktor Yang Mempengaruhi Ketidakpatuhan Berobat Lansia Penderita Hipertensi Di Wilayah Kerja Puskesmas Pampang. *J Ilm Kesehat pencerah*. 2020;09(2):115-125.

2. Khoiriyah N, Siregar PP, Kota M. Edukasi Hipertensi dan Pemeriksaan Tekanan Darah , Asam Urat dan Kadar Gula Darah di Masjid Al-Hasanah , Kelurahan Sudirejo II. *J implementa husada*. 2022;3(3).

3. Kemenkes RI. RISKESDAS 2018. *JURNAL*. Published online 2018.

4. Harun H. Tingkat Kepatuhan Minum Obat Pasien Hipertensi Dinilai dengan Morisky Medication Adherence Scale - 8 (MMAS-8) di RSUP M Djamil Padang. 2020;01(01):137-141.

5. Rahayu KP, Widiastuti TC, Khuluq H. Evaluation Of Compliance Of Drug Use in Type 2 Diabetes Mellitus Patients in Outpatient Departement at Purbowangi Hospital Evaluasi Kepatuhan Penggunaan Obat Pada Pasien Diabetes Melitus Tipe 2 di

44

Instalasi Rawat Jalan Rumah Sakit Umum Purbowangi. *Univ Res colloqium*. Published online 2022:888-897.

6. Prihatin K, Fatmawati BR, Suprayitna M, Keperawatan PS, Pengobatan K. Faktor-Faktor Yang Mempengaruhi Kepatuhan Berobat Penderita. *J Ilm Stikes Yars Mataram*. 2020;10(2):7-16.

7. Apriliyani, Winda; R, Laila D. Evaluasi Tingkat Kepatuhan Penggunaan Antihipertensi Pada Pasien Hipertensi Menggunakan Kuesioner MMAS-8 Di Penang Malaysia. *Soc Cinical Pharm Indones J*. 2020;5(1):23-33.

8. Anwar M, Parhani A, Irwan M. Faktor yang berhubungan dengan kepatuhan minum obat anti hipertensi. *Berk Ilm Mhs Ilmu Keperawatan Indones*. 2020;8(1):16-24.

9. Padmaningsih NP, Budiman AW. Analisis Faktor-Faktor Yang Mempengaruhi Tingkat Kepatuhan Pasien Hipertensi Dalam Mengkonsumsi Obat : SYSTEMATIC REVIEW. *J Kesehat Tambusai*. 2023;4(4):7110-7121.

10. Pusparini AD, Zuraida R, Susianti S. Diabetes Mellitus and Health Education's Role In Patient Management: a literature Review. J.Ilmu Kedokt dan Kesehat. 2022;8(4):382-388. Doi:10.33024/jikk.v8i4.5090

11. Muhlis, Muhammad, and Alissa Jihan Prameswari. "Kepatuhan Penggunaan Obat Pada Pasien Hipertensi Di Instalasi Rawat Jalan Salah Satu Rsud Di Wilayah Daerah Istimewa Yogyakarta". Jurnal Insan Farmasi Indonesia 3.1 (2020): 104-113.

12. Mekatindu, Marsha Gladis, Muhamad Nurmansyah, and Hendro Bidjuni. "Identifikasi Faktor Pendukung Yang Berhubungan Dengan Kepatuhan Minum Obat Pada Pasien Hipertensi Di Puskesmas Tatelu Kabupaten Minahasa Utara". Jurnal Keperawatan 9.1 (2021): 19-26.

13. Yulianus Sudarman, Selvi Alfrida Mangundap, Rina Tampake, Firdaus J. Konoli TSY. Faktor-Faktor yang Berhubungan dengan Kepatuhan Minum Obat Anti Hipertensi pada Pasien di Wilayah Kerja Puskesmas Salakan Kabupaten Banggai. *Indones J Heal Promot*. 2022;5(10):1263-1268.

14. Dinda V. Lomotu, Fatimawali JMP. liFaktor-Faktor Yang Mempengaruhi Kepatuhan Minum Obat Hipertensi Pada Pasien Lansia di Poli Lansia Puskesmas Gogagoman Kotamobagu. *J Kesehat Tambusai*. 2024;5(2):2546-2558.

15. Listi Sintiadewi D., Andi Yusuf, Rahmawati Aziz. Analisis Faktor Memengaruhi Kepatuhan Berobat Lansia Penderita Hipertensi Pada Masa Pandemi *COVID-19* Di Puskesmas Bulili Kota Palu. Jurnal Kesehatan Masyarakat. 2021;5(2)

16. Karuniawati H, IkawatI Z, Gofir A. Pencegahan Sekunder Untuk Menurunkan Kejadian Stroke Berulang Pada Stroke Iskemik. J Manaj dan Pelayanan Farm. 2015;5(1):14-21.

17. Megatsari H, Laksono Ad, Ridlo Ia, Yoto M, Azizah An. Perspektif Masyarakat Tentang Akses Pelayanan Kesehatan Community Perspective About Health Service Acces. Bul Penelit Sist Kesehat. 2018;21(4):247-253. Doi:10.22435/Hsr.V2li4.231